

THREATENED SPECIES ASSESSMENT

For A Proposed Rezoning of Land

Lots 11,12,13,46 and 227 DP 755980

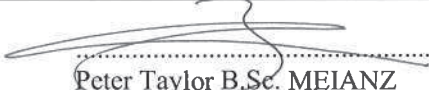
Boggabilla NSW

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Executive Summary

SMK Consultants Pty Ltd has been commissioned by Bedajama Pty Ltd to prepare a planning proposal under the provisions of the Environmental Planning and Assessment Act 1979 in order to rezone land in northwest New South Wales. This Threatened Species Assessment was prepared to accompany the Planning Proposal.

Matters considered in the Threatened Species Assessment include a seven part assessment under the Environmental Planning and Assessment Act 1979 and Threatened Species Conservation Act 1995, a Protected Matters Report that considers potential impacts on matters of national environmental significance under the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) and an assessment of potential impacts on Koala habitat under the provisions of State Environmental Planning Policy No. 44 – Koala Habitat Protection.

The above assessment under the Environmental Planning and Assessment Act 1979 and Threatened Species Conservation Act 1995 concluded that the proposal would have no significant impact on threatened species, populations, communities or their habitats and that there was no requirement to prepare a Species Impact Statement.

The assessment conducted under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) concluded that the proposal would not have a significant impact on any matters of national environmental significance and that a referral to the Minister was not required.

The assessment conducted under State Environmental Planning Policy No. 44 – Koala Habitat Protection determined that the land was classified as potential koala habitat did not consist of defined core koala habitat as no Koalas were present on the land and had not been on the land for some time.

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1. Introduction

SMK Consultants Pty Ltd has been commissioned by Bedajama Pty Ltd to prepare a Planning Proposal to rezone land in Moree Plains Shire in northern New South Wales. An essential component of the Planning Proposal is an assessment of significance conducted in accordance with s5A of the Environmental Planning and Assessment Act 1979 and the Threatened Species Assessment Guidelines. This report presents the findings of that assessment.

The report also considers Matters of National Environmental Significance as required under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).

2. Description of Site

The subject land comprises Lots 11-13, 46 and 227 in Deposited Plan No. 755980 and is located in northwest NSW opposite the Queensland town of Goondiwindi. A locality plan is included in Part 4 of the Planning Proposal.

Regional context

The region is located in the Murray-Darling Basin. It is one of the richest agricultural production areas in the state with a gross annual production of \$1.8 billion (ABS 2006 Census). The region produces sheep, cattle, broad acre cereals, irrigated cotton and is also home to intensive plant and livestock industries and support industries. Coal and coal seam gas production is growing while there is excellent potential for renewable energy generation such as wind and solar.

The New South Wales Government's *Strategic Regional Land Use Plan: New England North West* describes the region as environmentally and culturally rich and diverse with a growing population.

Local context

The subject land is located opposite the Queensland town of Goondiwindi and on the southern side of the Macintyre River. This river forms the border between New South Wales and Queensland at this point.

The subject land is located on the floodplain of the Macintyre River. The land has been modified as a result of historical clearing for farming, planting of crops for cereal and fodder production in addition to grazing of cattle. The northern section of the development is traversed by remnant areas of native vegetation in the form of mature trees in an open cultivation and grassland habitat in addition to areas of denser regrowth. The southern section of the subject land has been cleared and cultivated for crop production.

3. Site History

The southern parts of the land have been used for dryland farming of mainly winter cereal crops. The northern section includes a disused gravel quarry. Some opportunistic grazing presently takes place on the land in areas that had been previously cultivated for various crops.

Site Description

The land comprises Lots 11, 12, 13, 46 and 227 in Deposited Plan 755980. Total area is 189 hectares. The northern boundary of the land abuts the Macintyre River. The eastern, western and part of the southern boundaries adjoin rural residential development while the remainder of the southern boundary adjoins the all-weather Mungindi-Goondiwindi Bridge Road.

Landform

The landform in the southern section of the area is generally flat with a slight slope to the west. The northern sector of the land has two landforms. The southern section of Lot 11 is dominated by a disused gravel quarry which is to remain in its present form of partial remediation. The quarry supports small waterholes for a short period after rain.

The northern section of Lot 11 supports an open woodland area and billabong. The billabong is rain and flood fed. It is shallow and therefore ephemeral. The river bank in this section is relatively steep and fronts the weir pond created by the Goondiwindi town weir. The water in the weir is permanent and maintained at a high level by Council and other agencies for recreation and aesthetic purposes.

The eastern section of Lot 11 had been more intensively farmed and therefore the open woodland had been removed. The area includes a field that had been irrigated by surface irrigation.

The remainder of the area has generally been cleared and used for agriculture. This included construction of random excavations for soil extraction which now appear as ephemeral waterholes.

Climate

Local temperature averages range up to the mid-thirties in summer to around four degrees in winter. Rainfall is summer dominant averaging 611 mm per annum.

Hydrology

The west-flowing Macintyre River forms the northern boundary of the land. Potable groundwater for stock and domestic purposes is available at a depth of 10 to 20 metres. This aquifer is not considered as extensive and produces a limited supply of sub-artesian water supplies. The aquifer is directly fed from the river.

The land is flood prone during medium to major flood events in the Macintyre River. Flooding occurs on an average of every 5 to 10 years with major flooding predicted to occur once in 50 years or more.

Soils

Soils in the area are sedimentary and comprise black to grey self-mulching clays over sandy gravel. The northern sector includes areas of sandy loams around the old gravel quarry.

4. Vegetation

Much of the land has been cleared and farmed with the exception of part of the northeast section of Lot 11. Vegetation over the southern section that is not currently cultivated for cereal cropping includes relatively poor quality grassland that has had a history of cultivation. The majority of the southern section is maintained for cultivation of crops.

In the north there is a riverine corridor dominated by mature River Red Gum (*Eucalyptus camaldulensis*) with a spacing of 30 to 50 metres along the river bank. Other species adjacent to the Red Gum corridor include Coolibah, Boonery, Blood Wood, River Cooba and three mature Carbeen. A shrub layer of Mimosa, boxthorn and Cooba saplings is present in parts. Ground cover consists of *Panicum sp.* cobblers peg, Buffel grass and *Atriplex* Spp. Numerous weed species dominate part of the bank area. A species of concern to fauna was Tiger Pear (*Opuntia aurantiaca*) which is a declared noxious weed and a hazard to fauna.

The quarried area has been cleared of native vegetation and is dominated by a thin cover of forbs and sparse grasses.

Habitat overview

The southern part of the property has been cleared and developed for dryland cultivation and has limited habitat value. Land adjoining is similar and little or no habitat connectivity remains. This area is considered to be suitable for open foraging but provides limited biodiversity value other than during a crop.

The northern sector of riverine vegetation is dominated by River Red gum woodland. The connectivity of this woodland has been broken as a result of cultivation development in the eastern sector of Lot 11. The remaining corridor consists of tress growing on the river bank.

5. Proposed Development

The proposal is to rezone the subject land to part R5 Large Lot Residential and part RU4 Primary Production Small Lots to permit its subdivision into 96 allotments comprising 67 R5 lots with the remainder being zoned RU4. Lot sizes would range from 4,000 square metres to 9.8 hectares. A number of internal roads would be created to service the proposed subdivision. Plans describing the proposal are included in the main report.

6. Potential impacts of the proposed development

The majority of the proposed development would take place on land that has been heavily modified by past farming and quarrying and as such has little natural habitat value.

A riverine Red Gum woodland is confined to the bank of the Macintyre River and is protected by the Water Management Act 2000 which requires a Controlled Activity Approval to be obtained prior to any work in, on or under waterfront land. A buffer distance of 40m is in place for NSW in which any development must have approval as a controlled activity. The proposed development has some potential to impact on this habitat as a result of requirements to clear for houses and roads.

Native vegetation is also protected under the Native Vegetation Act 2003 which also classifies riparian land as "State Protected Land".

7. Statutory Requirements

Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) and Environmental Planning and Assessment Regulation 2000 (EPAR) provide a framework for environmental planning in New South Wales.

Section 5A of the EP&A Act outlines seven matters that must be taken into account in determining whether a proposed development is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats.

The *Threatened species assessment guidelines: The assessment of significance* (August 2007) were published in the New South Wales Government Gazette No. 10 on the 25th of January 2008. The guidelines set out seven factors of assessment that must be considered in determining whether a proposed development would impact on threatened species, populations and ecological communities, and their habitats.

Protection of the Environment Operations Act 1997

This Act is the key piece of environmental protection legislation in New South Wales and is administered by the Environment Protection Authority. The relevant section of

the Act to this proposal is Section 120 which prohibits the pollution of water and would mainly apply during construction works where sediment may migrate off-site if appropriate sediment control measures are not applied.

