

Proposed Biodiversity Certification for the Wagga Wagga Local Environmental Plan 2008

Under the NSW Threatened Species Conservation Act 1995

Department of **Environment & Climate Change** NSW



This report constitutes notice of the proposed biodiversity certification for the Wagga Wagga Local Environmental Plan (LEP) under section 126G(4) of the *Threatened Species Conservation Act 1995*.

Submissions invited

The Department of Environment and Climate Change welcomes submissions on this proposal for biodiversity certification for the Wagga Wagga LEP 2008.

Submissions should be sent to:

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Submissions will be accepted up to 5 pm **Wednesday 15 April 2009**.

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Executive summary

The aims of this report are to:

- highlight the provisions of the draft Wagga Wagga Local Environmental Plan (LEP) that relate to biodiversity conservation in the area of land proposed to be biodiversity certified (henceforth: 'the bio-certified area')
- assess, for the purpose of section 126G of the *Threatened Species Conservation Act 1995* (TSC Act), whether the LEP (or LEP with amendments) and other relevant measures, will lead to an overall improvement or maintenance of biodiversity values, including threatened species and communities.

Biodiversity certification of the proposed bio-certified area of the LEP by the Minister for Climate Change and the Environment would mean that any development in the proposed bio-certified area (for which development consent is required under the LEP), is for the purposes of Part 4 of the *Environmental Planning and Assessment Act 1979* taken to be development that is not likely to significantly affect any threatened species, population, or ecological community or its habitat.

That is, biodiversity certification replaces site-by-site, development-by-development assessment of threatened species under the TSC Act with a landscape-wide strategic assessment. In general, it removes the need to undertake detailed threatened species impact assessments at the development application stage for the bio-certified area of the LEP, reducing government regulation whilst improving or maintaining biodiversity.

Biodiversity values

Biodiversity values in the proposed bio-certified area include five different vegetation types, four of which may conform to the definition of one of two endangered ecological communities (EECs): Box-Gum Woodland and Inland Grey Box Woodland.

Additionally, a range of threatened species listed under both State and Commonwealth legislation occur within the bio-certified area, including the nationally endangered Swift Parrot, Superb Parrot, and a range of woodland birds.

Protection mechanisms

Identified features of high conservation value, referred to in this report as the 'Natural Areas', are now to be retained through the application of Environmental Zones (E2, E4), the Public Recreation Zone (RE1) and the Transition Zone (RU6) in the draft LEP. It should be noted that the *Native Vegetation Act 2003* applies to these zones. Future urban and industrial development is directed away from these areas.

Additionally:

- the LEP includes Clause 7.3: *Environmentally Sensitive Lands – Biodiversity* which will apply to the Natural Areas
- the LEP includes Clause 5.9 *Preservation of trees or vegetation*, which will apply to areas outside the Natural Areas that are zoned Residential, Industrial and Business
- for one of the most significant conservation sites in the area, at Lloyd, in addition to an E2 zoning, private landholders have agreed to enter into Planning Agreements to transfer the land to Wagga Wagga City Council (WWCC) and WWCC have agreed to prepare Conservation Management Plans for these areas.

The Department of Environment and Climate Change NSW (DECC) also makes further recommendations for amendments to the LEP at Section 4.3.

Key outcomes

- 933 hectares of EECs and threatened species habitat, representing 91% of all extant vegetation, are to be retained, and development directed away from these areas through appropriate zoning.
- A further 36 hectares (3% of all extant vegetation) of vegetation is to be retained through other measures, including conditions attached to existing Development Consents, and protection through the Development Control Plan.
- All high conservation value (or 'red flag') areas are to be retained through these measures.
- Offset targets calculated from the potential loss of low conservation value vegetation (60 hectares or 6% of extant vegetation) are all met within the proposed bio-certified area.
- High conservation value vegetation and habitat is linked and consolidated into a viable network of reserves and other natural areas where protection of the environment is a key objective of the proposed LEP zoning.

1. Introduction

The aims of this report are to:

- highlight the provisions of the draft Wagga Wagga Local Environmental Plan (LEP) that relate to biodiversity conservation in the area of land proposed to be biodiversity certified (henceforth: 'the bio-certified area')
- assess, for the purpose of section 126G of the *Threatened Species Conservation Act 1995* (TSC Act), whether the LEP (or LEP with amendments) and other relevant measures, will lead to an overall improvement or maintenance of biodiversity values, including threatened species and communities.

1.1 Overview of biodiversity certification

The NSW Minister for Climate Change and the Environment has the ability to confer certification on an Environmental Planning Instrument (EPI) if the Minister is satisfied that the EPI, in addition to other relevant measures, will lead to the overall improvement or maintenance of biodiversity values, including threatened species.

The primary effect of conferring certification on an EPI is that any development requiring consent (or any activity under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) not requiring consent) is taken to be development that is not likely to significantly affect threatened species. This removes the need to address the Assessment of Significance for threatened species (s.5A of the EP&A Act), prepare species impact statements or meet concurrence/consultation requirements involving the Director General of the Department of Environment and Climate Change NSW (DECC) or Minister for Climate Change and the Environment.

The draft Order for Certification, which would be signed by the Minister if biodiversity certification were to proceed, is at Appendix 2.

Certification has many practical advantages. It allows up-front strategic assessment of conservation values, enables informed community participation in planning decisions, reduces the potential for land-use conflict, and creates greater certainty of planning outcomes for development projects in areas zoned for development.

Most significantly, it offers great opportunities to put in place planning strategies that will assist in reversing the long-term decline in biodiversity so that biodiversity values may be improved or maintained.

2. Description of the planning area

2.1 Description of the general environment

The draft Wagga Wagga LEP applies to the entire 482,160 hectares of the Wagga Wagga Local Government Area (LGA). The region is located in the South West Slopes bioregion of New South Wales and has an expanding population of approximately 60,000.

The proposed bio-certified area is a relatively small area of 10,655 hectares around the city of Wagga Wagga that is considered to be the future urban and industrial growth area. It includes the existing urban area, and proposed future urban and industrial release areas. The entire Wagga Wagga LGA, and proposed bio-certified area, is shown in Figure 1.

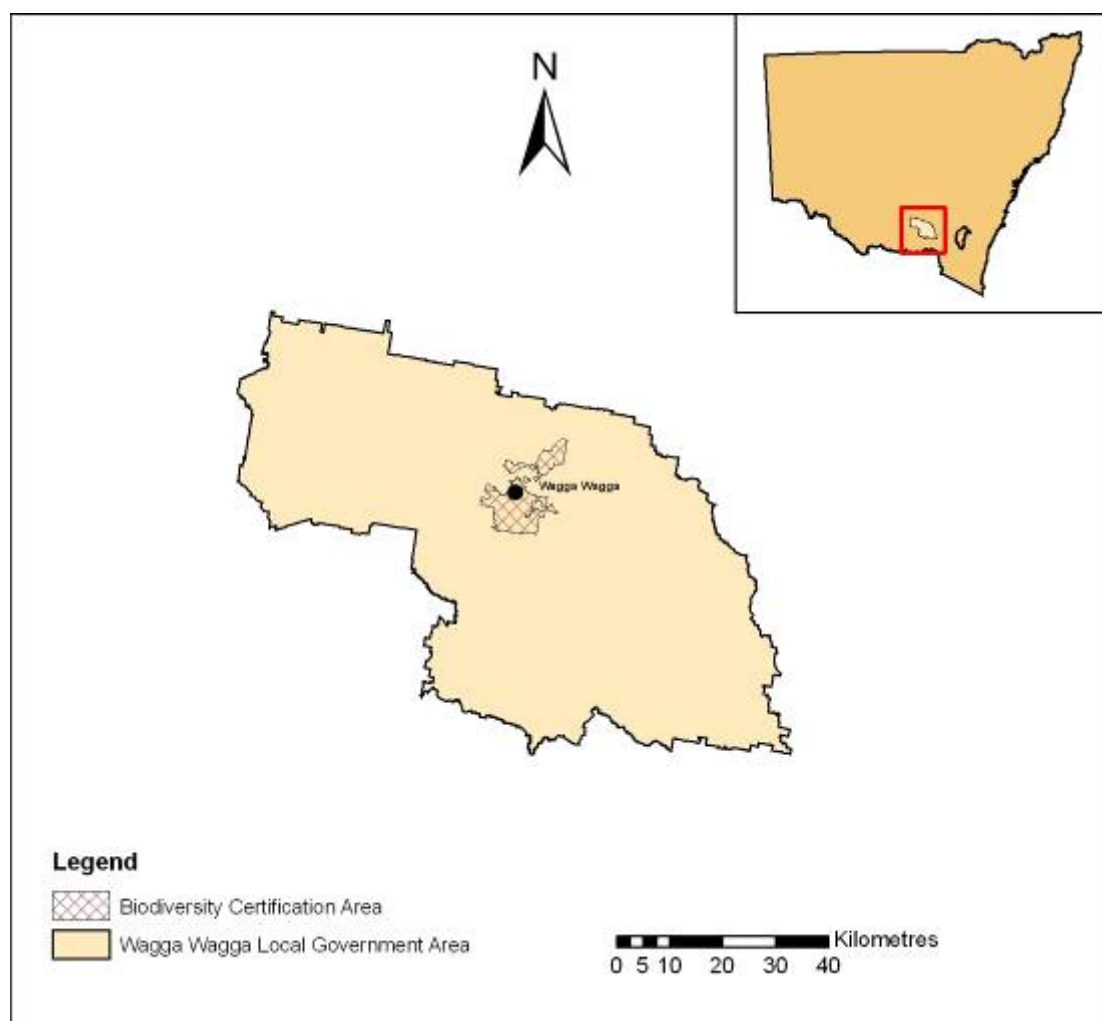


Figure 1: Wagga Wagga Local Government Area and area proposed for biodiversity certification

The South West Slopes bioregion is one of the most cleared and fragmented in NSW (NSW National Parks and Wildlife Service, 2003). Much of the remaining vegetation is restricted to less productive areas (e.g. steep ridgelines and rocky hills), or is in very poor condition due to fragmentation into small patches which are particularly susceptible to degradation through total grazing pressure, increased nutrient loads, and weed invasion. As a result many of the plants and animals that survive in the bioregion are declining, and some are threatened with extinction.

2.2 Vegetation types

Until 2005 there had been no vegetation map for the Wagga Wagga LGA, or the Wagga Wagga urban area. Priday and Mulvaney (2005) developed a modelled vegetation map for the 'pre-clearing' (pre-1750) and 'extant' (or remaining) area of vegetation for the Wagga Wagga LGA, based on 172 floristic plots. The pre-clearing distribution of each community was modelled using a combination of field observations and geology/soil types.

Eighteen (18) vegetation types across the whole Wagga Wagga LGA were identified from the floristic plots and field observations. The comparison of the 'pre-clearing' area and the extant or remaining area for each vegetation type enables the conservation status of these vegetation types to be derived. DECC considers that 'over-cleared' vegetation types are those with more than 70% of their original extent cleared.

This proposal for biodiversity certification adopts the Priday and Mulvaney (2005) vegetation classification in its analysis of impacts of the LEP, as it remains the only map that exists for the Wagga Wagga area. However, Benson (in press) has developed a classification system for the vegetation of the South West Slopes bioregion, and this classification is used in the regulatory tools used of both the *Native Vegetation Act 2003* and the TSC Act. Equivalents to Benson's vegetation communities are provided (below) for each vegetation type of Priday and Mulvaney (2005).

In the area proposed for biodiversity certification, there are five vegetation communities present:

- River Red Gum Forest
- Yellow Box Woodland
- White Box Woodland
- Grey Box Woodland
- Wagga Wagga Hills Open Forest.

The mapped extent of these communities in Priday and Mulvaney within the bio-certification area was provided as a modelled map, not considered sufficiently accurate for this assessment. Accordingly, Priday and Mulvaney's map has been modified by subsequent reports by Ecological Australia Pty. Ltd. (2007) and Thompson (2007), which are described in Section 4.1.1. Additionally, ground truthing and field observations by officers of DECC and Wagga Wagga City Council (WWCC) have also modified the original map.

The revised extant vegetation map for the area proposed for bio-certification is provided at Figure 2.

Wagga Wagga City Council
Bio-certification Proposal

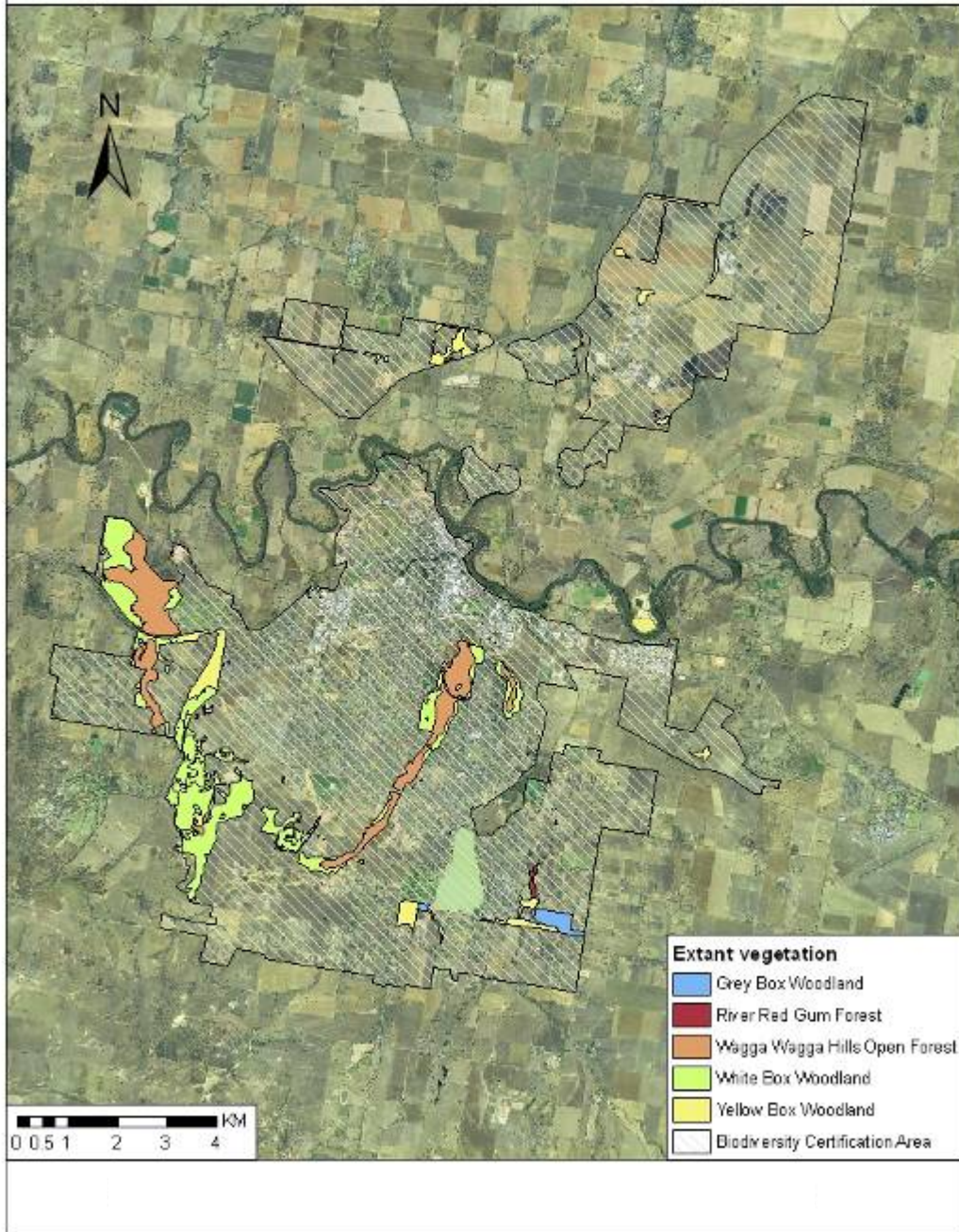


Figure 2: Extant vegetation in the Wagga Wagga proposed bio-certified area (Based on Priday and Mulvaney (2005) modified by Ecological Australia P/L (2007), Thompson (2007), and DECC WWCC field observations.)

