Property: Lot 1, DP115459

Sutton, NSW

Flora and Fauna Assessment

Griffin Associates Environment P/L

Legislative Framework

Since August 2017 the NSW Threatened Species Act (TSC) and several parts and provisions of the NPW Act that dealt with threatened species and communities, and protected wildlife, and provisions under the EP&A Act that dealt with threatened species impact assessments were repealed and replaced with the ***Biodiversity Conservation Act 2016*** (BC Act) and supporting regulations, which are administered by the Office of Environment and Heritage.

Under the BC Act, where development or activity requiring consent is likely to significantly affect threatened species, the application for development consent is to be accompanied by a biodiversity development assessment report.

The test for determining significant effect is in Clause 7.3 of the BC Act. It requires consideration of effects on: (i) threatened species; (ii) endangered and critically endangered ecological communities; (iii) habitat for threatened species or ecological communities; (iv) any declared area of outstanding biodiversity value; and (v) key threatening processes.

The following report is a survey of flora and fauna of the subject site and is presented here to determine whether any of these considerations apply to the development of the site.

Environmental Setting and Site History

The site, adjoining Sutton Road and backing onto McLaughlins Creek and its junction with the Yass River is on the alluvial floodplain of the Yass River valley and has an elevation range of 600m ASL along the banks of McLaughlins Creek to 616m in the northwest corner on Sutton Road. The Future Urban Investigation area is flat, with only 3m elevation change across the site.

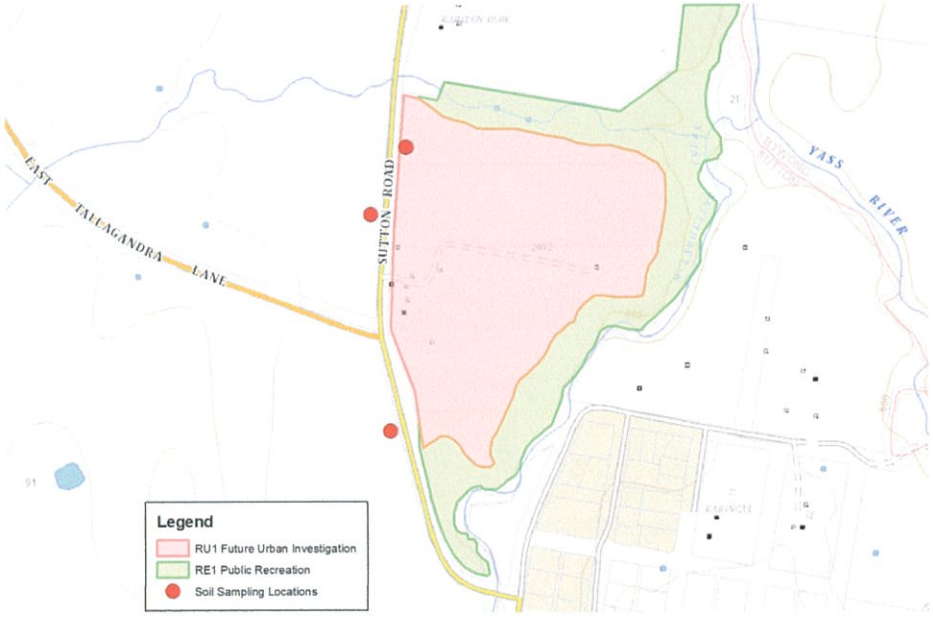

Figure 1: Site Location, Topography and Soil Profile Records

The property is on the narrow band of Quaternary Alluvium associated with the Yass River floodplain, comprising sand, silty clay and black organic clay. The red circles on and adjacent to the western boundary of the site (Figure 1) mark soil profile examinations by the NSW Soil Conservation Service in 1994 and held by the NSW Department of Environment

and Climate Change. The profiles describe a silty loam of 1.2 – 1.8 m depth over shale, with neutral pH and no salinity issues.

The history of the site has been mixed cultivation and grazing since its sale from the Crown estate in a 1,920 acre block in 1827 or 1828 to John Brown, who on-sold the property to William Guise in 1833. By 1833 the site was fully cleared for cropping and pasture. The 1906 parish map of Gooyoogarroo shows a 1035 acre portion still in the ownership of the Guise family.