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires approval of the Commonwealth Minister for the Environment for actions that may have a significant impact on matters of national environmental significance. The EPBC Act also requires Commonwealth approval for certain actions on Commonwealth land.

Matters of national environmental significance under the Act include the following:

- World Heritage properties;
- National Heritage places;
- Ramsar wetlands of international importance;
- threatened species or ecological communities listed in the EPBC Act;
- migratory species listed in the EPBC Act;
- Commonwealth marine environment; and
- nuclear actions.

8. Methodology of Assessment

Site Investigation

A number of site visits and investigations have been undertaken between 2007 and 2012 and include land surveys, flora and fauna surveys, flood studies, land capability studies and demand surveys.

The flora and fauna surveys targeted major species and habitat in the area to assess potential threatened species such as Koala.

Information Sources

In relation to threatened species, populations and ecological communities, and their habitats searches were undertaken of the NSW Wildlife Atlas, the schedules of the Threatened Species Conservation Act 1995 and the Commonwealth Environmental Resources Information Network (ERIN).

9. Results

Vegetation communities, flora and fauna observed on the subject site

Flora

The riverine corridor is dominated by mature River Red Gum with tree spacing between 30-50m along the bank area. Other species in the higher part or top of the riverbank include Coolibah, Boonery, Bloodwood, River Cooba and three mature Carbeen. A shrub layer of Mimosa, Boxthorn and Cooba saplings is present in parts. Ground cover consisted of *Panicum spp*, Cobblers Peg, Buffel Grass, and *Atriplex spp*. Numerous weed species dominated part of the bank area. A species of concern to fauna was Tiger Pear (*Opuntia aurantiaca*), which is a declared noxious weed and a hazard to fauna. The presence of various weed species is very seasonal.

The quarry area has been cleared of native vegetation as a result of the excavation. The area is now dominated by a thin cover of forbs and sparse grasses due to a lack of

topsoil material covering the old quarry surface. The area has minimal habitat value and does not appear to hold water for more than a short period after rain.

The western part of Lot 11 supports open River Red Gum woodland. The shrub and natural ground cover has been removed as a result of cultivation under the trees and dryland cropping in this area. It appeared that recent cultivation of the field included the removal of scattered mimosa, and a dense growth of black roly-poly. (*Sclerolaena muricata*). The ground cover consisted of various crop weeds with minimal growth of native grasses. Ground cover was approximately 100 % in part with bare patches present in other parts.

The southern part of the property consists of open farming land utilised for dryland cultivation. Several hectares of open grassland have been retained at the southern end of the property which adjoins the Goondiwindi-Boomi road.

The road reserve area between the Goondiwindi town bridge and the eastern edge of Lot 227 (DP755980) supports a River Red Gum woodland area and Paper Bark woodland. This roadside area is relatively undisturbed and can be described as having high biodiversity value.

Fauna

Scats were identified from the Common brushtail possum which appears to associate with the hollows present in the older river gum trees along the riverine corridor. Scratchings on the trees were identified as typical brush tailed possum markings. No clear signs of Koala or sugar glider were noted although tree species and habitat available was considered suitable. Several Euro (*Macropus robustus*) were identified along the river corridor. Signs of eastern grey or western grey kangaroo were noted.

Numerous water bird species were noted along the river corridor as the area is located within the Goondiwindi town weir pool.

The road reserve area between the Goondiwindi Town Bridge and Lot 227 supports 15-20 pairs of nesting white-necked heron during the original fauna survey in 2007. The birds are considered relatively nomadic with nesting based on seasonal conditions.

Ground cover on the older cultivated field on Lot 11 provided minimal grazing potential for species such as a kangaroo. The habitat and foraging value of the riverine area varies considerably from season to season. Forage species and density of ground cover would result in a mobile population moving to and from the area between cultivation events. The refuge areas of less disturbed land to the west (downstream) would provide a less disturbed habitat area for many ground dwellings and less mobile species. The cultivation and cropping of the area would disturb many of these species and therefore their presence would be seasonal.

The river bank area is exposed to the northern bank which is developed as residential land within the main denser living area of Goondiwindi. The river bank is also disturbed on a daily basis by fisherman within the town weir pool.

The majority of Lots 12, 13 and 46 is cultivated land utilised for dryland cereal crop production. This would provide an open foraging area for numerous species of bird and mammal.

Habitat Assessment

The southern part of the property has been cleared and developed for dryland agriculture with only small remnants of grassland and sapling regrowth present. The biodiversity value of this land is limited in that adjoining land is similar. Little or no permanent habitat connectivity remains. The area is considered to be suitable for open foraging but provides limited biodiversity value other than during a crop.

The northern part of the property consists of open grassland with River Red Gum woodland in the western one third of the subject area. The eastern section of riverine corridor associated with the Macintyre River has been reduced to an area of the sloped riverbank with no trees above the high bank in parts. This has resulted from the development of irrigation and cultivation on this bank. The area is presently utilised for grazing and therefore some habitat has been regenerated above the high bank.

An area to the east of the property along both sides of Kentucky road between the property and the Goondiwindi-Boggabilla road includes an area of River Red Gum woodland that has been left in a relatively pristine state, although overgrown in parts by weed species. This roadside area would be considered as having high biodiversity.

Potentially occurring threatened flora

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Tylophora linearis</i>		Range: Barraba, Mendooran, Temora and West Wyalong districts. Habitat: Dry scrub and open forest. Very low abundances. Flowering: Spring purple 3-6mm in diameter with fruiting 2-3 months later.	V,P	E	No. Not present.
<i>Desmodium campylocaulon</i>	Creeping Tick-trefoil	Range: Collarenebri and Moree districts in the north-western plains of NSW. Also in NT and Darling Downs district of south-eastern QLD. Habitat: Cracking black soils in the Narrabri, Moree and Walgett local government areas. Flowering: Summer-autumn. Pea-like and numerous, pink or bluish, about 6 mm long.	E1,P		No. Not present.
<i>Swainsona murrayana</i>	Slender Darling Pea	Range: north & central slopes, north, south and far south-western plains of NSW & in QLD, VIC, SA. Habitat: Grey & brown heavy clay & clay loam soils in bladder saltbush, black box and grassland communities. Grasslands on inland floodplains & discharge areas and eucalypt forests. Flowering: Flowering spring.	V,P	V	No. Not present.
<i>Acacia jucunda</i>	Yetman Wattle	Range: Yetman district near the QLD border on NW Slopes of NSW. Habitat: Dry eucalypt woodland communities on sandy to sandy-loam soils. Flowering: July-September. Golden yellow. Clustered into ball-shaped heads with 10-20 heads on each stalk.	E1,P		No. Not present.
<i>latyzoma microphyllum</i>	Braid Fern	Range: Recorded in NSW only in the Yetman district. The species is widespread across northern Australia, from WA to the NT, eastern Qld and just into central-northern NSW. Habitat: Grows in sandy or swampy soils, or in clay soils adjacent to streams and lagoons and subject to periodic flooding. Recorded in NSW at Bruxner Highway growing as one localised patch in deep sandy soil, with <i>Leptospermum</i> species, <i>Brachyloma daphnoides</i> and <i>Lomandra</i> species. The fern was growing at Bebo State Forest in <i>Angophora</i> and <i>Callitris</i> woodland in sandy soil, and a very open sunny position also in sandy soil. Other associated species include <i>Hakea dactyloides</i> , <i>Brachyloma daphnoides</i> , <i>Jacksonia scoparia</i> , <i>Xylomelum cunninghamii</i> and <i>Calytrix tetragona</i> . Grows in Qld in deep sandy soils over clay where there is periodic marked increase in the level of the water table, or sometimes in clay beside streams or lagoons where the ground is subject to periodic, prolonged inundation by water. Fertile plants of <i>Platyzoma microphyllum</i> have been recorded throughout most of the year. Populations can form tussocks or colonies up to several metres across; in NSW the fern forms very localised and clumped populations.	E1,P,3		No. Suitable habitat absent. Not present.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Digitaria porrecta</i>	Finger Panic Grass	Range: Near Moree to Tambar Springs and from Tamworth to Coonabarabran. Habitat: Native grassland, woodlands or open forest with a grassy understorey, on richer soils. Flowering: Mid-January-late February. Clustered together along a stalk in a cylinder shape, spread stiffly from the flowering stem, with the lower clusters arranged in a whorl of 4-6, each up to 30cm long.	E1,P	E	Yes.
<i>Homopholis belsonii</i>	Belson's Panic	Range: north from the Wialda district into Queensland. Habitat: dry woodland (eg Belah) on poor soils.	E1,P	V	Yes.
<i>Polygala linearifolia</i>	Native Milkwort	Range: North from Copeton Dam and the Wialda area to southern QLD. Also on NSW north coast near Casino and Kyogle and in W.A. Habitat: Sandy soils in dry eucalypt forest and woodland with a sparse understorey. Also in dark sandy loam on granite in shrubby forest, and in yellow podsolic soil on granite in layered open forest. Flowering: Spring-Summer. Bluish purple, yellowish or occasionally white.	E1,P		No. Suitable habitat absent. Not present.