2.2.1 River Red Gum Forest

Description

This community is found along the Murrumbidgee River floodplain, and along other creek systems which may be prone to inundation. It may be most equivalent to vegetation community #5 of Benson (in press). It is characterised by the dominant tree species River Red Gum (*Eucalyptus camaldulensis*), but other tree species including Yellow Box (*E. melliodora*) and Grey Box (*E. microcarpa*) may occur.

Status

In the entire Wagga Wagga LGA, approximately 32% of the pre-clearing extent of this community remains. It is not an over-cleared vegetation type and is considered by Priday and Mulvaney (2005) to have a conservation status of Vulnerable.

Bio-certification area

Generally, the area proposed for bio-certification excludes the main area of River Red Gum Forest along the Murrumbidgee River, but some small remnants of the community do occur, including in the Lake Albert area. The area proposed for bio-certification includes 7 hectares of mapped extant vegetation described as River Red Gum Forest.



Figure 3: River Red Gum in the Lake Albert area

2.2.2 Yellow Box Woodland

Description

This community occurs on alluvial terraces above the Murrumbidgee floodplain. It is equivalent to vegetation community #276 of Benson (in press). The dominant tree species is Yellow Box (*E. melliodora*) but other tree species including Blakelys Red Gum (*E. blakelyi*), Grey Box (*E. microcarpa*) and White Box (*E. albens*) may occur.

Status

In the entire Wagga Wagga LGA, approximately 3% of the pre-European extent of this community remains. It conforms to the definition of White Box – Yellow Box – Blakelys Red Gum Woodland (Box-Gum Woodland), listed as an endangered ecological community (EEC) under the TSC Act and under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Bio-certification area

The area proposed for bio-certification includes 161 hectares of mapped extant vegetation described as Yellow Box Woodland.



Figure 4: Yellow Box Woodland, Silvalite Reserve

2.2.3 White Box Woodland

Description

This community occurs as open grassy woodlands in the Wagga Wagga area, generally occurring on lower rising and undulating hills. It is generally equivalent to vegetation community #266 of Benson (in press), although some areas (particularly at Research Station, Red Hill and Pomingalarna) may be more closely aligned with vegetation community #282. The dominant tree species is White Box (*E. albens*) but other tree species may occur including Yellow Box (*E. melliodora*) or Grey Box (*E. microcarpa*) on lower slopes, as well as Blakeley's Red Gum (*E. blakelyi*). White Cypress Pine (*Callitris glaucophylla*) and Kurrajong (*Brachychiton populneus*) may occur on rockier sites, or where the community grades into Wagga Wagga Hills Open Forest. Lightwood (*Acacia implexa*) may be locally common in some areas, and Western Silver Wattle (*A. decora*) is a commonly recorded shrub species.

Status

In the entire Wagga Wagga LGA, approximately 2% of the pre-European extent of this community remains. It conforms to the definition of Box-Gum Woodland, listed as an EEC under the TSC Act, and under the Commonwealth EPBC Act.

Bio-certification area

The area proposed for bio-certification includes 509 hectares of mapped extant vegetation described as White Box Woodland.



Figure 5: White Box Woodland, Silvalite Reserve

2.2.4 Grey Box Woodland

Description

This community occurs as open grassy woodlands, and is generally equivalent to vegetation community #76 of Benson (in press). It is dominated by Grey Box (*E. microcarpa*) and displays a limited distribution near (and generally east of) Lake Albert, including parts of Rawlings Park. It is also found further westwards in the Wagga Wagga LGA.

Status

In the entire Wagga Wagga LGA, approximately 1% of the pre-European extent of this community remains. It conforms to the definition of Inland Grey Box Woodland, listed as an EEC under the TSC Act.

Bio-certification area

The area proposed for bio-certification includes 31 hectares of mapped extant vegetation described as Grey Box Woodland.



Figure 6: Grey Box Woodland, Rawlings Park

2.2.5 Wagga Wagga Hills Open Forest

Description

This community occurs as low open forests dominated by White Cypress Pine (*C. glaucophylla*), White Box (*E. albens*) and Blakelys Red Gum (*E. blakelyi*). It is generally equivalent to vegetation community #346 of Benson (in press). It is found on the rising hills and higher ridges from Willans Hill south and westwards through to Pomingalarna, including two relatively small patches in the Lloyd area.

Status

In the entire Wagga Wagga LGA, approximately 15% of the pre-European extent of this community remains. Although not specifically listed under either the TSC Act or EPBC Act, parts of this community may conform to the definition of Box-Gum Woodland, listed as an EEC under both Acts. An individual site assessment would be required to determine whether any particular site conformed to the definition of the listed community.

Bio-certification area

The area proposed for bio-certification includes 321 hectares of mapped extant vegetation described as Wagga Wagga Hills Open Forest.



Figure 7: Wagga Wagga Hills Open Forest, Pomingalarna Reserve

2.3 Threatened species

Within the proposed bio-certified area, only one species of threatened flora, the Woolly Ragwort (*Senecio garlandii*), might be expected to occur. However, the biodiversity studies (Ecological Australia Pty Ltd, 2007) found that this species would not be expected to occur in any of the 'release areas' (refer to Section 4.1.1).

Fifteen threatened species of fauna listed under the TSC Act might be expected to occur. These species are listed below, with species marked with an asterisk (*) also listed under the Commonwealth EPBC Act.

Further information on the species, including their habitat descriptions, threats, and recovery strategies, can be found at www.threatenedspecies.environment.nsw.gov.au.

Endangered species

- Bush-Stone Curlew *Burhinus grallarius*
- Swift Parrot *Lathamus discolor* *
- Regent Honeyeater *Xanthomyza phrygia* *
- Booroolong Frog *Litoria booroolongensis* *

Vulnerable Species

- Grey-crowned Babbler *Pomatostomus temporalis temporalis*
- Diamond Firetail *Stagonopleura guttata*
- Brown treecreeper *Climacterus picumnus victoriae*
- Painted Honeyeater *Grantiella picta*
- Glossy Black Cockatoo *Calyptorhynchus lathami*
- Superb Parrot *Polytelis swainsonii*
- Turquoise Parrot *Neophema pulchella*
- Squirrel Glider *Petaurus norfolcensis*
- Brush-tailed Phascogale *Phascogale tapoatafa*
- Little Pied Bat *Chalinolobus picatus*
- Yellow-bellied Sheath-tail Bat *Saccolaimus flaviventris*

The biodiversity studies (Ecological Australia Pty Ltd, 2007) document the presence of habitat for these species in the 'release areas' within the proposed bio-certified area (refer to Section 4.1.1). These studies found that the Regent Honeyeater, Glossy Black Cockatoo, Brush-tailed Phascogale and Booroolong Frog would not be expected to occur in any of the 'release areas'.

2.4 Threatened populations

In the TSC Act, the Squirrel Glider *Petaurus norfolcensis* is listed as a vulnerable species throughout NSW. However, the population in the Wagga Wagga LGA was considered to be at a higher level of threat (i.e. in immediate danger of extinction) and in 2000 was classified as an endangered population under the Act.

Claridge and van der Ree (2004) consider that the Final Determination of the NSW Scientific Committee to list this population was made largely on the basis of limited point locality records of the species and an assessment of the extent of habitat

clearing. The authors consider that the decision to designate the population as endangered was valid at the time and do not dispute the fact that squirrel gliders within the Wagga Wagga LGA are at serious risk of extinction. However, recent surveys have revealed that the species is more widespread across the South West Slopes bioregion of NSW than initially recognised. Despite this situation, the future conservation status of the squirrel glider is still uncertain due to extensive historic clearing and fragmentation of habitat as well as ongoing incremental loss and degradation of key resources.

The locations where Squirrel Gliders have been recorded in the South West Slopes are listed in Claridge and van der Ree (2004). Locations within the Wagga Wagga urban area are shown in Table 1.

Table 1: Recorded locations of squirrel gliders in the Wagga urban area

Location	Planning outcome in draft WW LEP
Wiradjuri Reserve	Zoned RE1 (not included in proposed bio-certified area) Neighbouring land (included in proposed bio-certified area) translated from 7c (Wildlife Habitats) to E2 zone.
Wilks Park	RE1 (not included in proposed bio-certified area)
Silvalite Reserve	E2 (included in proposed bio-certified area)
Private Property (Lloyd)	E2 / R1 (included in proposed bio-certified area) Further discussed in Section 4.2.5.

Since the Claridge and van der Ree report was released in 2004, the Squirrel Glider has been recorded at other sites including the grounds of Charles Sturt University and several sites along the Murrumbidgee River (David Read, WWCC, pers. comm.). None of these are within the proposed bio-certified area.

The extent of the listed Endangered Population is legally defined by the boundaries of the Wagga Wagga LGA. The biodiversity studies undertaken by Ecological Australia Pty Ltd (2007) documented the presence of habitat for this endangered population in different parts of the proposed bio-certified area. These studies confirmed that the Lloyd area is the only 'release area' where the species has been recorded.

2.5 Endangered ecological communities

2.5.1 Box-Gum Woodland

The White Box Yellow Box Blakely's Red Gum Woodland (commonly referred to as Box-Gum Woodland) is an open woodland community (sometimes occurring as a forest formation), in which the most obvious species are one or more of the following: White Box (*Eucalyptus albens*), Yellow Box (*E. melliodora*) and Blakely's Red Gum (*E. blakelyi*). Intact sites contain a high diversity of plant species, including the main tree species, additional tree species, some shrub species, several climbing plant species, many grasses and a very high diversity of herbs. The community also includes a range of mammal, bird, reptile, frog and invertebrate fauna species.

Intact stands that contain diverse upper and mid-storeys and ground layers are rare. Modified sites include, but are not limited to, the following:

- areas where at least one of the main tree species is present ranging from an open woodland to a forest structure, and the ground layer is predominantly composed of exotic species

- sites where the trees have been removed and only the grassy ground layer and some herbs remain.

The Commonwealth Government listing of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland differs from the NSW listing. Areas that are part of the Commonwealth Government listed ecological community must have either:

- an intact tree layer and predominately native ground layer, or
- an intact native ground layer with a high diversity of native plant species but no remaining tree layer.

In the proposed bio-certified area, sites within one of two vegetation types - White Box Woodland, and Yellow Box Woodland – in good condition, will conform to the NSW definition of Box-Gum Woodland, and are likely to conform to the Commonwealth definition. Additionally, sites within the Wagga Wagga Hills Open Forest may conform to either definition of Box-Gum Woodland, particularly where the site is dominated by White Box or Blakely's Red Gum.

The biodiversity studies (Ecological Australia Pty Ltd, 2007) document the extent and condition of these vegetation types across the release areas. The vegetation map shows the presence of these vegetation types across the proposed bio-certified area.

2.5.2 Inland Grey Box Woodland

Inland Grey Box Woodland includes those woodlands in which the most characteristic tree species, Inland Grey Box (*Eucalyptus microcarpa*), is often found in association with Bimbil Box (*E. populnea* subsp. *Bimbil*), White Cypress Pine (*Callitris glaucophylla*), Kurrajong (*Brachychiton populneus*), Buloke (*Allocasuarina luehmannii*) or Yellow Box (*Eucalyptus melliodora*), and sometimes with White Box (*Eucalyptus albens*). Shrubs are typically sparse or absent, although this component can be diverse and may be locally common, especially in drier western portions of the community. A variable ground layer of grass and herbaceous species is present at most sites. At severely disturbed sites the ground layer may be absent. The community generally occurs as open woodland 15–25 m tall, but in some locations the overstorey may be absent as a result of past clearing or thinning, leaving only an understorey or ground layer.

In the Wagga Wagga area, Priday and Mulvaney (2005) describe an unusual disjunct stand of Grey Box Woodland to the east of Lake Albert that includes the area at Rawlings Park. This conforms to the definition of the EEC.

3. Description of protection mechanisms

3.1 Zones

Of the 1029 hectares of extant vegetation within the proposed bio-certified area, 933 hectares (91%) are zoned in the draft Wagga Wagga Local Environmental Plan 2008 (dWWLEP) as either E2, E4, RE1, or RU6, as shown in Figure 8. For the purpose of this report, these areas are termed 'Natural Areas', and are shown in Figure 9.

These Natural Areas include all features of high conservation value (and those that conform to the definition of 'red-flag' areas within the *BioBanking Assessment Methodology*), except for one area at Gumly Gumly (protected through the conditions of an existing Development Consent) and one area at Lloyd (to be protected through the Development Control Plan (DCP), refer to Section 4.2.5 and relevant measure 3a in Section 4.4).

Importantly, clearing within these zones is controlled by the *Native Vegetation Act 2003* and this will require an 'improve or maintain' outcome for any applications for clearing of native vegetation unless exempt or excluded (refer to Section 3.1.5).

On the basis of the spatial application of these zones, and their provisions, DECC considers that future development is directed away from areas of high conservation value, and that these areas are retained through the provisions of the dWWLEP.

3.1.1 Zone E2 – Environmental Conservation

Of all the zones available in the new Standard Instrument LEP (other than E1 – National Parks and Nature Reserves), this is the zone which provides the greatest protection, with its first objective being to 'protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values', with the second objective being to prevent development that could destroy those values. WWCC have added a third objective 'to provide for recreational activities that promote enjoyment and appreciation of the natural environment, consistent with the protection of those values'.