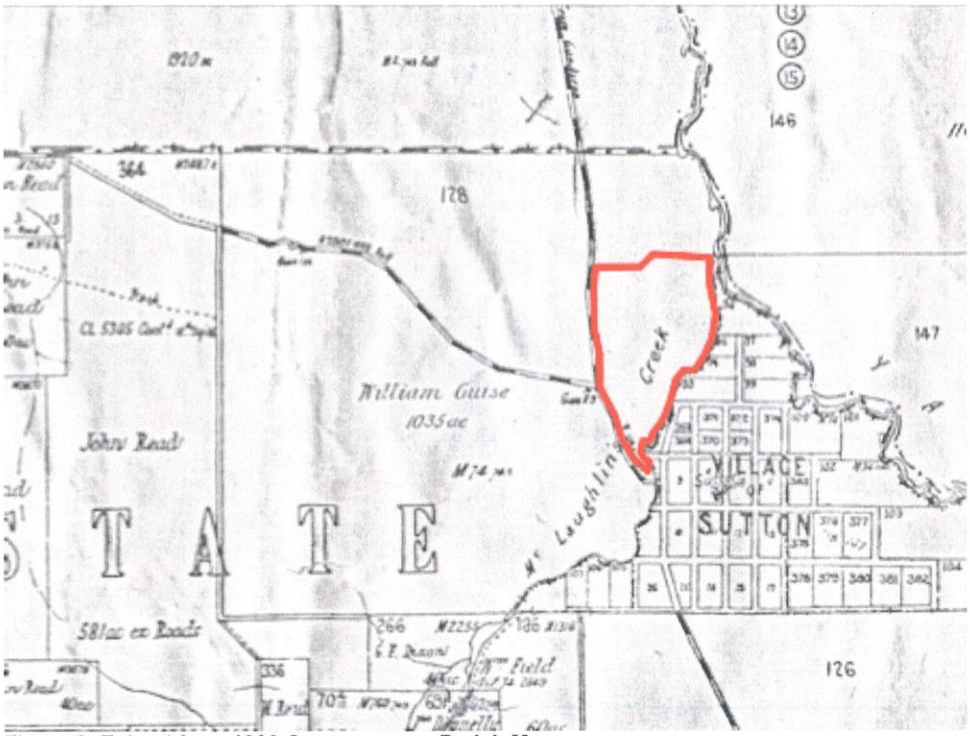

Figure 2: Extract from 1906 Gooyoogarroo Parish Map

An 1899 list of agricultural enterprises carried out in the Gundaroo district showed that 80% of the land around Sutton was cultivated rather than grazed, and this applied particularly to the river flats, where wheat, maize and oats were grown. As a result of over 150 years of cropping ***no remnant flora of native forest, woodland or natural grassland survives on the site***.

Lucerne cutting in progress on the southern segment of the site.

Cut lucerne stubble on the northern segment of the site.

The lack of natural forest, woodland or natural grassland removes the potential for any on-site fauna relating to such habitats. The absence of any adjoining forest or woodland habitat also makes it unlikely that any large mobile animals such as forest grey kangaroos, red-necked wallabies or possums would be visitors to the site. The lack of tree and shrub cover precludes the presence of small native ground-dwelling mammals and reptiles over most of the property as well as denying safe flight corridors for woodland bird species and gliders.

Common animals of farmland and peri-urban areas occur. These include magpies, magpie larks, galahs, sufphur crested cockatoos, Red-rumped parrots, Australian kestrels, as well as brown snakes, rats, mice, common skinks and foxes.

The only adjacent habitat area is McLaughlins Creek and its banks. The reeds, rushes and open water surfaces potentially provide habitat for waterfowl but the water quality is low due to domestic runoff from Sutton. The stream banks may provide habitat for Water rats (*Hydromys chrysogaster*) and the Red-bellied black snake (*Pseudechis porphyriacus*). During the course of this study, work commenced on the removal of crack willows from the watercourse.