Potentially occurring threatened fauna

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Jalmenus eubulus</i>	Pale Imperial Hairstreak	Range: QLD & NSW Habitat: In NSW is only found in Brigalow dominated woodlands and open forests in the north of the state.	E4A,2		No. Suitable habitat absent. Not present.
<i>Crinia sloanei</i>	Sloane's Froglet	Range: Murray Darling Basin particularly the Darling Riverine Plains, NSW South Western Slopes and Riverina Bioregions. Habitat: It is typically associated with periodically inundated areas in grassland, woodland and disturbed habitats on the flood plains. Breeding: Typically breeds in ephemeral wetlands, or periodically inundated areas of permanent wetlands, in grasslands, woodlands, and disturbed environments.	V,P		No. Not seen.
<i>Anomalopus mackayi</i>	Five-clawed Worm-skink	Range: Western slopes of the Great Dividing Range. Northern floodplains, Bimble Box-Pine Woodlands. Habitat: Lives in permanent tunnel-like burrows under fallen timber and in deep cracking clays. Open woodlands with low grass cover and scattered eucalypt in regions with red-black to black clay loam soils.	E1,P	V	Yes. Not seen.
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	Range: Central eastern Australia, from Mareeba (NE Qld) to mid-eastern NSW; common on Darling Downs and near Brisbane Habitat: ranges, slopes, valleys, plains & floodplains which may be vegetated with dry or wet sclerophyll, esp. <i>Callitris</i> . Shelters under bark or in tree hollows Preferred Food: frogs, geckoes, skinks, birds and mammals	V,P		Yes. Not seen.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Anseranas semipalmata</i>	Magpie Goose	Range: Coastal from Broome (WA) to Brisbane (Qld) and 300 km inland. Casual S and NE NSW, SE Qld, Vic, SA, WA Habitat: Large seasonal wetlands and well-vegetated dams with rushes and sedges, wet grasslands, floodplains Breeding: Jan-Apr in nfh, Jul-Nov in sth to produce 1-16 off-white eggs Nest: Deep cup on mound of floating or trampled-down vegetation, in colony in swamp	V,P		No. Suitable habitat absent.
<i>Oxyura australis</i>	Blue-billed Duck	Range: SE and SW Aust Habitat: Well-vegetated swamps, large dams, lakes Breeding: Usually produce 5-6 pale green eggs. Nest: Domed cup of reeds on trampled reed platform	V,P		No. Suitable habitat absent.
<i>Stictonetta naevosa</i>	Freckled Duck	Range: W. NSW, far SW Qld, NE SA, SW WA. Habitat: Large, well-vegetated swamps, in dry periods, moves to open lakes. Breeding: Sept-Dec Nest: Well constructed bowl of stems and sticks in lignum clump, over-hanging tea-tree branch or flood-debris or old nest of Coot.	V,P		No. Suitable habitat absent.
<i>Phaps histrionica</i>	Flock Bronzewing	Range: Nomadic bird across northern Australia Habitat: Open woodland and plains Breeding: Usually produce 2 white eggs. Nest: Under bush or in grass	E1,P		No. Suitable habitat absent.
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	Range: Coastal and sub-coastal nfh Aust from Port Headland (WA) to central coast NSW Habitat: Large areas of shallow swamps/flooded meadows. Breeding: Breed in solitary pairs. Strongly territorial when breeding to produce 2-4 white eggs Nest: Large stick nest on tree top.	E1,P		No. Suitable habitat absent.
<i>Circus assimilis</i>	Spotted Harrier	Range: Wide spread on mainland Australia but sparsely distributed. Habitat: The Spotted Harrier is found in open wooded country in tropical and temperate Australia, particularly in arid and semi-arid areas. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands. Preys on terrestrial mammals (e.g. bandicoots, bettongs and rodents), birds and reptiles, occasionally insects and rarely carrion. Breeding: Builds a stick nest in a tree and lays eggs in spring (or sometimes autumn), with young remaining in the nest for several months.	V,P		Yes. May forage.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Hieraaetus morphnoides</i>	Little Eagle	Range: Throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. It occurs as a single population throughout NSW. Habitat: Occupies open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used. Prays on birds, reptiles and mammals, occasionally adding large insects and carrion. Breeding: Nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter. Lays two or three eggs during spring, and young fledge in early summer.	V,P		Yes.
<i>Lophoictinia isura</i>	Square-tailed Kite	Range: Throughout Aust but mainly coastal forests. Habitat: Open woodland. Each pair has a territory of +100 km². Breeding: Usually produce 2 blotched white eggs. Nest: Large stick cup on horizontal branch	V,P,3		Yes.
<i>Falco hypoleucos</i>	Grey Falcon	Range: Resident or nomadic visitor to inland parts of all mainland states Habitat: Lightly treed inland plains, gibber deserts, sand ridges, pastoral lands, timbered watercourses Breeding: June-Nov to produce 2-3 buff and heavily red-brown marbled eggs Nest: Refurbished nest of another raptor or corvid, usually high in leafy eucalypt on watercourse or waterhole	E1,P,2		No. Not present.
<i>Grus rubicunda</i>	Brolga	Range: Most of northern and eastern Aust. Habitat: Congregate in marshlands. Breeding: Usually produce 2 spotted & blotched white eggs Nest: Large heap of grass and sticks, usually in shallow water.	V,P		No. Suitable habitat absent.
<i>Ardeotis australis</i>	Australian Bustard	Range: Mainland Australia, mostly extinct in settled areas of S, SE Aust and SW WA. Nomadic in response to rainfall; regular movements south in summer and to northern coastal Aust in winter Habitat: Grasslands, spinifex, open scrublands, grassy woodlands, sand-hills, pastoral lands, burned ground, occasionally crops, airfields. Preferred Food: Centipedes, insects, lizards, young birds, small rodents, molluscs, leaves, seeds and fruit. Breeding: Aug-Nov in southern Aust and all months in northern Aust to produce 1-3 buff to green-buff eggs Nest: Open, bare ground, by bush, stones, tussock.	E1,P		No. Suitable habitat absent.
<i>Burhinus grallarius</i>	Bush Stone-curlew	Range: Widespread north and north-eastern Aust. Habitat: Occurs in large groups on northern pastures. Breeding: Usually produce 1-2 blotched pale umber eggs. Nesting: Normally on the ground	E1,P		No. Suitable habitat absent.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Rostratula australis</i>	Australian Painted Snipe	Range: SE SA, Vic and NSW Riverina, NW NSW, Qld Channel Country, SE Qld and Qld Fitzroy Basin. Sporadic reports from nth WA, inland NT and inland and sub-coastal Nth Qld. Habitat: Temporary or infrequently filled freshwater wetlands. Preferred Food: They feed in shallow water or at the waters' edge and on mudflats, taking seeds and invertebrates such as insects, worms, molluscs and crustaceans. Breeding: Typically produce 3-4 eggs Notes: This species was recently split from Painted Snipe (<i>Rostratula benghalensis</i>)	E1,P	E	No. Suitable habitat absent.
<i>Calyptrorhynchus banksii samueli</i>	Red-tailed Black-Cockatoo (inland subspecies)	Range: Eastern and northern Australia. Becoming rarer in settled areas. Habitat: Open forest woodland and scrubland Preferred Food: Trunk and branch feeder. Breeding: Usually produce 2-6 eggs Nest: Large nest – untidy dome of sticks lined with grass, bark, wool etc. 3-6m above ground.	V,P,2		Yes.
<i>Calyptrorhynchus lathamii</i>	Glossy Black-Cockatoo	Range: NE Vic, inland NSW and Qld in hilly, rocky ridge country. Habitat: She oaks (mostly <i>Allocasuarinas</i>) in forests, woodlands, timbered watercourses. Also in eucalypts, native cypress (<i>Callitris</i>), brigalow (<i>Acacia</i>) scrub. Preferred Food: Almost exclusively on seeds extracted from the wooden cones of casuarinas Breeding: March-August producing one large, white, oval egg. Nest: Layer of woodchips in large hollow, often high.	V,P,2		No. Suitable habitat absent.