No activities are permitted without consent. A range of land use activities are permitted with consent. The view of DECC is that, of these activities, 'bee keeping, extensive agriculture, home business, home occupation and water recreation structures' should be removed from this list. DECC will make this request in its submission to the exhibition of the dWWLEP.

The E2 zone has been applied at:

- Red Hill (previously zoned 1b – Rural small holdings)
- Research Station (previously zoned 5a - Special Uses)
- Silvalite (previously zoned 6a - Open Space)
- Lloyd (previously zoned 1e - Future Urban and 7b - Hillscape)
- Bourkelands Ridge (previously zoned 6a - Open Space and 7b - Hillscape).

3.1.2 Zone E4 – Environmental Living

The E4 zone provides for low-impact residential development in areas with special ecological, scientific or aesthetic values, and aims to ensure that residential development does not have an adverse effect on those values. WWCC have added

an additional objective to 'provide for development that can assist in the enhancement, management and restoration of those values'.

Only home occupations are permitted without consent. The E4 zone allows the council to permit a range of land-use activities with consent, as shown in the dWWLEP. It is the view of DECC that these are appropriate. All other land-use activities are prohibited.

The E4 zone has only been applied in one area of high conservation value, at Boorooma East. The site contains an area of Box-Gum Woodland on steep rocky slopes that are generally unsuitable for medium or high density residential development. Although parts of the site have tree cover at or above benchmark densities, the site is dominated by an exotic ground layer.

DECC agrees with WWCC that the choice of an E4 zone is appropriate because it may, potentially, allow existing landholders to build a dwelling house on each existing lot, or to develop proposals for some very limited number of dwelling houses that, through innovative layout of building envelopes and required infrastructure, will not impact on the overall 'improve or maintain' outcome for biodiversity.

The effect of relevant measure 3c in Section 4.4, requiring that any building envelopes are not to be located where there are existing mature trees, and the application of Clause 7.3 of the dWWLEP, will ensure that development associated with the E4 zoning will have an acceptably low impact.

3.1.3 Zone RE1 – Public Recreation

The RE1 zone has the objective of enabling 'land to be used for public open space or recreational purposes' and also to 'protect and enhance the natural environment for recreational purposes'. WWCC have added an additional objective to 'protect and enhance the natural environment generally and to assist in ensuring that areas of high ecological, scientific, cultural or aesthetic values are maintained or improved'.

Only environmental facilities, environmental protection works and roads are permitted without consent. WWCC has not added any further land uses as activities permitted without consent. The RE1 zone allows the council to permit a range of land-use activities with consent. It must be borne in mind that the zone applies to a wide range of reserves, and that these uses are appropriate for the zone as a whole.

The RE1 zone has only been applied to a limited number of Natural Areas with high conservation values, including the Crown reserves at

- Pomingalarna
- Willans Hill
- Rocky Hill
- Rawlings Park and Lake Albert area.

DECC can recommend biodiversity certification with these areas zoned as RE1, given that any clearing in the RE1 zone is controlled by the *Native Vegetation Act 2003*, and, that Clause 7.3 of the dWWLEP applies to the Natural Areas.

Clause 14 of the Native Vegetation Regulation 2005 makes clear that the construction, operation and maintenance of infrastructure by Crown land managers does not require consent under the Act. However, this does not apply to the clearing of native vegetation that comprises a threatened species, or a component of a threatened population or threatened ecological community, listed under the TSC Act

or is likely to comprise habitat of such a threatened species. Similarly, clause 18A(2)(b) applies to works by councils.

Given that the Crown reserves in Wagga zoned RE1 include EECs or habitats of threatened species, DECC is satisfied that the management of Crown reserves zoned RE1 would result in an overall 'improve or maintain' outcome for biodiversity within the proposed bio-certified area. Refer also to relevant measure 1 in Section 4.4.

3.1.4 Zone RU6 – Transition

The RU6 zone provides for the protection and maintenance of land that provides a transition between rural and other land uses, and aims to minimise conflict between land uses. WWCC had included an additional objective of 'providing for revegetation and ecosystem restoration activities' in an earlier draft of the LEP, as WWCC intended that these 'buffer areas' will be predominantly vegetated, with protection of existing trees and restoration and re-vegetation using locally native species. DECC considers it important that this objective be re-instated.

Environmental protection works, extensive agriculture, home occupations, home business, and roads are permitted without consent. Dwelling houses are permitted with consent, as are funeral chapels, home industries, and timber and building supplies. A range of land-use activities are prohibited.

The RU6 zone has only been applied in one area of high conservation value, for an area of roadside vegetation along Trahairs Road at Bomen. Importantly, clearing in the RU6 Transition zone is controlled by the *Native Vegetation Act 2003*.

Refer to Section 4.2.13 for further description of the Bomen area, and to relevant measure 3b in Section 4.4.

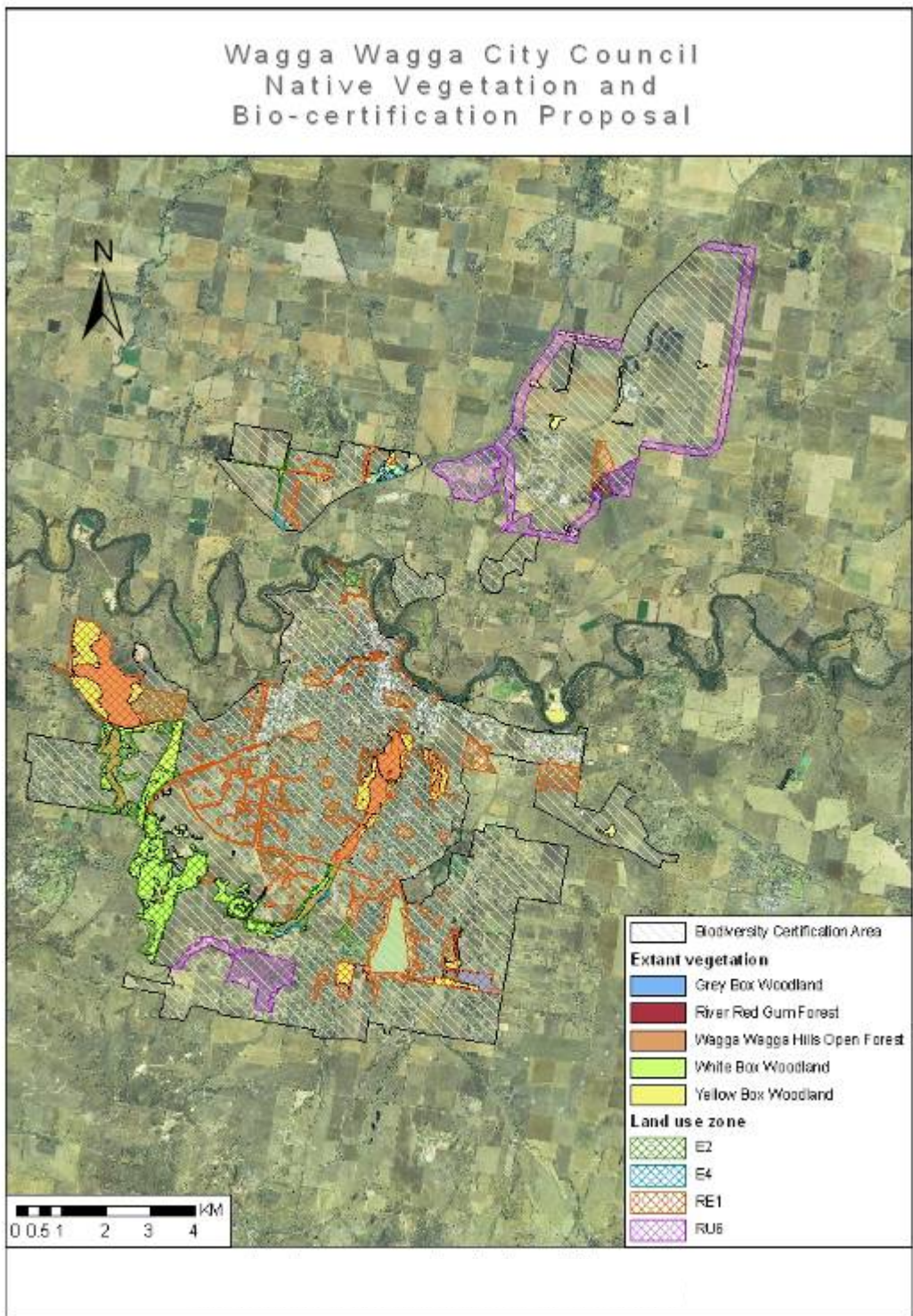


Figure 8: Extant vegetation, and zoning, in proposed Wagga Wagga bio-certified area

Wagga Wagga City Council
Native Vegetation and
Bio-certification Proposal

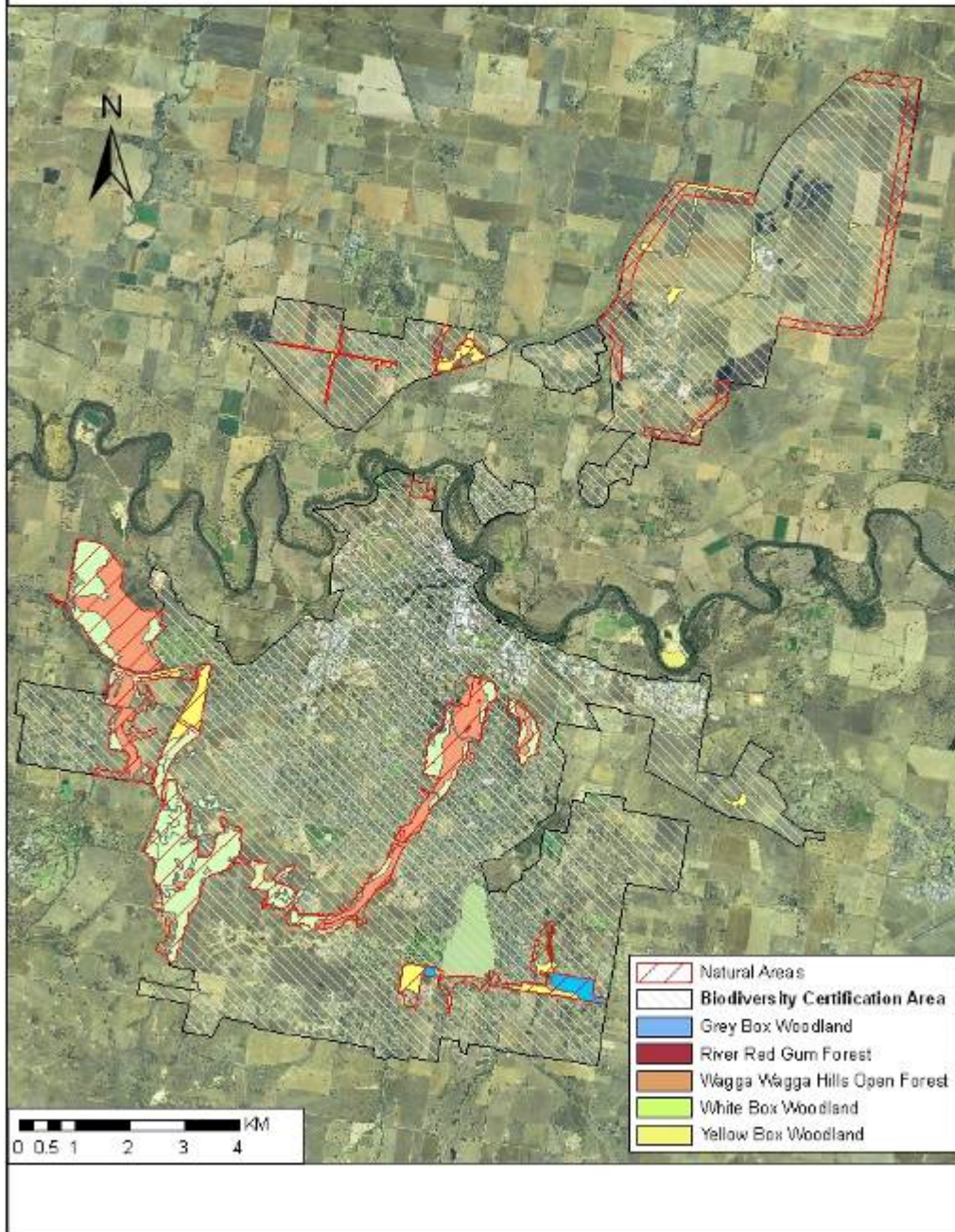


Figure 9: Natural Areas retained in the dWWLEP

3.1.5 Zones, and the operation of the Native Vegetation Act

The *Native Vegetation Act 2003* regulates the clearing of native vegetation in NSW, but does not apply to Residential, Business, or Industrial Zones. It does apply to Environment, Recreation and Rural zones, designated E, RE and RU in LEPs.

Despite that fact that the Minister may choose to biodiversity certify part of the Wagga Wagga LEP under section 126G of the TSC Act, the Native Vegetation Act will still apply to the E, RE and RU zones within the proposed bio-certified area.

This means that any proposed clearing of native vegetation in these zones, unless exempt or excluded under Divisions 2, 3 and 4 of Part 3 of the Native Vegetation Act, or clause 6 of the Native Vegetation Regulation, will require a Property Vegetation Plan or development consent under that Act. The clearing that can occur under these divisions of the Act may present some threat to the overall improve or maintain outcome for biodiversity, and so is considered in detail below.

Clearing under Division 2 of Part 3 of the Native Vegetation Act

Clearing under **section 19** of the *Native Vegetation Act 2003* allows for the clearing of non-protected regrowth. This could, potentially, limit the effectiveness of ecosystem restoration within retained areas and jeopardise the overall improve or maintain outcome for biodiversity. Section 10(1)(b) of the Native Vegetation Act provides for environmental planning instruments to identify protected regrowth. Recommendation 1 in Section 4.3 of this report recommends that consideration be given to the identification of regrowth in Natural Areas in the proposed bio-certified area as 'protected regrowth'.

Clearing under **section 20** of the Act allows for clearing of some low condition vegetation comprising ground cover. This will have little or no impact in the Natural Areas within the proposed bio-certified area. Most low condition vegetation is in the development zones.

Clearing under Division 3 of Part 3 of the Native Vegetation Act

Clearing under **section 22** of the *Native Vegetation Act 2003* permits clearing for routine agricultural management activities (RAMAs). RAMAs are set out in section 11 of the Act, and Part 4 of the Native Vegetation Regulation 2005. DECC considers that these will have an acceptably low impact on the overall improve or maintain outcome for biodiversity, as described below.