A search of the NSW Office of Heritage and Environment Atlas of NSW Wildlife was

undertaken for the Sutton area. This atlas contains recorded sightings of plants, mammals, birds, reptiles, amphibians, some fish, and some (mainly endangered) invertebrates. No threatened species of flora or fauna have been recorded for the site or adjoining the site

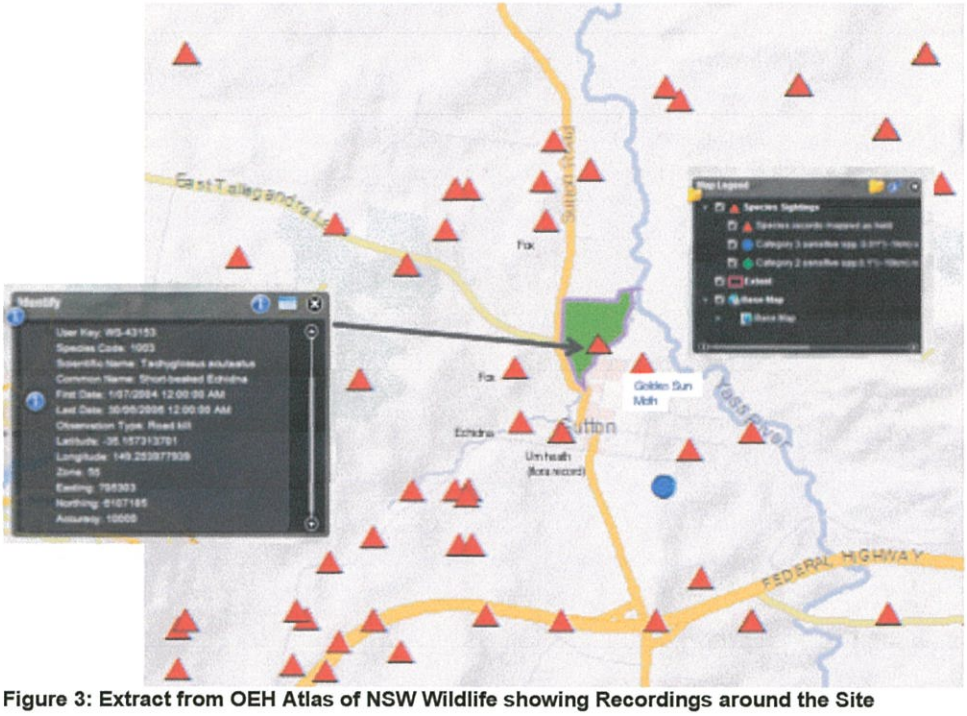

Figure 3: Extract from OEH Atlas of NSW Wildlife showing Recordings around the Site

The search of the atlas showed only a 2004 road-kill recording of an Echidna on the opposite bank of Mc Laughlins Creek. The nearest recordings to the site are common species, with the exception of a 1999 Golden sun moth recording on the high wooded ridge in the centre of Sutton village.

The Yass Valley Towns and Villages Study (2004) reported on two biodiversity surveys in the local area. These found threatened grassland and woodland communities and habitat for endangered species on high ground to the west and northeast of the site, but no biodiversity values on the cultivated river flats.

Cultural Plantings

The current cultivated area of Lot 1, DP115459, which comprises all of the urban investigation area, is sown to lucerne. Over the last ten years cultivation has alternated with hay-making crops of phalaris/ryegrass and lucerne for lucerne hay and silage. Significant individual trees and tree groups are listed and described in Table 1. All species listed are exotics, and their significance is as cultural plantings and landscape values rather than relics of natural communities or habitats. The location of the plantings are shown on Figure 3 below.