<i>Neophema pulchella</i>	Turquoise Parrot	Range: Slopes, lowlands of Divide in SE Australia Habitat: Open grassy woodland, with dead trees, near permanent water and forested hills, coastal heaths, pastures with exotic grasses, weeds, roadsides, orchards. Preferred Food: Seeds of grasses, herbaceous plants and shrubs, with a reliable source of water. Flowers, nectar, fruits, leaves and scale insects may also be eaten. Breeding: Aug-Dec and Apr-May to produce 4-5 white, round eggs Nest: In dead stump or sprout of eucalypt	V,P,3		No. Suitable habitat absent.
<i>Ninox connivens</i>	Barking Owl	Range: Mainland Aust. Habitat: Open forests, woodlands, dense scrubs, foothills, river red gums, other large trees near watercourses, penetrating otherwise open country, paperbark woodlands. Rare or absent from arid, treeless or heavily forested regions. Breeding: July-Nov to produce 2-3 dull white roundish eggs. Nest: Decayed debris, tree hollows, occasionally on the ground and sometimes in rabbit burrows	V,P,3		Yes.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Tyto longimembris</i>	Eastern Grass Owl	Range: North eastern Australia and coastal islands. Breeding: In the nest, 3-8 dull white eggs are laid. They breed generally all year round. Habitat: Due to the grass owls adaptation skills, this owl prefers tall grasslands and swamps since its adaptation to walking on the land in tall grass. Preferred Food: They feed predominantly on small rodents. Common prey are the long-haired rat and the cane rat.	V, P, 3		No. Suitable habitat absent.
<i>Chthonicola sagittata</i>	Speckled Warbler	Range: SE Aust, on and inland from Divide Habitat: Drier woodlands with tussocks, branches, rocks; in Qld, mulga, brigalow, vine scrubs Breeding: Aug-Jan to produce 3-4 chocolate-red eggs Nest: Domed of grass, bark-shreds, moss, lined with fur; on ground, low shrub, tree-trunk	V, P		No. Suitable habitat absent.
<i>Melithreptus gularis</i>	Black-chinned Honeyeater (eastern subspecies)	Range: Northern, central & eastern Australia. Habitat: Dry forest & woodlands especially along rivers. Breeding: Usually produce 2 spotted pink eggs Nest: Deep cup consisting of fur, down, bark & grass in outer foliage.	V, P		No. Suitable habitat absent.
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	Range: Eastern and northern Australia. Becoming rarer in settled areas. Habitat: A bird species common in Box-Gum, Box-Cypress & Open Box woodlands and scrubland. Birds are generally unable to cross large open areas. Preferred Food: Feed on invertebrates by foraging on the trunks and branches of eucalypts and other woodland trees or on the ground, digging and probing amongst litter and tussock grasses. Breeding: Usually 2-3 eggs laid between July and February. Nest: Nest is a large, untidy dome of sticks lined with grass, bark, wool etc. 3-6m above ground.	V, P		No. Suitable habitat absent.
<i>Daphoenositta chrysoptera</i>	Varied Sittella	Range: Widespread on mainland Australia Habitat: Eucalypt woodlands and forests throughout their range. They prefer rough-barked trees like stringybarks and ironbarks or mature trees with hollows or dead branches. Breeding: nest is a deep open cup, like a cone, of bark and spider web, decorated on the outside with long pieces of bark, camouflaged to look like the fork or branch where it is placed.	V, P		No. Suitable habitat absent.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Melanodryas cucullata cucullata</i>	Hooded Robin (southern form)	Range: Drier woodland/forest habitats in mainland Aust. Habitat: Drier eucalyptus forests, woodlands, scrubs; with fallen logs, debris; mallee, casuarinas, cypress pine, mulga; cleared paddocks with stumps/dead trees or regrowth; Banksia-dominated coastal scrubs. Breeding: July-Dec to produce 2-3 apple-green/pale olive, faint red/brown tint on large end, or clouded rich brown eggs. Nest: Open cup of bark-strips, rootlets, grass, spider's web; on stump, cavity in broken trunk, horizontal fork/branch, stunted eucalypt, on or near dead wood, 1-6 m high. Communal nests – three or more may attend a nest.	V, P		No. Suitable habitat absent.
<i>Stagonopleura guttata</i>	Diamond Firetail	Range: eastern Aust. West of Great Dividing Range Habitat: Open forest woodland & wooded grassland Breeding: Aug-Jan to produce 4-6 white, oval eggs Nest: Globe of grass lined with feathers, with entrance spout, found in dense bush or high tree, mistletoe or Babbler's nest.	V, P		No. Suitable breeding habitat absent.
<i>Sminthopsis macroura</i>	Stripe-faced Dunnart	Range: Inland central and northern Aust. Has declined from NE parts of the western division (Barwon & Namoi Rivers) early 1900's Habitat: Arid to semi-arid woodland, shrubland or tussock grasslands on a variety of substrates from clays to sandy or stony soils. Tends to prefer denser vegetation along drainage lines & shelters in cracks in ground during day Preferred Food: Feeds at night mainly on invertebrates. Breeding: Females sexually mature at ~ 5mths & can rear 2 litters (each of ~6 young) during breeding season from July to Feb.	V, P		No. Suitable habitat absent.
<i>Phascolarctos cinereus</i>	Koala	Range: Fragmented distribution throughout eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia. Habitat: Eucalypt woodlands and forests. Preferred Food: Foliage of more than 70 eucalypt species and 30 non-eucalypt species. Breeding: Females breed at two years of age and produce one young per year.	V, P	V	Yes.
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Range: Eastern & northern Aust. Habitat: Wooded habitats of Mulga, Bimble Box – Pine communities, Northern floodplains. Preferred Food: Airborne insects above canopy and sometimes closer to ground. Breeding: Normally one per year	V, P		No. Suitable habitat absent.
<i>Mormopterus beccarii</i>	Beccari's Freetail-bat	Range: Northern Australia Habitat: Roost in tree hollows and under roofs. They roost together in colonies of around 50 bats. Preferred Food: Beetles, leafhoppers, weevils, flies, moths and grasshoppers. They fly quickly over water in a range of forest types.	V, P		No. Not recorded.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Mormopterus eleryi</i>	Bristle-faced free-tailed bat, Hairy-nosed Freetail Bat	Range: NT, QLD & North-West NSW Habitat: Knowledge of the ecology of the Hairy-nosed Freetail Bat is limited, however evidence suggests that the species depends on hollows and tree fissures for roosting sites. All other Australian species from the same family generally roost in tree hollows and fissures.	E1,P		No. Not recorded.
<i>Chalinolobus picatus</i>	Little Pied Bat	Range: NSW, Qld Habitat: Caves, mines, tunnels Breeding: Normally one per year.	V,P		No. Suitable habitat absent.
<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	Range: Overall, the distribution of the south eastern form coincides approximately with the Murray Darling Basin with the Pilliga Scrub region being the distinct stronghold for this species. Habitat: Inhabits a variety of vegetation types, including mallee, bullocke Allocasuarina leuhmanni and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland. Preferred Food: Hunt non-flying prey - especially caterpillars and beetles - and will even hunt on the ground. Breeding: Mating takes place in autumn with one or two young born in late spring to early summer.	V,P	V	No. Suitable habitat absent.