Of the RAMAs set out in section 11 of the Act, section 11(a) refers to activities of 'rural infrastructure', which is of limited relevance to the Natural Areas within the proposed bio-certified area. Only zone RU6 is a rural zone. Section 11(d) allows a private landholder to collect firewood for non-commercial use only, which is an activity that has very limited scope in the Natural Areas. DECC considers that the remainder of the RAMAs in section 11 have an acceptably low level of risk.

Section 11(2) of the Act provides for RAMAs to be also listed in the Native Vegetation Regulation 2005, and these additional RAMAs are listed under Part 4 of the Regulation. Of these, the effects of the RAMAs at clauses 14 and 18A of the Regulation are discussed in Section 3.1.3 and in relevant measure 1 in Section 4.4. The RAMA listed under clause 16 of the Regulation only applies to rural infrastructure, and is likely to be of limited relevance to the areas shown in Figure 8. The remainder of the RAMAs listed under Part 4 of the Regulation are considered by DECC to have an acceptably low level of risk to the overall improve or maintain outcome for biodiversity.

Clearing under **section 23** of the Act is not relevant to the proposed bio-certified area.

Clearing under **section 24** of the Act, sustainable grazing of native vegetation, may have some impact on the retained areas within the proposed bio-certified area. Once the:

- Conservation Management Plan, as will be set out in the Planning Agreements for the Lloyd area (see Section 3.4), and
- the requirement for the Department of Lands to prepare Plans of Management for Crown reserves, with public consultation in accordance with Division 6 of Part 5 of the *Crown Lands Act 1989*

have been implemented, this impact will be limited.

Clearing under Division 4 of Part 3 of the Native Vegetation Act

Clearing under **section 25** of the *Native Vegetation Act 2003* is not likely to have significant impact on the Natural Areas within the proposed bio-certified area. Many of the activities listed under section 25 of the Act have a process for environmental assessment built in.

Clearing under clause 6 of the Native Vegetation Regulation

Additionally, clause 6 of the Native Vegetation Regulation 2005 provides for the erection of a dwelling house to not require a separate consent under the Native Vegetation Act. This has relevance only within the E4 zone at Boorooma East. Relevant measure 3c in Section 4.4 ensures that the impact of this is negligible.

In effect, native vegetation clearing in E2, E4, RE1 and RU6 zones within the bio-certification area would require consent under the Native Vegetation Act, unless exempt or excluded under Divisions 2, 3 and 4 of Part 3 of that Act, or clause 6 of the Native Vegetation Regulation. Taking into account Recommendation 1 in Section 4.3, and Relevant Measure 1 in Section 4.4, DECC is confident that the impact of these exemptions and exclusions will be acceptably low. DECC is also confident that any such consent would result in an improve or maintain outcome for biodiversity, through the application of Part 5 of the Regulation.

3.2 Overlays

The dWWLEP includes at Clause 7.3, a 'Biodiversity overlay'. (Other 'Natural Resource Management' overlays are provided at clauses 7.4, 7.5, and 7.6.) Clause 7.3 applies to the Natural Areas within the proposed bio-certified area.

This is important because the zonings of E2, E4, RE1 and RU6 still provide for some land uses to be permitted with consent. Clause 7.3:

- has objectives that are appropriate to the 'Natural Areas', to protect biological diversity and ecological processes and encourage the recovery of threatened species
- ensures development consent must not be granted unless the applicant has submitted a report with the Development Application that addresses identification of adverse impacts on biodiversity, and a description of proposed measures taken to ameliorate the adverse impacts
- ensures that if the consent authority considers that the development will cause an adverse impact then it cannot grant development consent unless satisfied the development meets the objectives of the clause, is designed to avoid potential impacts as far as practicable, and offsets any adverse impact through the restoration of a disturbed site.

Within the proposed bio-certified area, Clause 7.3 only applies to the Natural Areas.

3.3 Clause 5.9 – Preservation of trees or vegetation

The dWWLEP has included Optional Clause 5.9, Preservation of trees or vegetation. This clause, provided in the Standard Instrument and unable to be amended by council, ensures that the removal of trees or native vegetation is an activity that requires consent from council.

This does not apply to the clearing of native vegetation that is authorised by development consent or a property vegetation plan under the *Native Vegetation Act 2003* or that is otherwise permitted under Division 2 or 3 of Part 3 of that Act.

In effect, this means that Clause 5.9 does not apply to zones where the Native Vegetation Act applies. In the case of the proposed bio-certified area, Clause 5.9 will apply to all zones other than E, RE, and RU zones unless in relation to activities under section 25 of the Act.

While these zones contain all of the vegetation in the proposed bio-certified area that DECC considers to be of high conservation value, the other zones (to which Clause 5.9 applies) do contain other vegetation, including paddock trees, and trees and vegetation in house-lots and open space areas and parks.

The clause will ensure that council consent is required for any impacts on this vegetation. The clause requires council to develop a DCP to 'prescribe the trees or other vegetation to which this clause applies by reference to species, size, location or other manner'. DECC will work with council to develop a DCP which addresses relevant issues, including:

- descriptions of the vegetation communities with special emphasis on vegetation and trees that may have derived from one of the two EECs in the area
- establishing a process whereby losses of vegetation are avoided where possible, or minimised to the fullest extent practicable.

The adoption of this DCP has been included as relevant measure 3d in Section 4.4.

DECC does not consider it necessary for the council to mandate any offsets for the clearing of, or impacts on, vegetation that may be authorised under Clause 5.9. The improvements in vegetation extent and quality, described in Section 4.2 and quantified in Appendix 1, still provide for an overall improve or maintain outcome for biodiversity for the proposed bio-certified area as a whole. Additionally, DECC will work with council to develop an appropriate DCP. Refer to relevant measure 3d in Section 4.4.

3.4 Planning agreements

The most significant natural area within the release areas is Lloyd, described in Section 4.2.5. Private landholders of the proposed E2 zone in the Lloyd area have indicated a willingness to enter into a Planning Agreement, under section 93F of the *Environmental Planning and Assessment Act 1979*, with WWCC to ensure that these lands are transferred to WWCC, and that WWCC will prepare and implement a Conservation Management Plan for the area.

Entering into these Planning Agreements will be critical in the restoration and conservation of the site, and in ensuring that an improve or maintain outcome for the Lloyd site, and the wider Wagga Wagga area, can be achieved. This matter is included as relevant measure 2 in Section 4.4.

3.5 Recommendations, relevant measures, and conditions

In addition to the provisions of the dWWLEP, this bio-certification proposal includes:

- a number of recommendations for amendments to the LEP prior to certification (Section 4.3)
- consideration of a number of relevant measures in addition to the LEP (Section 4.4)
- a condition of biodiversity certification (Section 4.5).

4. Assessment of the biodiversity certification proposal

4.1 How biodiversity values have been assessed

4.1.1. Biodiversity studies for 'release areas'

The Wagga Wagga City Council commissioned studies of the biodiversity of all 'release areas' identified in the Wagga Wagga Spatial Plan (WWCC 2007), and these are shown in Figure 10.

The areas shown in Figure 10 represent the areas where WWCC proposed zoning changes will result in increased land-use intensity or development, and which may have had impacts on the extent or quality of native vegetation, including threatened ecological communities, as well as habitat for threatened species or communities.

These studies (Ecological Australia Pty. Ltd. 2007) preceded the introduction of the *BioBanking Assessment Methodology*. However, they followed a methodology developed by DECC and endorsed by WWCC that assessed an 'improve or maintain' outcome.

The methodology used the same thresholds as those employed in the biodiversity assessment chapter of the *Environmental Outcomes Assessment Methodology* (EOAM), pursuant to Part 5 of the Native Vegetation Regulation 2005. This seeks to ensure improve or maintain outcomes for native vegetation. This is broadly similar to the *BioBanking Assessment Methodology* which was developed subsequently.

The ecological studies were tasked with identifying:

- i. over-cleared vegetation types, or EECs, or vegetation in over-cleared landscapes that were in medium-good condition, and ensure that these were protected
- ii. vegetation other than that in (i) above, and determining whether this clearing would be within the thresholds set out in the Threatened Species Tool¹
- iii. where this potential clearing was within the thresholds set out in (ii) above, whether this would be adequately offset by the areas identified and protected in (i) above.

Of all the areas subject to the ecological studies, DECC considered the Lloyd area to be by far the most significant. Previous studies (Mullins and Sutherland 2002) had confirmed that the site contained large areas of Box-Gum Woodland, some of it in very good condition, and provided habitat for a range of threatened species. The studies by Ecological Australia P/L (2007) documented the extent of EECs in medium-good condition. At the request of some landholders in the area, an additional study by Thompson (2007) refined this mapped extent of EECs, by greater field sampling and additional plot data.

The outcome for Lloyd is described in Section 4.2.5 but essentially all areas of woodlands in medium-good condition, totalling 251 hectares, have been retained and protected in an E2 zoning, reinforced by a planning agreement.

The other areas included in the biodiversity studies which had the potential to include areas of high conservation value were Estella (some roadside vegetation along Harris and Pine Gully roads), Boorooma (an area of Box-Gum Woodland) and

¹ The Threatened Species Tool is part of the Property Vegetation Plan Developer, developed as part of the EOAM under Part 5 of the Native Vegetation Regulation 2005.

Bomen (some very small and widely dispersed patches of Box-Gum Woodland). All areas of high conservation value at these sites have been protected in one of the zones referred to in Section 3.1, and this is further discussed in Section 4.2.

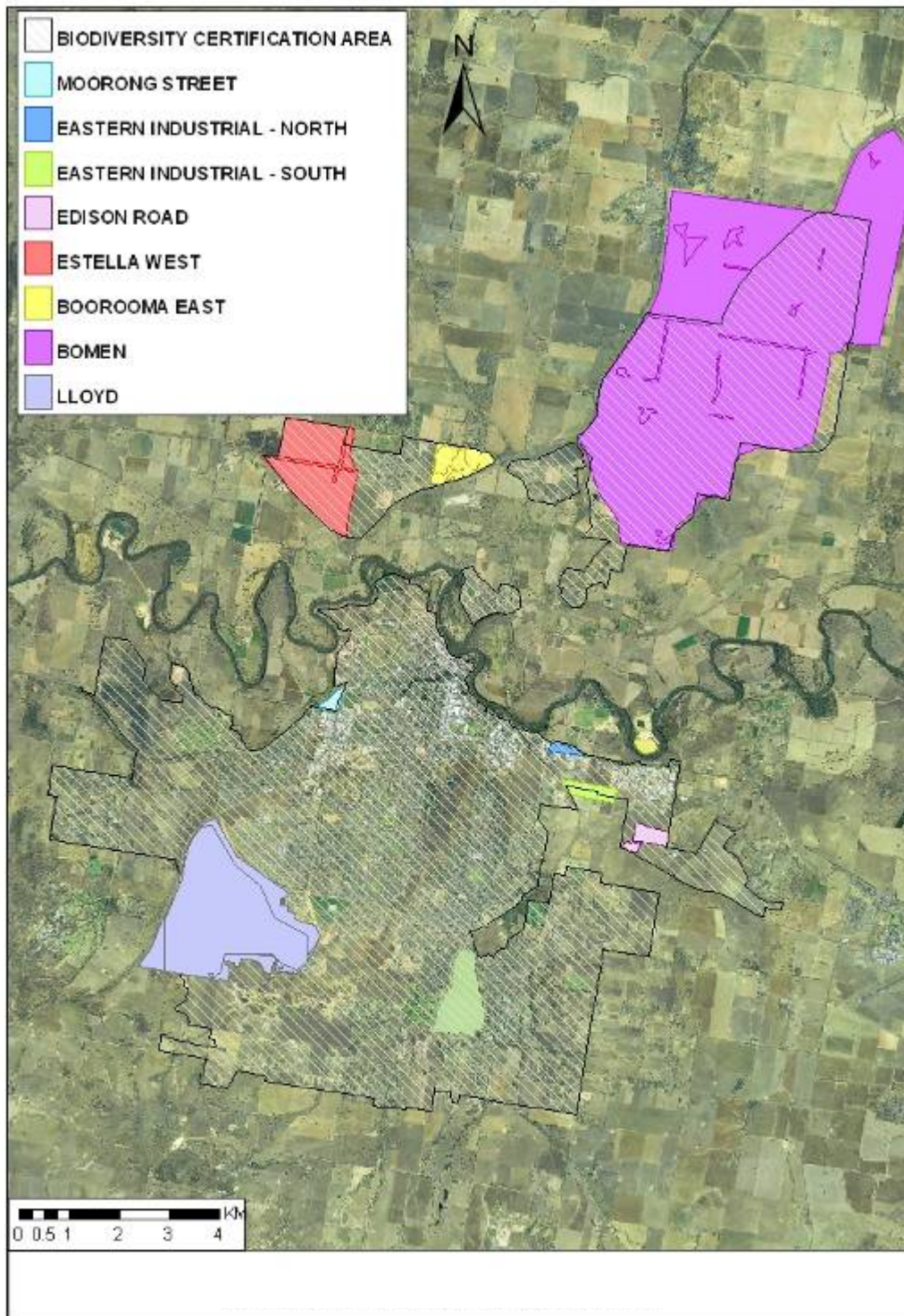


Figure 10: The 'release areas' investigated by Ecological Australia P/L (2007)

4.1.2. Appraisal of biodiversity values outside 'release areas'

Outside the areas included in the biodiversity studies, there are some significant areas of high conservation value vegetation. These include

- Crown reserves at Pomingalarna, Silvalite, Bourkelands Ridge, Willans Hill, Rocky Hill, and Rawlings Park with its neighbouring parks and reserves in the Lake Albert area. The outcomes for these areas are described below, but in four instances (Red Hill, Silvalite, Bourkelands Ridge and Rocky Hill) the dWWLEP provides added protection for vegetation and habitat, and nowhere is protection reduced
- the DECC Wagga Wagga Research Station. The dWWLEP provides significantly enhanced protection for woodlands that occur here and for their regional connectivity (described in Section 4.2.3).

No development of any of these areas is proposed. Consequently, there has not been a rigorous process of biodiversity assessment of these areas. However, the area of each vegetation type within these areas has been assessed, and an estimate of the numbers of large trees (based on benchmark values) given. This is to assist in determining whether offset targets have been met.

The Gumly Gumly estate includes an area of Yellow Box Woodland that provides habitat for the Superb Parrot. This has been the subject of assessment by DECC as part of a referral of a development application. The woodland area is protected through the conditions of this development consent, issued by WWCC, which is now in force. Refer to Section 4.2.10.