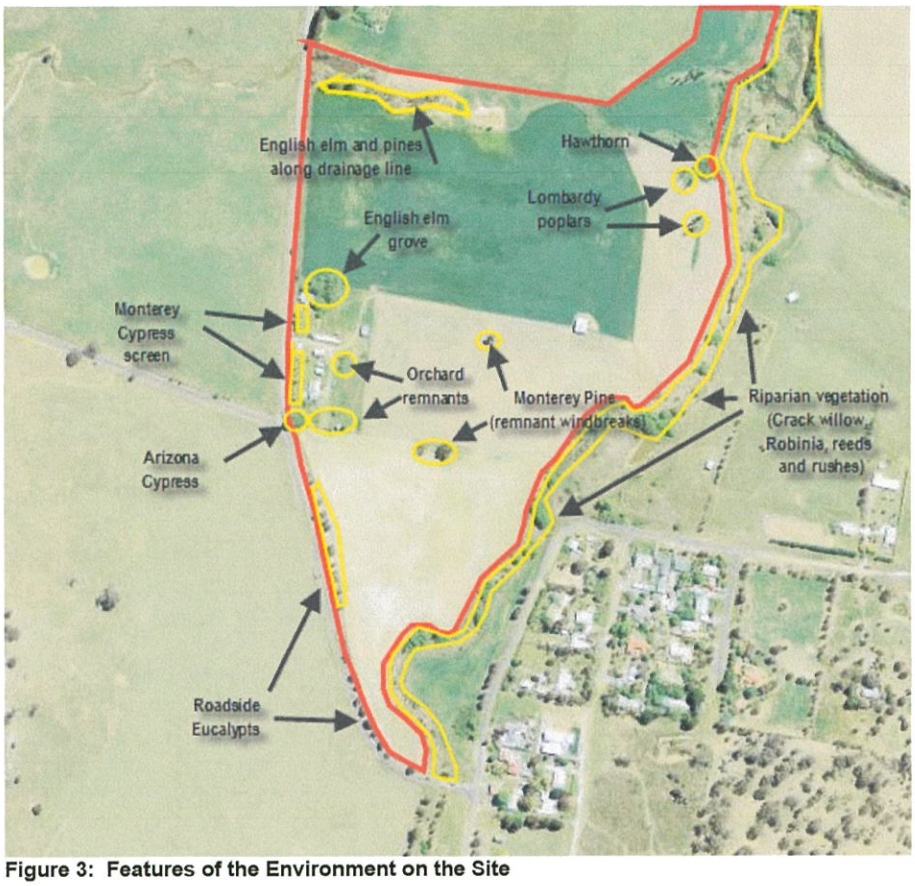

Figure 3: Features of the Environment on the Site

Table 1: Cultural Plantings on Site

Map Reference	February 2015 Photograph	Description	Value
Riparian vegetation		Crack willow (*Salix fragilis*), Robinia (*Robinia pseudoacacia*), Cumbumgi (*Typha orientalis*) and Common reed (*Phtagmites australis*) growing in and beside McLaughlins Creek. The crack willow is being progressively removed as part of the ecological rehabilitation of McLaughlins Creek.	Local habitat values limited by poor water quality. Potential wildlife corridor when rehabilitated with native species.
			
Elms and pine on drainage line		English elms (*Ulmus procera*), probably self seeded, along the stream which marks the northern boundary of the site. At the Sutton road end are Monterey pines (*Pinus radiata*) and hawthorn (*Crataegus* sp).	Exotic plantings and regrowth along drainage line. Moderate landscape/ scenic value.
			
Lombardy poplars		Lombardy poplars (*Populus nigra*) growing on old river banks and terraces. The older trees were planted in the early part of the 20th century. Others have grown up from underwood.	Plantings and regrowth dating from early settlement. Period. Moderate cultural heritage value and moderate

			landscape value.
			
English elm grove		English elm (*Ulmus procera*) grove near slab sheds. These planted elms are associated with the oldest buildings on site, dating from the late 19th century. There are two original trees and numerous younger trees which have grown from natural underwood seedlings.	Plantings and underwood growth dating from early settlement period. High cultural heritage value and high landscape value.
			
Monterey cypress screen		Monterey cypress (*Cupressus macrocarpa*) screen planting along Sutton Road. This species was widely planted in the ACT and surrounding districts in the 1960s and probably dates from that time.	Low cultural heritage value. Moderate landscape value.
Monterey pine windbreak remnants		Monterey pines (*Pinus radiata*) which are survivors of windbreaks between paddocks. This species only lives to about 80 years in the Canberra region and the individuals on site are over-mature, indicating a pre WW2 planting date.	Low cultural value, common within the region. Trees are senescent, with limited future landscape value.
			
Orchard remnants		Six mature fruit trees which trace the extent of an original orchard adjacent to the houses and sheds of the property. Fruit types of the surviving trees are apples and pears.	Low cultural heritage value and limited landscape value.
Arizona cypress		A single Arizona cypress (*Cupressus arizonica*) on the property border opposite the intersection with Tallagandra Lane. This is a short-lived, quick growing species and probably dates from the 1960s (same planting period of the *Cupressus macrocarpa* screen).	Moderate cultural heritage value and high landscape value.
Roadside Eucalypts		Yellow box (*Eucalyptus melliodora*) trees planted along the edge of the Sutton Road easement. Less than 20 years old.	Neutral value.