Threatened Ecological Communities

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions</i>	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	The Brigalow community is a low woodland or forest community dominated by Brigalow (<i>Acacia harpophylla</i>), with pockets of Belah (<i>Casuarina cristata</i>) and Poplar Box (<i>Eucalyptus populnea</i> subsp. <i>bimbi</i>). Scattered remnants on the North West Slopes and Plains and Darling River Plains in NSW; also in Queensland. This community has been extensively cleared for agriculture, with most surviving remnants along roadsides and paddock edges.	E3	E	No. Not present.
<i>Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions</i>	Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions	Previously an open forest community of flora and fauna that may now exist as woodland or as remnant trees. Characteristic tree species are Carbeen (<i>Corymbia tessellaris</i>) and White Cypress Pine (<i>Callitris glaucophylla</i>). Associated trees include <i>Corymbia dolichocarpa</i> , <i>Eucalyptus populnea</i> , <i>E. camaldulensis</i> , <i>Casuarina cristata</i> and <i>Allocasuarina leuhmannii</i> . Found on riverine plains of the Meehi, Gwydir, MacIntyre and Barwon Rivers and in small remnants farther south. Occurs on siliceous sands, earthy sands and clayey sands.	E3		Yes.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregion</i>	Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregion	A woodland community of flora and fauna is found on the grey, self-mulching clays of periodically waterlogged floodplains, swamp margins, ephemeral wetlands, and stream levees. The structure of the community may vary from tall riparian woodlands to very open 'savanna like' grassy woodlands with a sparse midstorey of shrubs and saplings. Typically these woodlands form mosaics with grasslands and wetlands, and are characterised by Coolibah (<i>Eucalyptus coolabah</i>) and, in some areas, Black Box (<i>E. largiflorens</i>). Other tree species may be present including River Cooba (<i>Acacia stenophylla</i>), Cooba (<i>A. salicina</i>), Belah (<i>Casuarina cristata</i>) and Eurah (<i>Eremophila bignoniiflora</i>).	E3	E	Yes.
<i>Marsh Club-rush sedgeland in the Darling Riverine Plains Bioregion</i>	Marsh Club-rush sedgeland in the Darling Riverine Plains Bioregion	Marsh Club-rush sedgeland is dominated by the Marsh Club-rush <i>Bolboschoenus fluviatilis</i> which forms dense stands up to 2 m tall. The community is further characterised by an understorey including Tussock Sedge <i>Carex appressa</i> , Ribbed Spike Rush <i>Eleocharis plana</i> , Blown Grass <i>Lachnagrostis filiformis</i> , Water Couch <i>Paspalum distichum</i> and Swamp Buttercup <i>Ranunculus undosus</i> . Other species that may be present include <i>Cyperus victoriensis</i> , <i>Typha domingensis</i> , <i>Ludwigia peploides</i> subsp. <i>montevidensis</i> and <i>Eleocharis pallens</i> . The ecological community is distinguished from other surrounding communities by a lack of trees and the dominance of <i>Bolboschoenus fluviatilis</i> (generally over 40% of the vegetation cover) although the structure may vary depending on past disturbance. Surrounding communities may include woodlands of Coolibah <i>Eucalyptus coolabah</i> and Black Box <i>E. largiflorens</i> , shrublands of River Cooba <i>Acacia stenophylla</i> and Lignum <i>Muehlenbeckia florulenta</i> or treeless communities dominated by Water Couch, Spike Rush, Tussock Rush <i>Juncus aridicola</i> or Common Reed <i>Phragmites australis</i> . <i>Bolboschoenus fluviatilis</i> is widespread in NSW and may occur as a component species in these surrounding communities and in a range of other wetland locations. Marsh Club-rush sedgeland is associated with grey clay soils usually with a surface layer of organic matter several centimetres thick. Further information on the community can be found in Benson (2008) under the name 'Marsh Club-rush very tall sedgeland of inland watercourses.'	E4B		No. Not present.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions</i>	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Penepplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions	This ecological community is scattered across the eastern parts of the alluvial plains of the Murray-Darling river system. The community is also known as Boree particularly in the southern part of its distribution. Typically, it occurs on red-brown earths and heavy textured grey and brown alluvial soils within a climatic belt receiving between 375 and 500 mm mean annual rainfall. The structure of the community varies from low woodland and low open woodland to low sparse woodland or open shrubland, depending on site quality and disturbance history. The tree layer grows up to a height of about 10 metres and invariably includes <i>Acacia pendula</i> (Weeping Myall or Borec) as one of the dominant species or the only tree species present. The understorey includes an open layer of chenopod shrubs and other woody plant species and an open to continuous groundcover of grasses and herbs. The structure and composition of the community varies, particularly with latitude, as chenopod shrubs are more prominent south of the Lachlan River district, while other woody species and summer grasses are more common further north. In some areas the shrub and canopy stratum may have been reduced or eliminated by clearing or heavy grazing, leaving derived grassland that may still constitute this community. This EEC is known from parts of the Local Government Areas of Berrigan, Bland, Bogan, Carrathool, Conargo, Coolamon, Coonamble, Corowa, Forbes, Gilgandra, Griffith, Gwydir, Inverell, Jerildere, Lachlan, Leeton, Lockhart, Moree Plains, Murray, Murrumbidgee, Narrabri, Narranderra, Narramine, Parkes, Urana, Wagga Wagga and Warren, and but may occur elsewhere in these bioregions.	E3	E	No. Not present.

Key threatening processes

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands</i>	Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands	This proposal would not alter the natural flow regime of rivers, streams or wetlands and would have minimal impact on the floodplain.	KTP		No.
<i>Anthropogenic Climate Change</i>	Anthropogenic Climate Change	The proposal would not impact on climate change.	KTP		No.
<i>Bushrock removal</i>	Bushrock removal	There is no bushrock on the subject land	KTP		No.
<i>Clearing of native vegetation</i>	Clearing of native vegetation	The land has been historically cleared and no further vegetation, other than regrowth, would be removed.	KTP		No.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Competition and grazing by the feral European Rabbit, Oryctolagus cuniculus (L.)</i>	Competition and grazing by the feral European Rabbit, <i>Oryctolagus cuniculus (L.)</i>	The proposed development would not introduce European Rabbits to the land.	KTP		No.
<i>Competition and habitat degradation by Feral Goats, Capra hircus Linnaeus 1758</i>	Competition and habitat degradation by Feral Goats, <i>Capra hircus Linnaeus 1758</i>	The proposed development would not introduce Feral Goats to the land.	KTP		No.
<i>Competition from feral honey bees, Apis mellifera L.</i>	Competition from feral honey bees, <i>Apis mellifera L.</i>	The proposal would not introduce feral honey bees to the land.	KTP		No.
<i>Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners</i>	Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners	The proposal would not influence the abundance of psyllids or Bell Miners.	KTP		No.
<i>Herbivory and environmental degradation caused by feral deer</i>	Herbivory and environmental degradation caused by feral deer	The proposal would not introduce feral deer to the land.	KTP		No.
<i>High frequency fire resulting in the disruption of life cycle processes in plants and loss of animals and loss of vegetation structure and composition</i>	High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition	The proposal would alter the present fire regime.	KTP		No.
<i>Importation of Red Imported Fire Ants Solenopsis invicta Buren 1972</i>	Importation of Red Imported Fire Ants <i>Solenopsis invicta Buren 1972</i>	The proposal does not involve the importation of Fire Ants.;	KTP		No.
<i>Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations</i>	Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations	Psittacines known to be susceptible to this disease are not present on the subject land.	KTP		No.
<i>Infection of frogs by amphibian chytrid causing the disease chytridiomycosis</i>	Infection of frogs by amphibian chytrid causing the disease chytridiomycosis	The proposal is unlikely to affect the spread of the disease-causing fungus.	KTP		No.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Infection of native plants by Phytophthora cinnamomi</i>	Infection of native plants by <i>Phytophthora cinnamomi</i>	The proposal would have no effect on the spread of <i>P. cinnamomi</i> which seems to be a coastal phenomenon.	KTP		No.
<i>Introduction of the Large Earth Bumblebee Bombus terrestris (L.)</i>	Introduction of the Large Earth Bumblebee <i>Bombus terrestris</i> (L.)	The proposal does not involve the introduction of <i>B. terrestris</i> .	KTP		No.
<i>Invasion and establishment of exotic vines and scramblers</i>	Invasion and establishment of exotic vines and scramblers	The proposal does not involve the introduction or establishment of exotic vines or scramblers.	KTP		No.
<i>Invasion and establishment of Scotch Broom (Cytisus scoparius)</i>	Invasion and establishment of Scotch Broom (<i>Cytisus scoparius</i>)	The subject land is outside the climatic range of <i>C. scoparius</i> .	KTP		No.
<i>Invasion and establishment of the Cane Toad (Bufo marinus)</i>	Invasion and establishment of the Cane Toad (<i>Bufo marinus</i>)	The proposal does not involve the introduction or establishment of <i>B. marinus</i> .	KTP		No.
<i>Invasion of native plant communities by African Olive Olea europaea L. subsp. cuspidata (Wall ex G. Don Cirferri)</i>	Invasion of native plant communities by African Olive <i>Olea europaea</i> L. subsp. <i>cuspidata</i> (Wall ex G. Don Cirferri)	Not present on the subject land and would not be introduced by this proposal.	KTP		No.
<i>Invasion of native plant communities by Chrysanthemoides monilifera</i>	Invasion of native plant communities by <i>Chrysanthemoides monilifera</i>	This Threat Abatement Plan aims to reduce the impacts of bitou bush and boneseed on threatened species, populations and ecological communities. These species are largely coastal and are not present on the subject land. This proposal has no implications for this plan.	KTP		No.
<i>Invasion of native plant communities by exotic perennial grasses</i>	Invasion of native plant communities by exotic perennial grasses	This proposal does not involve the introduction of the listed exotic perennial grasses.	KTP		No.
<i>Invasion of the Yellow Crazy Ant, Anoplolepis gracilipes (Fr. Smith) into NSW</i>	Invasion of the Yellow Crazy Ant, <i>Anoplolepis gracilipes</i> (Fr. Smith) into NSW	<i>A. gracilipes</i> is not present on the subject land. The proposal would not introduce <i>A. gracilipes</i> to the land.	KTP		No.
<i>Invasion, establishment and spread of Lantana (Lantana camara L. sens. Lat)</i>	Invasion, establishment and spread of Lantana (<i>Lantana camara</i> L. sens. Lat)	Lantana is not present on the subject land and would not be introduced by this proposal.	KTP		No.