While many trees exist throughout the proposed bio-certified area, outside the areas discussed in Section 4.2, DECC considers that:

- their removal would still trigger Clause 5.9 of the dWWLEP, and its associated DCP, and that the DCP provisions will afford appropriate biodiversity protection as they will be developed with DECC (refer to relevant measure 3d in Section 4.4).
- in the event that removal of any tree is granted by WWCC under Clause 5.9 and its associated DCP, these impacts are more than adequately offset through the increased protection of the network of significant habitats in the dWWLEP, described below.

The River Red-Gum forests along the Murrumbidgee floodplain, which are significant for a range of threatened species and the Squirrel Glider endangered population, have been excluded from the area proposed for biodiversity certification. This is because there have not been any ecological studies of this area commissioned for the LEP review process, nor have there been any specific development or conservation proposals reflected in the dWWLEP. It is therefore appropriate for any future development in this area to continue to require threatened species assessment under section 5A of the EP&A Act.

4.2 How the overall 'improvement or maintenance' of biodiversity values has been determined

Across the proposed bio-certified area (Figure 11), DECC believes that the provisions of the dWWLEP will ensure that biodiversity will be improved or maintained overall. The basis for this is described below, with reference to the planning outcome for each relevant site or 'precinct' in the proposed bio-certified area.

For each precinct described below, the potential losses of:

- vegetation patches (defined by area of each vegetation type; and, by the estimate of the number of large trees in each patch), and
- scattered paddock trees,

has been estimated. These are detailed in Appendix 1.

Appendix 1 also demonstrates that these potential losses have been used to generate an offset target based on the Threatened Species Tool. These offset targets are wholly achieved within the proposed bio-certified area through the vegetation retained in the Natural Areas.

4.2.1 Pomingalarna Reserve

This area contains a large and significant remnant of Wagga Wagga Hills Open Forest, with some areas of White Box Woodland on the lower slopes.

In the current LEP the area is zoned 6a (Open Space). This has been directly translated to Zone RE1 (Public Recreation) in the draft LEP. DECC notes that the Native Vegetation Act continues to apply to areas zoned RE1. Refer to Section 3.1.5.

DECC notes that the Department of Lands has signalled its intention to prepare a Plan of Management under Division 6 of Part 5 of the *Crown Lands Act 1989* for the area. DECC also notes that the WWCC has received an Environmental Trust grant for the protection of the Glossy Black Cockatoo habitat at Pomingalarna.

DECC considers that the level of protection afforded by the LEP zoning to the native vegetation in the Pomingalarna area has not changed as a consequence of the introduction of the dWWLEP, and that the new zoning will continue to afford adequate protection to this native vegetation.

4.2.2 Red Hill

This area contains a large and significant remnant of Wagga Wagga Hills Open Forest, with some areas of White Box Woodland on the lower slopes. Despite the area having been subject to extensive disturbance from quarrying and associated roading, the area contains habitat for threatened species and provides critical landscape connectivity between Lloyd and Pomingalarna. The reserve has been the subject of publicly-funded restoration activities in recent years.

In the current LEP the area is zoned 1b (Rural Small-holdings). In the dWWLEP, a zone of E2 (Environmental Conservation) is proposed. As such, the level of protection afforded to the vegetation is significantly enhanced.

DECC considers that the additional protection provided to native vegetation, endangered ecological communities and threatened species habitat through the change of zoning from 1b (Rural small holdings) to E2 (Environmental Conservation) in the Red Hill area contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

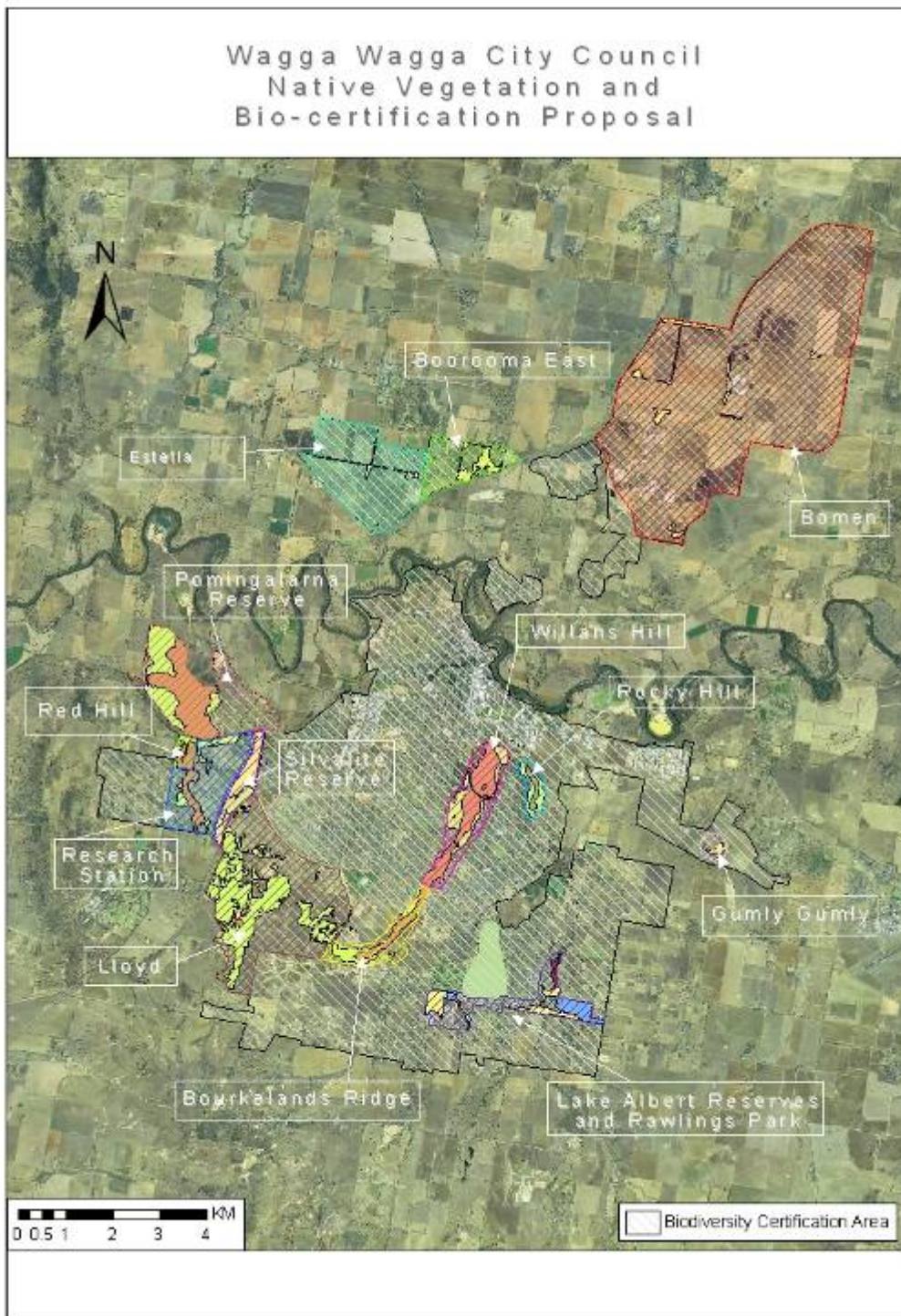


Figure 11: Localities referred to in Section 4.2

4.2.3 Research Station

This area has been used for many years by the NSW Government as an agricultural, forestry and soil conservation research station. It is bisected by a prominent ridgeline which has never been cultivated and retains some tree and native ground cover. As such, it is amenable to the natural restoration of woodland communities and provides a critical link between Red Hill and Silvalite/Lloyd. Additionally, it includes some areas of revegetation and forestry trials that now provide important habitat.

In the current LEP, the site is zoned 5a (Special Uses). In the dWWLEP, a zone of E2 (Environmental Conservation) is proposed for that part of the site that has extant vegetation in good condition and which provides landscape connectivity between Pomingalarna Reserve/Red Hill, and Silvalite Reserve/Lloyd. As such, the level of protection afforded to the vegetation is significantly enhanced. The balance of the Research Station site is zoned SP1, a direct translation of the current 5a zoning.

DECC considers that the additional protection provided to endangered vegetation and threatened species habitat through the change of zoning from 5a (Special Uses) to E2 (Environmental Conservation) in the Research Station area contributes significantly to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.4 Silvalite Reserve

Silvalite Reserve is rare in that it includes an area of alluvial terrace which contains good examples of Yellow Box Woodland. It also includes some very significant areas of White Box Woodland, and these areas provide critical connectivity between Lloyd and Pomingalarna Reserve.

The reserve has been the subject of community-based restoration activities in recent years and is well-known to the Wagga Wagga community as an important natural area.

In the current LEP, the site is zoned 6a (Open Space). In the dWWLEP, a zone of E2 (Environmental Conservation) is proposed. As such, the level of protection afforded to the vegetation is enhanced.

DECC considers that the additional protection provided by the LEP zoning to native vegetation, endangered ecological communities and threatened species habitat in the Silvalite area contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.5 Lloyd

The natural environment of the Lloyd area has been described in Mullins and Sutherland (2002) and Ecological Australia Pty. Ltd. (2007). It contains outstanding examples of extensive White Box Woodlands (part of the Box-Gum Woodland EEC) that provide habitat for a range of threatened fauna, including the Squirrel Glider endangered population (Claridge and van der Ree 2004). The site is significant not only for the area and quality of vegetation and habitat, but also because it contributes greatly to the connectivity of landscapes and habitats in the wider Wagga Wagga area.

The current Wagga Wagga LEP has the area largely zoned 1e (Future Urban) with some areas zoned 7b (Hillscape). In consideration of the outstanding biodiversity values of the site, and the potential impacts of urban subdivision on the endangered woodlands, WWCC, the landholders, and DECC agreed to the conduct of biodiversity

studies (Ecological Australia Pty. Ltd. 2007; Thompson 2007) to inform planning decisions that would ensure an improve or maintain outcome for the site's biodiversity.

The studies identified areas of vegetation and EEC in medium-good condition, and recommended the retention of these areas. The studies also identified areas in low condition, and paddock trees, which may be able to be cleared with appropriate offsets.

The planning outcome, reflected in the proposed zonings for the area in the dWWLEP, largely follows the recommendations of the biodiversity studies. A large consolidated area of endangered woodland, totalling 251 hectares, has been proposed for E2 zoning. This includes 245 hectares of White Box Woodland, and 6 hectares of Wagga Wagga Hills Open Forest.

Areas of mapped vegetation outside the proposed E2 zone at Lloyd

Area 1 – Confirmed Squirrel Glider habitat

A further 7 hectares of White Box Woodland, confirmed as habitat for the listed Squirrel Glider endangered population, will be retained though relevant measure 3a in Section 4.4.

The Threatened Species Tool (Refer Section 4.1.1) also sets a requirement for the Squirrel Glider endangered population, such that all sites referred to in Claridge and van der Ree (2004) are to be 'red-lighted', or prohibited from clearing. As noted in Section 2.4, the authors list several sites in the Wagga Wagga LGA where there are records of the Squirrel Glider. One of these listed sites is 'private property' at an undisclosed location, referenced as 'Bruce Mullins, unpubl. data' in Claridge and van der Ree (2004). Bruce Mullins has confirmed to DECC that this private property is, in fact, Lloyd.

DECC sought the professional opinion of Mr. Mullins, as to whether the area included in the proposed E2 zone at Lloyd contains all the habitat that was referred to in Claridge and van der Ree. His response was that outside the areas zoned as E2, the only other area that conforms to the definition of Squirrel Glider habitat at Lloyd is shown in the blue rectangle in Figure 12.

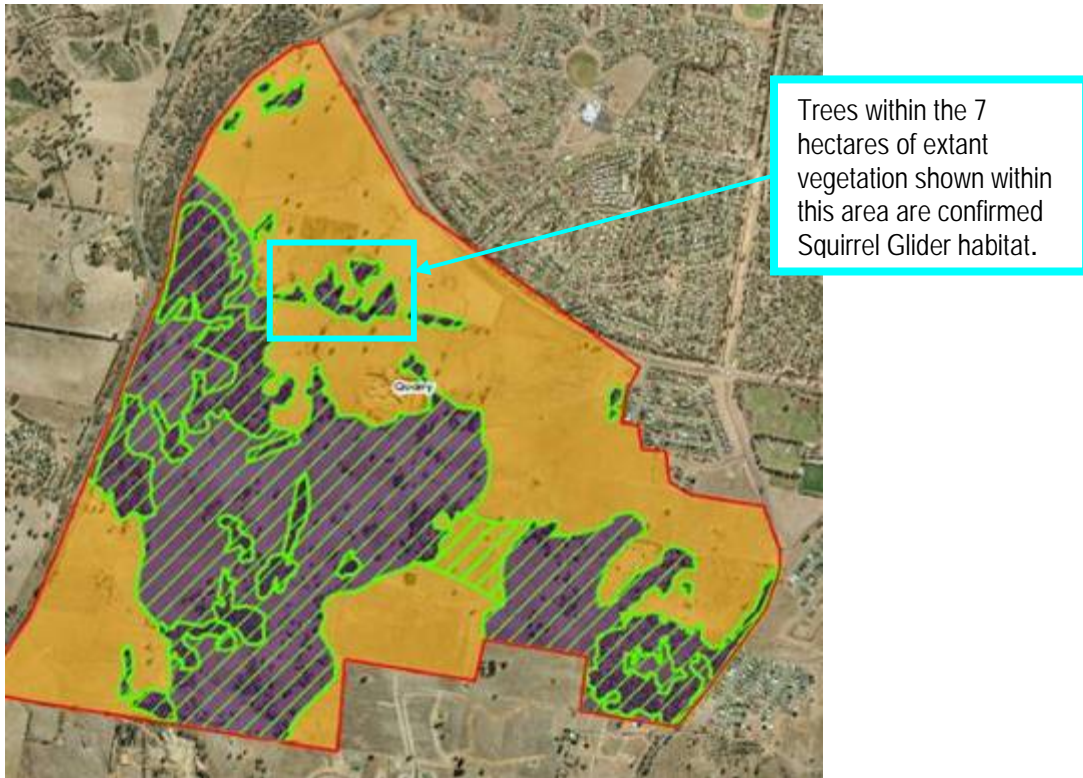


Figure 12: Squirrel Glider habitat not included in the E2 zone (Bruce Mullins, pers. comm., October 2008)

Discussions with WWCC have indicated agreement that these trees will be protected through Open Space networks in the Lloyd Structure Plan. This requirement will be set out in the WW DCP. Refer to relevant measure 3a in Section 4.4. This area is therefore not counted as a 'loss' of vegetation.

Area 2 – Mixed native/exotic grassland south of the quarry

Despite being identified in Ecological Australia Pty. Ltd (2007) as in moderate condition, the area of predominantly native grassland south of the quarry (approx 18 ha) did not contain any survey plots by Ecological Australia, and was subject to additional survey commissioned by the landowner (Thompson, 2007). It was found to be in low condition, with disturbed areas dominated by exotic grasses and weeds, and other areas with <50% native ground cover.