Summary of Findings in Relation to BC Act Requirements

The following is to be taken into account for the purposes of determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats:

Matter to be Considered under Para 7.3 *BC Act*	**Findings for Lot 1, DP115459**
(a) in the case of a threatened species, whether the proposed development or activity 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,	There are no threatened species recorded or found on site.
(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:	There are no endangered ecological communities recorded or found on site.
(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	Not applicable
(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,	Not applicable
(c) in relation to the habitat of a threatened species or ecological community:	There are no habitats for threated species or ecological communities recorded or found on site.
(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and	Not applicable
(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and	Not applicable
(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,	Not applicable
(d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),	There are no declared areas of outstanding biodiversity value recorded on site.
(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	The site has been cleared of natural vegetation for 180 years, its development will not contribute to, or increase the threatening process of land clearing.

There are no threatened species, endangered ecological communities, habitats for threatened species or communities or areas of outstanding biodiversity value on the site. Since the site has been cleared of natural vegetation for 180 years, its development for low density residential use would not contribute to, or increase the threatening process of land clearing. It is therefore concluded that a ***biodiversity development assessment report*** under the Act is not required.

Bushfire Hazard

A bush fire prone area is an area of land that can support a bush fire or is likely to be subject to bush fire attack. Bushfire prone areas are identified on a bush fire prone lands map which have been prepared for most councils across NSW. The map identifies bush fire hazards and associated buffer zones within a local government area.

These maps are certified by the Commissioner of the NSW Rural Fire Service (RFS). New development on areas identified as bush fire prone are subject to the development and planning controls of '*Planning for Bush Fire Protection 2006 (A* Guide for Councils, Planners,

Fire Authorities and Developers)'.

The certified fire prone lands of the Sutton district mapped for Yass Valley Council are at Figure 4 below.

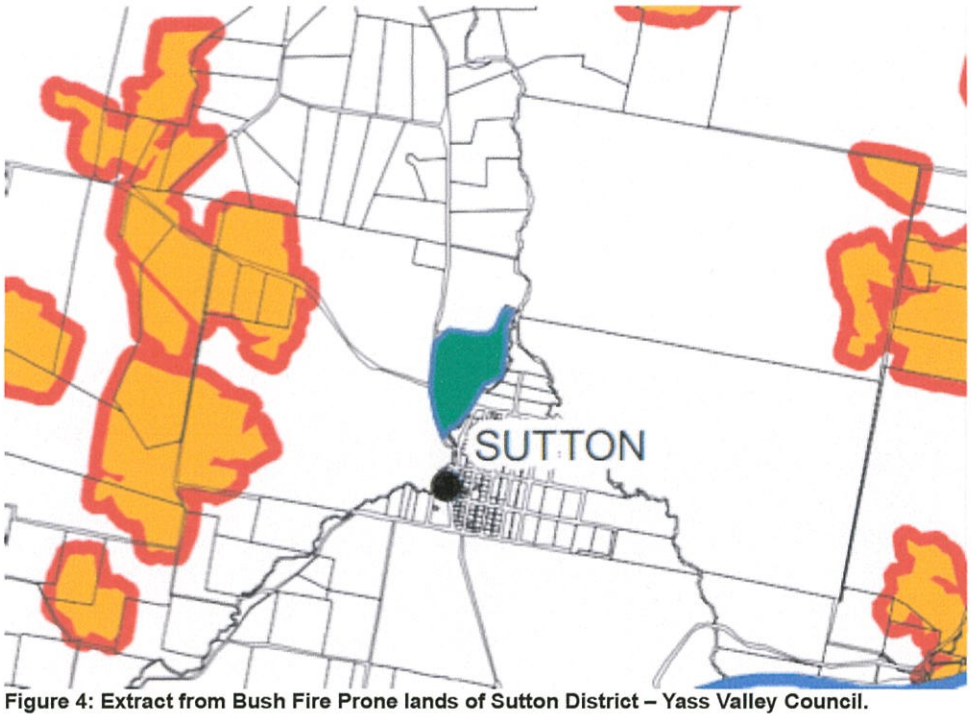

Figure 4: Extract from Bush Fire Prone lands of Sutton District – Yass Valley Council.

The lands are mapped as:

Bush Fire Prone Land – Vegetation Category 1

Buffer zone around fire prone areas

The figure shows that the subject site (in green) is not mapped as fire prone or as part of a buffer zone. The nearest buffer zone boundary on the hazard side from prevailing bushfire winds (westerlies and nor-westerlies) is 2.75 km distant. On the lower hazard (eastern) side the distance is 6.6 km. The provisions of *Planning for Bushfire Protection, 2006*, therefore do not apply to the subject site.