Scientific Name	Common Name	Comments	NSW status	Comm. status	7 Part Test? Y/N
<i>Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants</i>	Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants	This proposal does not promote the escape of garden plants.	KTP		No.
<i>Loss of Hollow-bearing Trees</i>	Loss of Hollow-bearing Trees	No hollow bearing trees would be removed by this proposal.	KTP		No.
<i>Loss or degradation (or both) of sites used for hill-topping by butterflies</i>	Loss or degradation (or both) of sites used for hill-topping by butterflies	The subject land contains no hill-topping sites.	KTP		No.
<i>Predation and hybridisation by Feral Dogs, Canis lupus familiaris</i>	Predation and hybridisation by Feral Dogs, Canis lupus familiaris	Closer settlement of the subject land would deter feral dogs from entering the land.	KTP		No.
<i>Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)</i>	Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)	This Threat Abatement Plan outlines the impacts of the introduced fish <i>Gambusia holbrooki</i> on native animals, particularly threatened frogs, and sets out the management actions that are necessary to abate this threat. This proposal has no implications for this plan.	KTP		No.
<i>Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)</i>	Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)	This Threat Abatement Plan outlines the impacts of foxes on native animals and sets out the management actions that are necessary to abate this threat. The subject land is not classified as a priority site for fox control, however, closer settlement is likely to have a positive effect on fox control in the area.	KTP		No.
<i>Predation by the Feral Cat Felis catus (Linnaeus, 1758)</i>	Predation by the Feral Cat Felis catus (Linnaeus, 1758)	Closer settlement of the land would deter F catus from invading the subject land.	KTP		No.
<i>Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus 1758</i>	Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus 1758	Feral pigs are known in the area. Closer settlement would have the effect of removing S scrofa from the subject land.	KTP		No.
<i>Removal of dead wood and dead trees</i>	Removal of dead wood and dead trees	The subject land is cleared and the proposal would not involve the removal of dead wood or dead trees.	KTP		No.

Code	Description	Definition under the NPW Act 1974, the TSC Act 1995, the FM Act 1994 No. 38, or the SSDP.
P	Protected	Refers to fauna not listed in Schedule 11 of the NPW Act 1974.
P 13	Protected Native Plants	Refers to flora listed in Schedule 13 of the NPW Act 1974.
V	Vulnerable	Refers to fauna and flora species that are likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate (Schedule 2, TSC Act 1995).
E1	Endangered	Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 1, TSC Act 1995).
E2	Endangered Population	Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a critical level, or its habitat has been so drastically reduced, that it is in immediate danger of extinction and it is not a population of a species already listed in Schedule 1, and: (a) it is disjunct and at or near the limit of its geographic range, or (b) it is or is likely to be genetically distinct, or (c) it is otherwise of significant conservation value. (Schedule 1, part 2, TSC Act 1995).
E4	Extinct	Refers to fauna and flora species that have not been located in nature during the preceding 50 years despite searching of known and likely habitats of that period (Schedule 1, part 4, TSC Act 1995).
E4A	Critically Endangered Species	Refers to a species that is eligible to be listed as a critically endangered species if, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations. (Schedule 1a, part 1, TSC Act 1995).
FCE	Critically Endangered Fish Species	Refers to fish species that, in the opinion of the Fisheries Scientific Committee, are facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations (Part 1 of Schedule 4A, FM Act 1994).
FE	Endangered Fish Species	Re Refers to fish species that, in the opinion of the Fisheries Scientific Committee: (a) are facing a very high risk of extinction in New South Wales in the near future, as determined in accordance with criteria prescribed by the regulations, and (b) are not eligible to be listed as a critically endangered species (Part 1 of Schedule 4, FM Act 1994).
FP	Protected Fish Species	The regulations may declare that fish of a specified species are protected fish (Part 2, Division 2, Section 19, FM Act 1994).
FV	Vulnerable Fish Species	Refers to fish species that, in the opinion of the Fisheries Scientific Committee: (a) are facing a high risk of extinction in New South Wales in the medium-term future, as determined in accordance with criteria prescribed by the regulations, and (b) are not eligible to be listed as an endangered or critically endangered species (Part 1 of Schedule 5, FM Act 1994).
FX	Extinct Fish	Refers to a species that is eligible to be listed if, in the opinion of the Fisheries Scientific Committee, it has not been recorded in its known or expected habitat in New South Wales, despite targeted surveys, over a time frame appropriate, in the opinion of the Fisheries Scientific Committee, to its life cycle and form (Part 4 of Schedule 4, FM Act 1994).
FEP	Endangered Population of Fish	Refers to a population that, in the opinion of the Fisheries Scientific Committee, is facing a very high risk of extinction in New South Wales in the near future, as determined in accordance with criteria prescribed by the regulations (Part 2 of Schedule 4, FM Act 1994).
FKTP	Key Threatening Process of Fish	Refers to a threatening process that, in the opinion of the Fisheries Scientific Committee: (a) adversely affects threatened species, populations or ecological communities, or (b) could cause species, populations or ecological communities that are not threatened to become threatened (Schedule 6, FM Act 1994).
2	Category 2 sensitive species	Refers to species for which Atlas sightings' coordinates will be supplied denatured to public web applications, and denatured to licensed clients. Such species are classed as highly sensitive, and provision of precise locations would subject the species to high risk from threats such as disturbance and collection.
3	Category 3 sensitive species	Refers to species for which sightings' coordinates will be supplied denatured to public web applications, but supplied 'as-held' to licensed clients. Current denaturing specifications are set out in Appendix 2. Such species are classed as of medium sensitivity, and provision of precise locations would subject the species to medium risk from threats such as collection/deliberate damage. Data are supplied under the conditions of a written data agreement, usually a Data Licence Agreement.

10. Potential Impacts of the proposed development

Vegetation Clearing and Habitat Loss

The subject land has been historically cleared and used for a combination of farming and an extractive industry. Remaining native vegetation is protected by the Native Vegetation Act 2003 and would require an approval for any clearing.

Fragmentation of Habitat

The habitat at present is in a fragmented state. The southern section of the area to be rezoned is completely fragmented as a result of the development for cultivation. The northern sector of the area has been fragmented by a gravel quarry, a small irrigation field on the river and cultivation within the open River gum woodland.

A thin line of vegetation along the river bank zone provides the only native vegetation connection (with trees) to provide a link between the upstream and downstream (east and west) areas of remnant woodland that have not been cleared along the riverine corridor on adjoining lots.

The intention of the rezoning is to allow development of dwellings. The preliminary subdivision design presented by the developer at present indicates that no disturbance would occur in the southern sector of the area. However, proposed lots 64 through to 95 as proposed will encroach the open River gum woodland area. The area is a cultivation beneath the trees, however the trees retain a high value in relation to corridors for species such as possum. To avoid permanent or complete fragmentation of this woodland habitat, the development would need to consider a suitable buffer zone along the river and along the southern edge of lots 82 to 95 in which all healthy mature trees should be retained. This would allow retention of the corridor thus avoiding complete fragmentation of the remaining corridor.

It is expected that the dwellings to be built on this river lots (64 to 95) will include extensive gardens and shade trees. This would provide some restoration of the habitat continuity to provide a link between upstream and downstream of the proposed rezoning area.

Weeds

A number of weed species are present on the land as discussed elsewhere in the report. Such weeds include noxious weeds. The weeds have potentially been introduced through the cultivation process in addition to spreading of weeds by fauna and flood.

A weed management process will be required in areas that are not maintained under cultivation at present. This would be an important management item during the development of the subdivision area if the rezoning is approved.

Erosion and sedimentation

Erosion and sedimentation are natural phenomenon involved in landscape formation. Abnormal rates of erosion and sedimentation from land disturbance can result in environmental damage.

This proposal does not involve land disturbance which would only occur following development approval for physical works on the land. Both erosion and sedimentation can be controlled by good engineering design and practice which would be a condition of any development consent issued by the consent authority.

11. Conclusion and Recommendations

Assessments of potential impacts on threatened species, populations, communities and their habitats has been conducted in accordance with the provisions of section 5A of the Environmental Planning and Assessment Act 1979 and the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).

The assessment conducted under section 5A of the Environmental Planning and Assessment Act 1979 determined that the proposal would not have a significant impact on threatened species, populations, ecological communities or their habitats and a species impact statement was not required.

The assessment conducted under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) using the Department's Protect Matters Search Tool concluded that the proposal would not have a significant impact on matters of national environmental significance and that no referral to the Minister was required.

The assessment conducted under the provisions of State Environmental Planning Policy No.44 – Koala Habitat Protection concluded that the land is not core Koala habitat and that no Koalas were present and had not been on the land for some time. There are no SEPP 44 issues in relation to the proposal.