The site was agreed to be zoned R1 (Residential) provided that the DCP ensured that the Lloyd Structure Plan provided a buffer to all drainage lines that included all trees along these drainage lines. Accordingly, trees along the drainage lines are not counted as 'losses': other trees are counted as losses.

Area 3 – Some small patches of treed vegetation, none larger than 4 ha, and totalling approx 6 ha.

Area 4 – Tree-less edges to the identified area of vegetation in medium-good condition, outside the 'line of best fit' agreed as the boundary to the E2 zone (approximately 4 hectares in area).

Areas 3 and 4 comprise 10 hectares of mapped vegetation which will not be retained, but DECC considers that this vegetation is not of high conservation value as the contribution of these areas to regional biodiversity values is low.

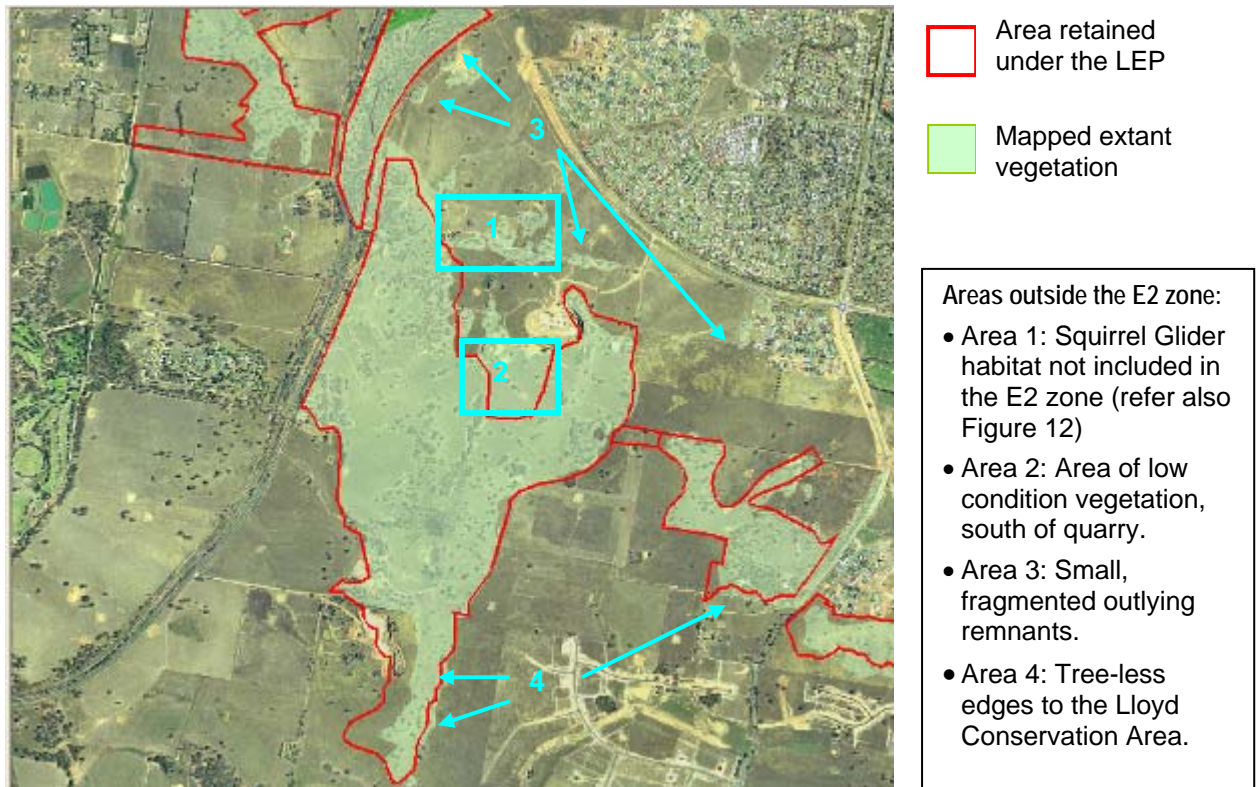


Figure 13: Planning outcome for Lloyd

The total losses of vegetation in the Lloyd area are set out in Appendix 1. Required offsets (see Section 4.2) for these losses have been achieved.

Overall, DECC is confident that the planning outcome for Lloyd does represent a 'improve or maintain' outcome. A large, consolidated area of EEC, the majority of which is currently zoned Future Urban, is proposed to be protected through an E2 (Environmental Conservation) zoning. Further, private landholders, WWCC and DECC have agreed that the land within the E2 zone will transfer to the ownership of WWCC, and that WWCC will prepare and implement a Conservation Management Plan for the site. The private landholders and WWCC have indicated a willingness to enter into a Planning Agreement to this effect, and this is reflected in Relevant Measure 2 in Section 4.4.

While Figure 13 demonstrates that the biodiversity studies informed the location of the boundaries of the E2 zone, the zoning also recognises:

- that salinity is a major issue in the Wagga Wagga urban area, and that the retention and regeneration of natural woodlands in the area proposed for E2 zoning will (in comparison to other land uses) assist in mitigating the salinity problem for the residential areas of Lloyd that are lower in the landscape
- that some parts of the E2 zone are above the 210 m contour, and therefore above the serviceability limit for water and sewer

- that the area will provide a valuable recreational asset and a link between Bourkelands Ridge and Silvalite Reserve. Ultimately, the Wiradjuri Walking Track will be re-located to a route within the E2 zone.

The proposed zone of E2 (Environmental Conservation) over an area with these high conservation values significantly enhances the protection afforded to the vegetation.

DECC considers that the additional protection provided to 251 hectares of native vegetation, endangered ecological communities and threatened species habitat through the change in zoning from 1e (Future Urban) and 7b (Hillscape) to E2 (Environmental Conservation) in the Lloyd area, and other relevant measures, contributes significantly to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.6 Bourkelands Ridge

This is a narrow ridge that connects Willans Hill to the Lloyd Area. It primarily contains areas of Wagga Wagga Hills Open Forest, and some small areas of White Box Woodland on the lower slopes. Substantial areas have been cleared of trees but retain predominantly native ground cover and are therefore amenable to natural restoration. It represents an important landscape connection along the chain of woodland and open forest areas in the Wagga Wagga urban area.

The area is zoned 6a (Open Space) and 7b (Hillscape) in the current Wagga Wagga LEP, and is proposed for E2 (Environmental Conservation) zoning.

Some areas of mapped extant vegetation in the Bourkelands Ridge area are not included in the E2 zone, and are not proposed for protection. These areas of vegetation are largely treeless, and while native ground cover predominates, they could not be considered to be of high conservation value as it has low species richness, and conforms to the criteria set out in clause 3(4) of the Threatened Species Conservation (Biodiversity Banking) Regulation 2008.

DECC considers that the additional protection provided to 50 hectares of native vegetation, endangered ecological communities and threatened species habitat through the change in zoning from 6a (Open Space) and 7b (Hillscape) to E2 (Environmental Conservation) in the Bourkelands area contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.7 Willans Hill

Willans Hill is a prominent landscape feature in the Wagga Wagga region and has long been an important recreational and environmental asset for the people of Wagga Wagga. The hill contains some outstanding examples of White Box Woodland, particularly on the eastern slopes, and also Wagga Wagga Hills Open Forest.

Willans Hill is zoned 6a Open Space in the current Wagga Wagga LEP, and is proposed for RE1 (Public Recreation) in the dWWLEP.

DECC considers that the level of protection afforded by the LEP zoning to the native vegetation in the Willans Hill reserves has not changed as a consequence of the introduction of the dWWLEP and that the new zoning will continue to afford adequate protection to this native vegetation.

4.2.8 Rocky Hill

This largely tree-less area is described by Hodgkinson (2004) as an actively regenerating White Box Woodland. The higher slopes are more likely to conform to the definition of Wagga Wagga Hills Open Forest.

The site is not zoned in the current Wagga Wagga LEP. The dWWLEP proposes an RE1 (Public Recreation) zone. DECC notes that the Native Vegetation Act continues to apply to areas zoned RE1. The effect of cl.14 of the Native Vegetation Regulation, given that the Crown reserves in question include EECs, would mean that an assessment under the Native Vegetation Act is required. This is because the vegetation in the Rocky Hill Reserve either comprises habitat for threatened species or is an EEC. This would ensure that an improve or maintain outcome is achieved.

DECC also notes that the Department of Lands has signalled its intention to prepare a Plan of Management for the area.

DECC considers that the level of protection afforded to the vegetation on Rocky Hill has increased as a consequence of the introduction of the dWWLEP and the RE1 zoning, compared to the site being previously un-zoned, and that this contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.9 Lake Albert reserves and Rawlings Park

The reserves in this area include Rawlings Park, a highly significant bushland reserve containing good examples of Grey Box Woodland and Yellow Box Woodland. A range of other smaller parks and reserves provide links from Rawlings Park to the west, to the Lake Albert foreshore and beyond to some small but important bushland areas on the western side of the lake.

Rawlings Park, and the other reserves in the Lake Albert area are zoned 6a Open Space in the current Wagga Wagga LEP, and are proposed for RE1 (Public Recreation) in the dWWLEP.

DECC considers that the level of protection afforded by the LEP zoning to the vegetation in the Willans Hill reserves has not changed as a consequence of the introduction of the dWWLEP and that the new zoning will continue to afford adequate protection to this native vegetation.

4.2.10 Gumly Gumly

This site contains an area of Yellow Box Woodland included in the R1 zone. The site has been assessed by DECC as part of a referred Development Application, and was found to have exotic/weedy understorey, although the mature trees provide habitat for the Superb Parrot. Protection of the trees has been provided through the conditions attached to an existing Development Consent that applies to the site, and because of this, DECC is satisfied that the zoning is appropriate and will not result in impacts on biodiversity in this instance.

4.2.11 Estella

The existing road reserves along Pine Gully and Harris roads contain important remnants of Yellow Box Woodland. These provide connectivity between the River Red Gum forests along the Murrumbidgee River, and with the woodland vegetation in the grounds of Charles Sturt University to the north. These were the subject of biodiversity studies (Ecological Australia Pty. Ltd. 2007).

These road reserves were previously zoned 1e (Future Urban) but in the dWWLEP, a zone of E2 is proposed. Some other vegetation slightly to the east is to be directly translated from 6a (Open Space) to RE1 (Public Recreation). The linear nature of the vegetation will ensure that lot yields in the Estella area are not greatly compromised, as a future urban design can accommodate the extant vegetation. It is anticipated that future urban design will also seek to re-locate these transport corridors, so that the entire width of the road reserves may be restored and regenerated.

DECC considers that the additional protection provided to native vegetation, endangered ecological communities and threatened species habitat through the change in zoning from 1e (Future Urban) to E2 (Environmental Conservation) in the Estella area contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.12 Boorooma East

The site at Boorooma East contains an area of Yellow Box Woodland, generally on a steep and rocky hilltop and on the slope to the south of the site. There is also some modified remnant vegetation along the road reserve and parallel drainage line on the west of the site that provides connectivity to the north and into the ground of the Riverina Institute of TAFE. The site was the subject of biodiversity studies (Ecological Australia Pty. Ltd. 2007).

The site was previously zoned 1e (Future Urban). It is proposed that the hilltop and road/riparian corridor along the western side be zoned RE1. The steep slope to the south with some remnant woodland is to be zoned E4, which accommodates existing uses (dwellings) and would ensure that any further subdivision would require a Property Vegetation Plan under the Native Vegetation Act. Dwellings are excluded from the Act due to the operation of clause 6 of the Regulation, but would be subject to Clause 7.3 of the dWWLEP. Refer also to relevant measure 3c in Section 4.4, which requires that the DCP ensure that building envelopes are not placed in any area with mature trees.

The site also includes an area of mapped extant vegetation that has not been included in either the RE1 or E4 zones, north of the RE1 zone. While Ecological Australia (2007) finds that the area has mixed exotic and native ground cover, DECC considers that the site has been heavily grazed for long periods and has very low species diversity. There are two mature trees in this area. DECC considers that this area has low conservation value and that its loss is more than adequately offset by the application of the E4 zoning, and the bio-certification proposal as a whole, as demonstrated in Appendix 1.

DECC considers that the additional protection provided to 21 hectares of native vegetation endangered ecological communities and threatened species habitat through the change in zoning from 1e (Future Urban) to E4 (Environmental Living) in the Boorooma East area, and other relevant measures, contributes to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.13 Bomen

The Bomen area is largely cleared, but does contain a number of small, isolated Yellow Box Woodland remnants. The site was the subject of biodiversity studies (Ecological Australia Pty. Ltd. 2007) which found that only one of these remnants – roadside vegetation along Trahairs Road – had native understorey. This is proposed for RU6 zoning, which will ensure the retention of this vegetation.

Ecological Australia P/L (2007) considers that the other small remnants were not of high conservation value. DECC endorses this view. These sites were mapped on the basis of tree cover thresholds (>25% of benchmark canopy cover) but include planted vegetation and generally have <50% native ground cover. These areas total 22.5 ha.

DECC has included a requirement for the DCP to ensure retention of the larger patches of low conservation value treed native vegetation in Bomen (Figure 14). Other losses of vegetation in Bomen will be more than adequately offset by the revegetation of the entire RU6 zone, which will serve as a buffer between the Bomen industrial area, and neighbouring rural land uses.

DECC considers that the objective for the RU6 zone should be amended to reflect the role of the RU6 zone at Bomen. Refer to Recommendation 3 in Section 4.3.