Sarah Grady B. Env. Sc
Environmental Consultant

12. Appendices

Appendix A. Atlas of NSW Wildlife Records within a 10 km radius of the Subject site

Fauna

Scientific Name	Common Name
<i>Jalmenus eubulus</i>	Pale Imperial Hairstreak
<i>Crinia sloanei</i>	Sloane's Froglet
<i>Anomalopus mackayi</i>	Five-clawed Worm-skink
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake
<i>Anseranas semipalmata</i>	Magpie Goose
<i>Oxyura australis</i>	Blue-billed Duck
<i>Stictonetta naevosa</i>	Freckled Duck
<i>Phaps histrionica</i>	Flock Bronzewing
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork
<i>Circus assimilis</i>	Spotted Harrier
<i>Hieraaetus morphnoides</i>	Little Eagle
<i>Lophoictinia isura</i>	Square-tailed Kite
<i>Falco hypoleucos</i>	Grey Falcon
<i>Grus rubicunda</i>	Brolga
<i>Ardeotis australis</i>	Australian Bustard
<i>Burhinus grallarius</i>	Bush Stone-curlew
<i>Rostratula australis</i>	Australian Painted Snipe
<i>Calyptorhynchus banksii samueli</i>	Red-tailed Black-Cockatoo (inland subspecies)
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo
<i>Neophema pulchella</i>	Turquoise Parrot
<i>Ninox connivens</i>	Barking Owl
<i>Tyto longimembris</i>	Eastern Grass Owl
<i>Chthonicola sagittata</i>	Speckled Warbler
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)
<i>Daphoenositta chrysoptera</i>	Varied Sittella
<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern form)
<i>Stagonopleura guttata</i>	Diamond Firetail
<i>Sminthopsis macroura</i>	Stripe-faced Dunnart
<i>Phascogale carolinensis</i>	Koala
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat
<i>Mormopterus beccarii</i>	Beccari's Free-tail-bat
<i>Mormopterus eleryi</i>	Bristle-faced free-tailed bat, Hairy-nosed Free-tail Bat
<i>Chalinolobus picatus</i>	Little Pied Bat
<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat

Flora

Scientific Name	Common Name
<i>Tylophora linearis</i>	
<i>Desmodium campylocaulon</i>	Creeping Tick-trefoil
<i>Swainsona murrayana</i>	Slender Darling Pea
<i>Acacia jucunda</i>	Yetman Wattle
<i>Platyzoma microphyllum</i>	Braid Fern
<i>Digitaria porrecta</i>	Finger Panic Grass
<i>Homopholis belsonii</i>	Belson's Panic
<i>Polygala linariifolia</i>	Native Milkwort

Ecological Communities

Scientific Name	Common Name
<i>Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions</i>	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions
<i>Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions</i>	Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions
<i>Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregion</i>	Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregion
<i>Marsh Club-rush sedgeland in the Darling Riverine Plains Bioregion</i>	Marsh Club-rush sedgeland in the Darling Riverine Plains Bioregion
<i>Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions</i>	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions

Key Threatening Processes

Scientific Name	Common Name
<i>Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands</i>	Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands
<i>Anthropogenic Climate Change</i>	Anthropogenic Climate Change
<i>Bushrock removal</i>	Bushrock removal
<i>Clearing of native vegetation</i>	Clearing of native vegetation
<i>Competition and grazing by the feral European Rabbit, Oryctolagus cuniculus (L.)</i>	Competition and grazing by the feral European Rabbit, Oryctolagus cuniculus (L.)
<i>Competition and habitat degradation by Feral Goats, Capra hircus Linnaeus 1758</i>	Competition and habitat degradation by Feral Goats, Capra hircus Linnaeus 1758
<i>Competition from feral honey bees, Apis mellifera L.</i>	Competition from feral honey bees, Apis mellifera L.
<i>Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners</i>	Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners
<i>Herbivory and environmental degradation caused by feral deer</i>	Herbivory and environmental degradation caused by feral deer
<i>High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition</i>	High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition
<i>Importation of Red Imported Fire Ants Solenopsis invicta Buren 1972</i>	Importation of Red Imported Fire Ants Solenopsis invicta Buren 1972
<i>Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations</i>	Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations
<i>Infection of frogs by amphibian chytrid causing the disease chytridiomycosis</i>	Infection of frogs by amphibian chytrid causing the disease chytridiomycosis
<i>Infection of native plants by Phytophthora cinnamomi</i>	Infection of native plants by Phytophthora cinnamomi
<i>Introduction of the Large Earth Bumblebee Bombus terrestris (L.)</i>	Introduction of the Large Earth Bumblebee Bombus terrestris (L.)
<i>Invasion and establishment of exotic vines and scramblers</i>	Invasion and establishment of exotic vines and scramblers
<i>Invasion and establishment of Scotch Broom (Cytisus scoparius)</i>	Invasion and establishment of Scotch Broom (Cytisus scoparius)
<i>Invasion and establishment of the Cane Toad (Bufo marinus)</i>	Invasion and establishment of the Cane Toad (Bufo marinus)
<i>Invasion of native plant communities by African Olive Olea europaea L. subsp. cuspidata (Wall ex G. Don Cirferri)</i>	Invasion of native plant communities by African Olive Olea europaea L. subsp. cuspidata (Wall ex G. Don Cirferri)

Scientific Name	Common Name
<i>Invasion of native plant communities by Chrysanthemoides monilifera</i>	Invasion of native plant communities by Chrysanthemoides monilifera
<i>Invasion of native plant communities by exotic perennial grasses</i>	Invasion of native plant communities by exotic perennial grasses
<i>Invasion of the Yellow Crazy Ant, Anoplolepis gracilipes (Fr. Smith) into NSW</i>	Invasion of the Yellow Crazy Ant, Anoplolepis gracilipes (Fr. Smith) into NSW
<i>Invasion, establishment and spread of Lantana (Lantana camara L. sens. Lat)</i>	Invasion, establishment and spread of Lantana (Lantana camara L. sens. Lat)
<i>Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants</i>	Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants
<i>Loss of Hollow-bearing Trees</i>	Loss of Hollow-bearing Trees
<i>Loss or degradation (or both) of sites used for hill-topping by butterflies</i>	Loss or degradation (or both) of sites used for hill-topping by butterflies
<i>Predation and hybridisation by Feral Dogs, Canis lupus familiaris</i>	Predation and hybridisation by Feral Dogs, Canis lupus familiaris
<i>Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)</i>	Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)
<i>Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)</i>	Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)
<i>Predation by the Feral Cat Felis catus (Linnaeus, 1758)</i>	Predation by the Feral Cat Felis catus (Linnaeus, 1758)
<i>Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus 1758</i>	Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus 1758
<i>Removal of dead wood and dead trees</i>	Removal of dead wood and dead trees

Appendix B. Assessment of Significance (7 Part Test) for Threatened Flora

The seven (7) part test, as required under Section 5A of the *EP&A* Act, has been applied to determine whether there is likely to be a significant effect on threatened species (endangered and vulnerable) recorded at, or likely to occur at the site.

Under the terms of the *EP&A* and *TSC* Acts, the most critical issues for this assessment are the definition of “local population”. The Act regards a local population as that inhabiting the study area, unless there is contiguous or proximate occupied habitat.

Furthermore, consideration of a “population” for the purpose of assessing its conservation status requires it to be a recognisable entity, disjunct or genetically distinct.

Endangered Species:

Finger Panic Grass – *Digitaria porrecta*

Vulnerable Species:

Belson’s Panic – *Homopholis belsonii*

Endangered Ecological Communities

Carbeen Open Forest Community in the Darling Riverine Plains and Brigalow Belt South Bioregions.

Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregion.

The following provides a discussion of the 7-parameters in the assessment of the above species and communities.

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction*

Present land use involves opportunistic rotational cropping and grazing activities. The two threatened species if they were present would have been within the cropping area.

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction*

No endangered local populations are present.

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction

i) Individual Carbeen and Coolibah trees do not constitute a community and the action proposed would not place a community at the risk of extinction.

ii) As above.

4. *In relation to the habitat of a threatened species, population or ecological community:*

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed,

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality

i) Some habitat would be disturbed as a result of the development of lots 64 to 95. The habitat at present is highly disturbed as a result of the cultivation of this land, however mature and larger trees have been retained in this area. The majority of these trees would generally be retained or replaced over time.

ii) Extensive fragmentation already exists as a result of current land use. The proposal will retain suitable corridors to avoid and potentially correct the current fragmentation of this habitat.

iii) The proposal is not considered as a threat to the remaining habitat's removal or isolation. The ground cover and mid-storey habitat layers have been removed or significantly modified as a result of existing land use. The rezoning of this land would allow some replacement of these two levels within the habitat.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly)*

The Director-General of the National Parks and Wildlife Service has not declared any critical habitat for any species on the subject land.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

The proposed development does not conflict with the priority actions identified to help recover any of the threatened species considered.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process*

Clearing of native vegetation is identified as a key threatening process for the threatened flora and communities considered. The proposed activity will have a minor effect on the long term survival of threatened species, populations or ecological communities in the locality. These impacts would be restricted to the riverine area on Lot 11. The southern area is devoid of native habitat of significance as a result of clearing and cultivation.

Any clearing proposed for future activities, such as clearing for construction of new fences, dwellings, access roads and services would be subject to detailed development assessment and consent.

The above assessment conducted under the provisions of section 5A of the EP&A Act has concluded that the proposal would not have a significant impact on threatened species, communities or their habitat and that a Species Impact Statement was not required.

Appendix C. Assessment of Significance (7 Part Test) for Threatened Fauna

The seven (7) part test, as required under Section 5A of the *EP&A* Act, has been applied to determine whether there is likely to be a significant effect on threatened species (endangered and vulnerable) recorded at, or likely to occur at the site.

Under the terms of the *EP&A* and *TSC* Acts, the most critical issues for this assessment are the definition of “local population”. The Act regards a local population as that inhabiting the study area, unless there is contiguous or proximate occupied habitat.

Furthermore, consideration of a “population” for the purpose of assessing its conservation status requires it to be a recognisable entity, disjunct or genetically distinct.

No threatened fauna species were observed at the subject site.

Threatened fauna with potential habitat or resources occurring on the site include:

Endangered Species:

Five-clawed Worm Skink – *Anomalopus mackayi*

Vulnerable Species:

Pale-headed Snake – *Hoplocephalus bitorquatus*

Spotted Harrier – *Circus assimilis*

Little Eagle – *Hieraaetus morphnoides*

Square-tailed Kite – *Lophoictinia isura*

Red-tailed Black Cockatoo – *Calyptorhynchus banksii samueli*

Barking Owl – *Ninox connivens*

Koala – *Phascolarctos cinereus*

The following provides a 7-parameter assessment of the above species.

1. *In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction*

No. Apart from the riverine corridor the land has little habitat or connective value having been cleared and farmed for generations. This proposal does not propose the removal of riverine vegetation.

2. *In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction*

The Director-General of the National Parks and Wildlife Service has not declared any endangered local populations.

3. *In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction

i) No endangered or critically endangered fauna communities are present on the land.

ii) As above.

4. *In relation to the habitat of a threatened species, population or ecological community:*

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed,

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality

i) The land has been historically cleared and farmed and has little habitat value apart from vegetation in the riverine corridor. No vegetation would be removed from the riverine corridor.

ii) No.

iii) As above.

5. *Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly)*

Not applicable, as the Director-General of the National Parks and Wildlife Service has not declared any critical habitat for any species relevant to the subject land.

6. *Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

The proposed development does not conflict with the priority actions identified to help recover any of the threatened species considered.

7. *Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process*

Clearing of native vegetation is identified as a key threatening process for the threatened flora and communities considered. The proposed activity will not affect the long term survival of threatened species, populations or ecological communities in the locality since the land has been historically cleared and farmed and it is proposed to retain all of the woodland on the subject site. Any clearing proposed for future activities, such as clearing for construction of new fences, dwellings, access roads and services would be subject to detailed development assessment and consent.

The above assessment conducted under the provisions of section 5A of the EP&A Act has concluded that the proposal would not have a significant impact on threatened species, communities or their habitat and that a Species Impact Statement was not required.

Appendix D. EPBC Act Protected Matters Report

Appendix E. EPBC Act Considerations

An assessment of the impact of the proposed development on threatened species, populations and ecological communities, World Heritage values, and migratory species listed under the *EPBC* Act is presented below.

Impacts on threatened species and ecological communities

Critically endangered and endangered species

An action has, will have, or is likely to have a significant impact on a critically endangered or endangered species if it does, will, or is likely to:

- lead to a long-term decrease in the size of a population, or
- reduce the area of occupancy of the species, or
- fragment an existing population into two or more populations, or
- adversely affect habitat critical to the survival of a species, or
- disrupt the breeding cycle of a population, or
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, or
- result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat*, or
- interfere with the recovery of the species.

No critically endangered species were observed on the subject site. Potential habitat for the endangered Five-clawed Worm Skink (*Anomalopus mackayi*) and Finger Panic Grass (*Digitaria porrecta*). occurs on the site

The Five-clawed Worm Skink is terrestrial, lives in permanent burrows under fallen timber and in deep cracking clay. This species has been recorded from localities on the western slopes of the Great Divide and northern floodplains. The NPWS Wildlife Atlas indicates that it has been recorded within 10km of the subject site.

It is considered unlikely that the proposed development will disrupt the lifecycle of any of these species such that a viable local population is likely to be placed at risk of extinction since it is proposed to retain the riverine and other native vegetation on the subject site with only minimal clearing for access roads and services. The potential impacts of the proposed development on the identified species are not likely to result in any of the points listed above.

Vulnerable species

An action has, will have, or is likely to have a significant impact on a vulnerable species if it does, will, or is likely to:

- lead to a long-term decrease in the size of an important population of a species, or
- reduce the area of occupancy of an important population, or
- fragment an existing important population into two or more populations, or
- adversely affect habitat critical to the survival of a species, or
- disrupt the breeding cycle of an important population, or
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, or

- result in invasive species that are harmful a vulnerable species becoming established in the vulnerable species' habitat, or
- interferes substantially with the recovery of the species.

An important population is one that is necessary for a species' long-term survival and recovery. This may include populations that are:

- key source populations either for breeding or dispersal,
- populations that are necessary for maintaining genetic diversity, and/or
- populations that are near the limit of the species range.

Suitable habitat for the Koala is located on the bank of the Macintyre River although targeted searches of the land failed to find either scats or scratch marks. Potential foraging habitat for Spotted Harrier, Little Eagle, Square-tailed Kite, Red-tailed Black Cockatoo and Barking Owl occurs on the subject site

The Pale-headed Snake is nocturnal tree dwelling reptile and suitable habitat occurs on the bank of the Macintyre River.

The Spotted Harrier, Little eagle, Square-tailed Kite, Red-tailed Black Cockatoo and Barking Owl may forage across the subject land and surrounding land. Nesting habitat is present on the bank of the Macintyre River.

Critically endangered and endangered ecological communities

No critically endangered ecological communities are declared for this site.

Impacts on Migratory Species

An action has, will have, or is likely to have a significant impact on a migratory species if it does, will, or is likely to:

- substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat of the migratory species, or
- result in invasive species that is harmful to the migratory species becoming established in an area of important habitat of the migratory species, or
- seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of the species.

An area of important habitat is:

- habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species, or
- habitat utilised by a migratory species which is at the limit of the species range, or
- habitat within an area where the species is declining.

It is considered unlikely that the proposal would impact on any migratory species given the low habitat value of the land.

Critically endangered and endangered ecological communities

No critically endangered or endangered ecological communities are present on the site. A few individual Carbeen and Coolibah trees are recorded on the site however, individual species do not constitute a community.

EPBC Assessment

The subject land has been heavily modified by past and present activities and no vegetation is to be removed. Following consideration of the proposal in accordance with the Department's Significant Impact Guidelines: Matters of National Significance (Commonwealth of Australia 2006) it is concluded that the proposed development will not impact on any matters of national significance and no referral is required.

Referral Recommendation

As a result of the above assessment it is concluded that no referral to the Commonwealth Minister for the Environment for consideration under the EPBC Act is required as it is unlikely that there would be any impacts on a matter of national environmental significance as a result of the proposal on the subject site.

Appendix F. SEPP No. 44 Koala Habitat Protection

SEPP 44 aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

- by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat;
- by encouraging the identification of areas of core koala habitat; and,
- by encouraging the inclusion of areas of core koala habitat in environment protection zones.

Koalas are obligate folivores which feed primarily on the genus *Eucalyptus*. Throughout their range in New South Wales, koalas have been recorded as using a wide variety of *Eucalyptus* spp.

The Local Government Area of Moree Plains Shire Council is listed in Schedule 1 of the Local Government Areas to which SEPP 44 applies, and is recognised as potential Koala habitat.

Core koala habitat means an area of land with a resident population of koalas, evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a population.

Potential koala habitat means areas of native vegetation where the trees of the types listed in Schedule 2 (feed tree species) constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.

River Red Gum (*Eucalyptus camaldulensis*) is listed in Schedule 2 of the SEPP and are present in the riverine corridor.

Koalas have/have not been recorded in the National Parks and Wildlife Service Wildlife Atlas within a 20 km radius of the subject site.

Targeted koala surveys were conducted on the site. No evidence of Koala presence now, or in the recent past, was found on the subject site. Scratch marks on tree trunks, and scats, provide reliable evidence of Koala presence for over six months after their presence. The subject site therefore does not constitute core Koala habitat. No further action under SEPP 44 is required.