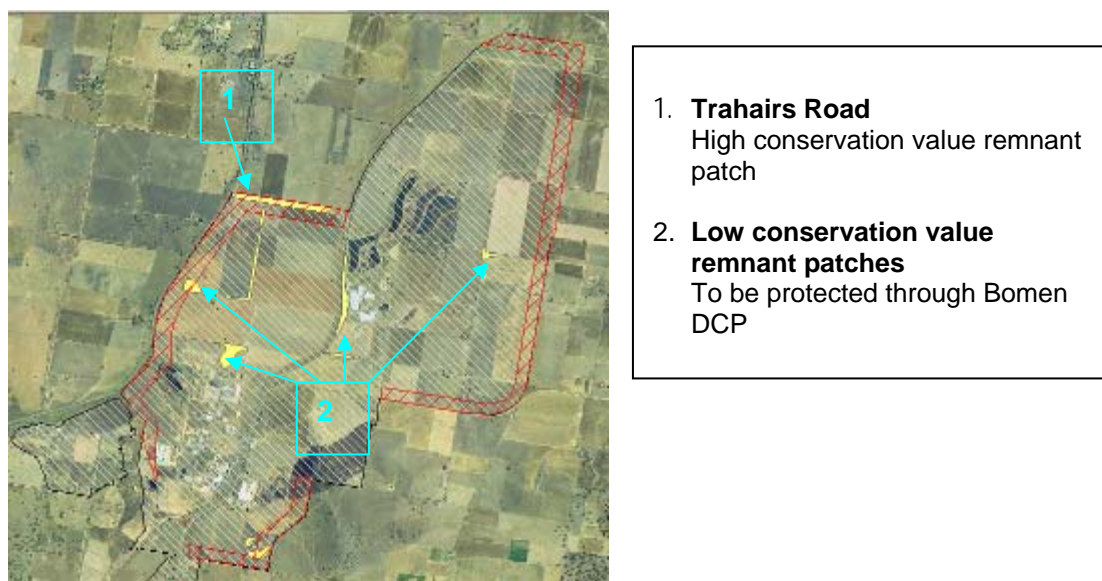


Figure 14: Vegetation at Bomen

DECC considers that vegetation management and re-vegetation activities in the RU6 zoning will provide protection for a small remnant of Yellow Box Woodland along Trahairs Road, and more than adequately offset any other losses of vegetation in the Bomen area. The RU6 zoning, and other relevant measures, contribute to the improvement or maintenance of biodiversity values of the Wagga Wagga urban area as a whole.

4.2.14 Balance of proposed biodiversity certification area

The balance of the proposed bio-certified area, outside the 13 precincts described above, does not contain any mapped extant vegetation. However, DECC estimates that it contains approximately 460 'paddock trees'. Clause 5.9 of the dWWLEP would apply to these areas (refer to Section 3.3) and Condition 3d (Section 4.4) would enhance the effectiveness of the administration of this clause.

Studies in the natural decline of paddock trees (referred to in Gibbons et al 2008) show that in landscapes similar to Wagga, all mature scattered trees may be lost over a 120-year period. Within 50 years, up to 50% of mature scattered trees may be lost. Within the first 10 years, the loss is predicted to be at a rate of approximately 1.5% per year. Over the 10 year life of the biodiversity certification, it could therefore be expected that the 'background rate' of loss would be 15% of paddock trees.

DECC estimates that for scattered trees outside the E, RE and RU zones of the bio-certification area, a higher rate of loss could be anticipated – up to 50% over 10 years. The operation of Clause 5.9 of the dWWLEP could be expected to mitigate this loss to approximately one-third, or 33%, of existing paddock trees over 10 years.

As discussed in Section 4.2, offset targets for potential paddock tree losses are achieved by the protection of existing trees and vegetation within the Natural Areas (Appendix 1).

4.2.15 Overall protection of vegetation

The Wagga Wagga bio-certification area has an area of 10,655 ha. Of this, 9626 hectares or 90% has been cleared, and 1029 hectares of vegetation (the 'extant' vegetation) remains.

Within the bio-certification area, 933 ha, or 91%, of mapped extant vegetation is retained by appropriate LEP zoning. This includes all areas that the *BioBanking Assessment Methodology* would identify as 'red-flag areas' and the EOAM would identify as 'red-lights', except for areas 1, 3 and 4 (Lloyd) shown in Figure 13.

A further 36 hectares (3%) is retained through other measures including the conditions of the endorsed Development Consent at Gumly Gumly, and protection of other vegetation at Bomen and Lloyd through the DCP.

Sixty ha, or 6% of vegetation, is not specifically retained, and DECC considers these to be of low conservation value. These areas would be subject to Clause 5.9 of the dWWLEP, and should losses eventuate, these would be more than adequately offset by the measures referred to in Section 3, and demonstrated in Appendix 1.

4.2.16 Potential additional areas

There are significant woodland areas and habitats on land owned by Charles Sturt University, and also the Riverina Institute of TAFE in North Wagga Wagga, and, a significant Crown Reserve on the Coolamon Road nearby. Discussion with the University has been initiated with a view to delineating Natural Areas, and development areas, as part of the final WWLEP 2008. These areas could, potentially, be included in the area proposed to be biodiversity certified.

4.3 Recommended amendments to LEP for certification

1. DECC recommends that the impact of the 'Natural Areas' being identified as Protected Regrowth in accordance with section 10(1)(b) of the Native Vegetation Act, (shown in Figure 15) on the ability of the LEP to improve or maintain biodiversity, should be considered.
2. DECC may recommend certain amendments to the Land Use Tables for Zones E2, E4, RE1 and RU6, including the removal of 'bee-keeping, extensive agriculture, home business, home occupation, water recreation structures' from the E2 zone.
3. DECC recommends that the additional objective for the RU6 zone of 'providing for revegetation and ecosystem restoration activities', included in an earlier draft of the dWWLEP, be re-instated.

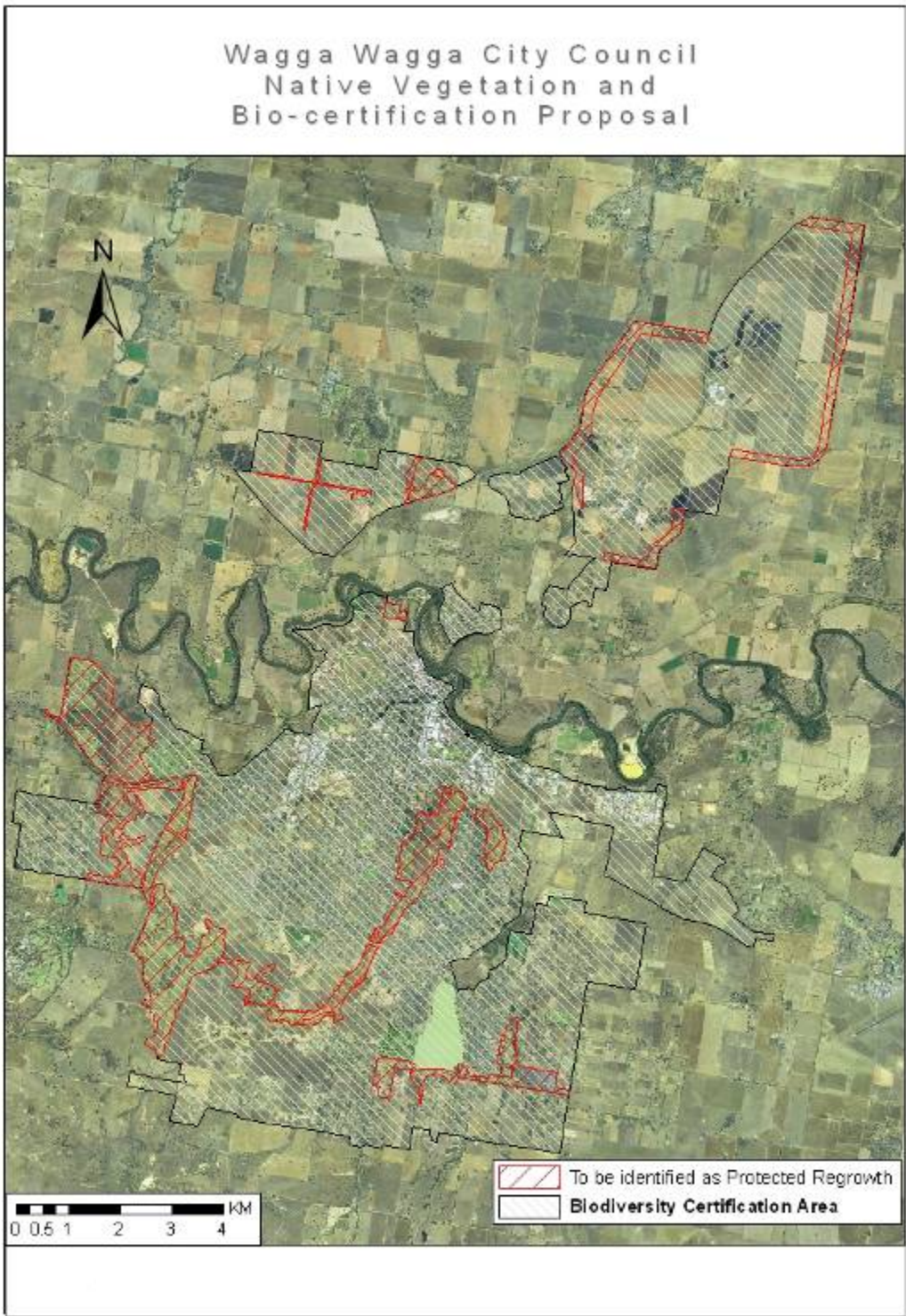


Figure 15: Area to be considered for identification as Protected Regrowth

4.4 Other relevant measures for certification

Other relevant measures for biodiversity certification are:

1. That the Department of Lands and WWCC be informed that any and all native vegetation (as defined in the *Native Vegetation Act 2003*) within all Crown Reserves and other areas where the RE1 zone applies in the proposed bio-certified area is considered by DECC to be native vegetation that comprises a threatened species, or a component of a threatened population or threatened ecological community, listed under the TSC Act or is likely to comprise habitat of such a threatened species. As such, clearing of native vegetation that would otherwise be exempted under the clause14 and clause18A of the Native Vegetation Regulation would require a consent or Property Vegetation Plan under the Native Vegetation Act.
2. That a Planning Agreement under section 93F of the EP&A Act between the private landholders in the E2 zone at Lloyd, and WWCC, be finalised to ensure that these lands are transferred to WWCC, and, that WWCC will prepare and implement a Conservation Management Plan for the area.

Note: Landholders in this area have indicated a willingness to enter into such an agreement.

3. That the WWCC develop a DCP jointly with DECC that achieves the following outcomes:
 - a. In relation to Lloyd, that the trees in the area of identified Squirrel Glider habitat outside the E2 zone at Lloyd (shown in Figure 12), and trees along drainage lines to the west and south of the quarry at Lloyd (shown as Area 2, Figure 13) are both to be retained in the Lloyd Structure Plan, and, that the DCP introduce effective cat control measures (all cats to be indoors or in cats runs).
 - b. In relation to Bomen, that the DCP specifies a requirement for a management plan for the buffer zone RU6, and, that the patches of vegetation shown in Figure 14 are retained in the Bomen Structure Plan.
 - c. In relation to Boorooma East, that the DCP specifies that within the E4 zone building envelopes will not be located on any area with mature trees.
 - d. In relation to Clause 5.9 of the LEP, that the DCP describes and defines the vegetation that may have derived from one of the two EECs in the area, or may be habitat for threatened species, and establishes a process whereby losses of vegetation are avoided where possible, or minimised to the fullest extent practicable.

4.5 Condition to be applied as the basis for certification

1. That the biodiversity certification will be limited to the area shown in Figure 15.

5. Assessment of proposal against section 126G(2) of the TSC Act

The likely social and economic consequences of implementation of the EPI

Currently, any development in Wagga Wagga that proposes to clear native vegetation must undertake individual impact assessment for threatened species, populations or ecological communities under both the EP&A Act and the Commonwealth *Environment Protection and Biodiversity Act 1999*. This is viewed as a costly burden to council, developers and the community for the following reasons:

- Development applicants must bear the financial cost of consultants undertaking assessments of the impacts of proposals on threatened species, populations and ecological communities or their habitats.
- There is a high likelihood that removal of vegetation will result in significant effects and impacts on threatened species, populations and ecological communities or their habitats, with assessment becoming complex and protracted and requiring negotiated outcomes.
- There are a range of community perceptions and expectations regarding environmental assessment processes and outcomes, which can lead to tension and, occasionally, conflict in the community, and between the council, the community, and landholders.

Biodiversity certification provides for:

- greater conservation and developer certainty as to what can and cannot be achieved on particular sites
- greater trust in achieving conservation goals as an 'improve or maintain' outcome is non-negotiable
- less council staff time dedicated to assessing specific development applications and negotiating with developers as to what can and cannot be done
- no financial cost to developers in producing individual assessments, which generally would have exceeded the cost now required to meet offset provisions
- increased financial resources to manage biodiversity through funds obtained through offset mechanisms.

The proposed bio-certified area within the dWWLEP strategically identifies those lands that are likely to have always been constrained to development. It provides assurance that development that requires Development Consent under the LEP is, for the purposes of Part 4 of the EP&A Act, not likely to significantly affect any threatened species, population, or ecological community or its habitat. It therefore results in cost-savings for both environmental managers, and for land-owners and development applicants.

The most efficient and effective use of available resources for the conservation of threatened species, populations and ecological communities

Biodiversity certification allows a pro-active rather than a reactive approach. It targets protection and enhancement works where they will be most effective within the context of the Wagga Wagga landscape. It also directs conservation activity to those areas in Wagga Wagga which are of particular significance.

The principles of Ecologically Sustainable Development

DECC considers that the provisions of the dWWLEP, as they relate to the area proposed for bio-certification, are consistent with the principles of Ecologically Sustainable Development, as defined in section 6(2) of the *Protection of the Environment Administration Act 1991*. These are:

- 1. The precautionary principle**
This has been applied through ensuring that future development in the proposed bio-certified area avoids land of high conservation value.
- 2. Inter-generational equity**
This assessment report demonstrates that biodiversity outcomes will be improved or maintained for future generations.
- 3. Conservation of biological diversity and ecological integrity**
Areas of high conservation value have been protected in the proposed bio-certified area.
- 4. Improved valuation, pricing and incentive mechanisms**
In the proposed bio-certified area, it is demonstrated that losses of vegetation and habitat are within acceptable thresholds and will be appropriately offset. Resources for conservation management will also be more effectively directed to high value sites that are strategically connected.

Conservation outcomes relating to the National Parks and Wildlife Act

DECC actively promotes Conservation Agreements (under Division 12 of Part 4 of the *National Parks and Wildlife Act 1974*) with private landholders in the South West Slopes bio-region, as one of a number of conservation strategies in the region (see below).

Conservation outcomes resulting from the operation outside the area of operation of the EPI of strategies, plans, agreements and other instruments

Conservation outcomes also result from the provisions of the dWWLEP, which operate outside the proposed bio-certified area, including a Biodiversity Overlay at Clause 7.3, and Clause 5.9, *Protection of trees and vegetation*. These provisions will complement the improvement and maintenance of biodiversity in the proposed bio-certified area by protecting biodiversity at a regional scale.

External to the operation of the dWWLEP, a range of conservation outcomes are being achieved as a result of various initiatives including the following:

- The administration of WWCC includes a Natural Environment Section, which is active in the management of Natural Areas under its control within the proposed bio-certified area, and across the LGA. It has significant expertise to develop and implement Plans of Management for Natural Areas, employs a Liaison Officer to facilitate community engagement in environmental management, and manages the City's weed management activities. It has recently secured Environmental Trust funding to protect and enhance Glossy Black Cockatoo habitat in Pomingalarna Reserve.
- The Section also provides expert advice to the Development Services Section on environmental aspects of Development Applications, and administers the

environment provisions of the DCP that aim to protect, restore and re-establish native vegetation in rural residential areas of the LGA.

- The Wagga Wagga Urban Landcare Group (WWULG) is active in the implementation of these management plans through the restoration and management of Natural Areas within the proposed bio-certified area. Recent activities have focused on the Willans Hill and Pomingalarna reserves.
- The expertise of the WWCC Natural Environment Section, in partnership with the WWULG, provides a model for the way in which local government can work with the community on environmental management issues. It can facilitate the sound conservation management of the Natural Areas within the proposed bio-certified area.
- At a wider scale, the Catchment Action Plan of the Murrumbidgee Catchment Management Authority (MCMA) includes several targets for biodiversity. Implementation of this plan within the Wagga Wagga LGA and across the catchment, and will achieve complementary conservation outcomes for native vegetation, EECs and threatened species.
- The MCMA is also delivering the Commonwealth's Environmental Stewardship Program for Box-Gum Woodlands in the catchment, as one of two catchments trialling the program which provides stewardship payments to landholders for protecting and managing areas of Box-Gum Woodland EEC. The conservation outcomes arising from this program will complement the dWWLEP as this EEC was one of the key biodiversity values addressed by the dWWLEP as it pertains to the proposed bio-certified area.
- DECC and the NSW Nature Conservation Trust are both active in promoting conservation agreements with private landholders in the South West Slopes bio-region, and DECC actively supports the activities of the Grassy Box Woodland Conservation Management Network. Appropriate voluntary management of habitat on large freehold properties is a key landscape-wide recovery strategy for the Box-Gum Woodland EEC and will complement the conservation outcomes achieved by the provisions of the dWWLEP for this EEC within the proposed bio-certified area.

The objectives of the TSC Act

- **To conserve biological diversity and promote ecologically sustainable development**

The proposed bio-certified area of the dWWLEP conserves biological diversity, as demonstrated in Section 4.2, and DECC considers that development in the proposed bio-certified area will therefore be ecologically sustainable (refer discussion above regarding ESD principles).

- **To prevent the extinction and promote the recovery of threatened species, populations and ecological communities**

The protection mechanisms outlined in Section 3 have been assessed in Section 4 to improve or maintain biodiversity, including threatened species, populations and ecological communities.

- **To protect the critical habitat of those threatened species, populations and ecological communities that are endangered**

There is no 'critical habitat' listed in the Wagga Wagga LGA.

- **To eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities**

The major vegetation remnants of all areas of high conservation value are protected by the mechanisms outlined in Section 3. Declared threatening processes relevant to Wagga Wagga LGA include:

- **Clearing of native vegetation**

It is demonstrated (refer to Section 4) that the dWWLEP will result in 'improve or maintain' outcomes, and that all important vegetation is included in areas subject to the Native Vegetation Act.

- **Invasion of native plant communities by exotic perennial grasses**

- **Competition and grazing by the feral European rabbit**

- **Ecological consequences of high frequency fires**

- **Predation by the European Red Fox**

The most significant vegetation remnants are to be actively managed for conservation, including highly significant areas at Lloyd for which a Conservation Management Plan will be established, and Crown reserves for which Plans of Management are being developed. These management plans will include strategies for addressing pest plant and animal control, and fire regimes.

- **Predation by feral cats**

Cat ownership has been discouraged and responsible cat ownership will be encouraged, through community programs such as 'Bell the Cat' and distribution of *The Cat Management Manual*. Additionally, relevant measure 3a at Section 4.4 requires the DCP to ensure that, at Lloyd, all cats are indoors or in cat runs.

- **Loss and/or degradation of sites used for hill-topping by butterflies**

All significant hilltops and ridgelines have been protected in the LEP.

- **Loss of Hollow-bearing trees**

- **Removal of dead wood and dead trees**

The most significant woodland areas, including large trees, are protected in appropriate zones. Losses of other trees has been calculated and offset to achieve an 'improve or maintain' outcome. The collection of dead wood from public lands is prohibited in Wagga Wagga City Council, and this will also apply to any private offset area.

- **To ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed**

The provisions of the Wagga Wagga LEP, as they apply to the proposed bio-certified area, have been rigorously assessed (refer to Section 4) and it is determined that biodiversity will be improved or maintained. Hence impact assessments for threatened species have been undertaken strategically via the bio-certification process.

- **To encourage the conservation of threatened species, populations and ecological communities by the adoption of measures involving cooperative management.**

The protection measures outlined in Section 3 include cooperative management with private landholders, WWCC, and other state agencies.

- **The conservation benefits that will result from a voluntary action that is being undertaken as part of a concurrence granted by the Director General.**

Not applicable

Acronyms

DCP	Development Control Plan
DECC	Department of Environment and Climate Change NSW
dWWLEP	draft Wagga Wagga Local Environmental Plan 2008
EEC	endangered ecological community
EOAM	Environmental Outcomes Assessment Methodology
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environmental Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instrument
LEP	Local Environmental Plan
LGA	Local Government Area
MCMA	Murrumbidgee Catchment Management Authority
RAMAs	routine agricultural management activities
TSC Act	Threatened Species Conservation Act 1995
WWCC	Wagga Wagga City Council
WWULG	Wagga Wagga Urban Landcare Group

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Note: References may be available through DECC.
Please email wagga.biocertification@environment.nsw.gov.au

Appendix 1: Offset Table

	Vegetation type		Extant vegetation (a)	Extant vegetation not retained (potential loss)	Offset target	Quantum of offset target met within precinct.	Vegetation surplus to offset requirement	Offset required to be met in other precincts
Pominalarna Reserve	Wagga Wagga Hills Open Forest	Area (a)	129.8	0	0	0	129.8	0
		Trees (b)	3045				3045	
	White Box Woodland	Area	93.7	0	0	0	93.7	0
		Trees	648	0	0	0	648	
	Yellow Box Woodland	Area	1	0	0	0	1	0
	Trees	6	0	0	0	6		
	Paddock trees (c)	Trees	336	19 (6)	24	24	293	0
	Total	Area	224.5	0				
		Trees	3705	19 (6)				
Red Hill	Wagga Wagga Hills Open Forest	Area	17.1	0	0	0	17.1	0
		Trees	422	0	0	0	422	
	White Box Woodland	Area	8.6	1.9	19	6.7	0	12.3
		Trees	116	24	240	92	0	148
	Paddock trees	Trees	4	0	0	0	4	0
	Total	Area	25.7	1.9				
		Trees	542	24				

(a) 'Area' is given in hectares.

(b) 'Trees' are estimated numbers of large trees within mapped extant vegetation areas.

(c) 'Paddock Trees' are estimated number of large trees outside mapped extant vegetation areas. Paddock tree figures are given in total, and then (in brackets) in predicted loss (refer to Section 4.2.14 for an explanation).

	Vegetation type		Extant vegetation	Extant vegetation not retained (potential loss)	Offset target	Quantum of offset target met within precinct.	Vegetation surplus to offset requirement	Offset required to be met in other precincts
Research Station	Wagga Wagga Hills Open Forest	Area	27.6	0	0	0	27.6	0
		Trees	163	0	0	0	163	0
	White Box Woodland	Area	14.9	2.1	21	12.8	0	8.2
		Trees	77	14	140	59	0	81
	Yellow Box Woodland	Area	8.8	5	50	3.8	0	46.2
		Trees	83	45	450	38	0	412
Paddock trees	Trees	183	0	0	0	183	0	
Total	Area	51.3	7.1					
	Trees	343	59					
Silvalite Reserve	White Box Woodland	Area	28.9	1.5	15	27.4	12.4	0
		Trees	211	3	30	30	178	
	Yellow Box Woodland	Area	36.8	1.8	18	18	17	0
		Trees	167	14	140	140	13	
	Paddock trees	Trees	0	0	0	0	0	0
	Total	Area	65.7	3.2				
	Trees	378	17					
Lloyd	Wagga Wagga Hills Open Forest	Area	6.1	0	0	0	6.1	0
		Trees	46	0	0	0	46	
	White Box Woodland	Area	270.8	26	260	244.8	0	15.2
		Trees	1577	149	1490	1428	0	62
	Paddock trees	Trees	116	98 (32)	160	18	0	142
	Total	Area	276.9	26	260			
	Trees	1739	181					

	Vegetation type		Extant vegetation	Extant vegetation not retained (potential loss)	Offset target	Quantum of offset target met within precinct.	Vegetation surplus to offset requirement	Offset required to be met in other precincts
Bourkelands Ridge	Wagga Wagga Hills Open Forest	Area	32.8	0	0	0	32.8	0
		Trees	159	0	0	0	159	
	White Box Woodland	Area	21.8	4.6	46	17.2	0	28.8
		Trees	68	9	90	59	0	31
	Paddock trees	Trees	69	48 (16)	80	21	0	59
Total	Area	54.6	4.6					
	Trees	296	25					
Willans Hill	Wagga Wagga Hills Open Forest	Area	96	9.1	91	86.9	0	4.1
		Trees	835	109	1090	726	0	364
	White Box Woodland	Area	47.4	0.3	3	3	44.1	0
		Trees	637	1	10	10	627	0
	Paddock trees	Trees	139	17 (6)	30	30	92	0
Total	Area	143.4	9.4					
	Trees	1611	116					
Rocky Hill	Wagga Wagga Hills Open Forest	Area	10.4	0	0	0	10.4	0
		Trees	13	0	0	0	13	
	White Box Woodland	Area	20.9	0.3	3	3	17.6	0
		Trees	35	0	0	0	35	
	Paddock trees	Trees	35	7 (2)	10	10	18	
Total	Area	31.3	0.3					
	Trees	83	2					

	Vegetation type		Extant vegetation	Extant vegetation not retained (potential loss)	Offset target	Quantum of offset target met within precinct.	Vegetation surplus to offset requirement	Offset required to be met in other precincts
Lake Albert/ Rawlings Park	Grey Box Woodland	Area	30.1	0	0	0	30.1	0
		Trees	197	0	0	0	197	0
	River Red Gum Forest	Area	7	0.7	7	6.3	0	0.7
		Trees	359	48	240	240	119	0
	Yellow Box Woodland	Area	40.3	0	0	0	40.3	0
		Trees	447	22	220	220	205	0
Paddock trees	Trees	276	21 (7)	35	35	220	0	
Total	Area	77.4	0.7					
	Trees	1279	77					
Gumly Gumly	Yellow Box Woodland	Area	5.1	0	0	0	5.1	0
		Trees	56	0	0	0	56	0
	Total	Area	5.1					
	Trees	56						
Estella	White Box Woodland	Area	0.3	0.3	3	0	0	3
		Trees	2	2	20	0	0	20
	Yellow Box Woodland	Area	11.7	0	0	11.7	11.7	
		Trees	134	5	50	50	84	
	Paddock trees	Trees	147	99 (33)	165	48	0	117
Total	Area	12	0.3					
	Trees	283	40					
Boorooma	River Red Gum Forest	Area	0.8	0	0	0	0.8	0
		Trees	2	0	0	0	2	0
	Yellow Box Woodland	Area	25.5	5.2	52	20.3	0	31.7
		Trees	201	22	220	179	0	41
	Paddock trees	Trees	94	76 (25)	125	18	0	107
Total	Area	26.3	5.2					
	Trees	297	47					

	Vegetation type		Extant vegetation	Extant vegetation not retained (potential loss)	Offset target	Quantum of offset target met within precinct.	Vegetation surplus to offset requirement	Offset required to be met in other precincts
Bomen	Yellow Box Woodland	Area	35.5 / 273 (d)	2.6	26	26	247	0
		Trees	261	15	150	15	135	0
	Paddock trees	Trees	506	422 (139)	695	84	0	611
	Total	Area	35.5	2.6				
		Trees	767	278				
Outside localities	Paddock trees	Trees	462	462 (152)	760	0	0	760

(d) In Bomen, there is 35.5 hectares of mapped remnant Yellow Box woodland. There is 237.5 hectares in the RU6 zone available for offsetting (restoration), totalling 273 hectares.

Of the 35.5 hectares, only the Trahairs Road remnant (12 hectares) is of high conservation value. Of the remaining 23.5 hectares of low conservation value vegetation, 20.9 hectares is to be retained.

Balances	White Box Woodland	100.3
(AREA)	Yellow Box Woodland	244.2
	Grey Box Woodland	30.1
	WW Hills Forest	219.7
	River Red Gum	0.1
Total (hectares)		+594.4

Balances	White Box Woodland	1146
(TREES)	Yellow Box Woodland	46
	Grey Box Woodland	197
	WW Hills Forest	3484
	River Red Gum	121
	Paddock trees	-986
Total		+4008

Appendix 2: Draft order of certification

THREATENED SPECIES CONSERVATION ACT 1995

Order to confer biodiversity certification on the Wagga Wagga Local Environmental Plan 2008

I, Carmel Tebbutt, Minister for Climate Change and the Environment and the Minister Administering the *Threatened Species Conservation Act 1995*, do by this order confer biodiversity certification on the Wagga Wagga Local Environmental Plan 2008 (the LEP) for the purposes of the *Threatened Species Conservation Act 1995* (the Act).

Subject to the condition listed in Schedule 1, I am satisfied that the LEP, in addition to the other relevant measures, will lead to the overall improvement or maintenance of biodiversity values.

The condition of biodiversity certification of the LEP listed in Schedule 1 is imposed pursuant to section 126H of the Act, the biodiversity certification of the SEPP is subject to the condition listed in Schedule 1.

The other relevant measures are set out in Schedule 2.

This order is made under section 126G (1) of the Act.

This order is to take effect on and from the date of its publication in the Government Gazette.

Pursuant to section 126J of the Act, biodiversity certification of the SEPP shall remain in force from the date the biodiversity certification order takes effect until [date] 10 years after commencement.

CARMEL TEBBUTT
Minister for Climate Change and the Environment
Signed at Sydney, this [date]

Schedule 1

Condition of biodiversity certification

Biodiversity certification is limited to the land shown edged heavy black as “biodiversity certification area” on the map below marked “Wagga Wagga City Council Biocertification proposal”.



Wagga Wagga City Council bio-certification proposal

Schedule 2

Other relevant measures

The following sets out the other relevant measures taken, that in addition to the LEP leads to the overall improvement and maintenance of biodiversity values:

1. A Planning Agreement under section 93F of the EP&A Act between the private landholders in the E2 zone at Lloyd, and WWCC, has been entered into. These lands have been transferred to WWCC, and WWCC has prepared and implemented a Conservation Management Plan for the area.
2. WWCC has developed a Development Control Plan [insert name of the DCP once it has been made] jointly with DECC.