



CRANEBROOK WEST FLORA AND FAUNA REVIEW

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1.0 INTRODUCTION

Penrith Lakes Development Corporation (PLDC) has prepared a Preliminary Site Flora and Fauna Assessment of Cranebrook West which is a portion of land within the PLDC Scheme Area located immediately adjacent to Cranebrook Park and Castlereagh Road in Castlereagh, NSW (see figure 1).

The land comprising the Site is intended partly for dedication to NSW Government and partly for use as future residential land. Historically the land has been disturbed, originally by agricultural practices and more recently by sand and gravel quarry operations. The area was rehabilitated after quarrying and the relocation of Castlereagh road.

Vegetation on the site consists of a small amount of older vegetation and tree and shrub plantings which were part of the landscape works surrounding the Castlereagh Road realignment completed in March 2007.

The aim of this document is to:

- Provide an assessment of the habitat available to flora and fauna at Cranebrook West,
- Outline any legislative limitations for the site,
- Outline opportunities and constraints for the site, and
- Assist in the dedication process.

2.0 LEGISLATION

2.1 LOCAL GOVERNMENT

A Tree Preservation Order (TPO) applies to the whole of the Penrith Local Government Area to ensure the long-term survival of the landscape character of the area. It promotes the replanting and good management of trees, whilst prohibiting the ring-barking, cutting down, topping, lopping, removing, injuring or willful destruction of any trees having a height greater than 3m with a girth of 30cm measured 40cm above the ground except with the written consent of Council.

The Tree Preservation order applies to all trees on private property and residents and landowners must contact Councils Parks Department for issues relating to all trees including street trees and trees on public property.



Figure 1: The Penrith Lakes Scheme (Yellow) with Cranebrook West highlighted in pink.

3.0 EXISTING FLORA AND FAUNA

The main vegetation community that can be found in adjacent properties consists primarily of domestic gardens with ornamental plantings along with some native tree species planted around the park.

The vegetation on site consists primarily of planted tree and shrub cells with a naturalised ground stratum created in 2007 as part of the landscaping for the Castlereagh Road realignment. The surrounding landscape to the east, but not forming part of this site, contains fragmented vegetation including Cumberland Plains Woodland on the hillside adjacent to Nepean St. To the north Castlereagh Ironbark Forest and Castlereagh Scribbly Gum Woodland occur. To the north along the escarpment, fragments of Alluvial Woodland, Shale Sandstone Transition Forest and Cumberland Plains Woodland can be found.

Common species used in the tree cells include *Eucalyptus* species primarily *amplifolia* and *tereticornis* and *Casuarina cunninghamiana* in the canopy stratum with species of *Acacia*, *Callistemon* and *Kunzea* making up the shrub stratum. The complete species list are identified in Table 1

Table 1 Native flora species of Cranebrook West

SCIENTIFIC NAME	COMMON NAME
<i>Acacia floribunda</i>	Sally Wattle
<i>Acacia parramattensis</i>	Sydney Green Wattle
<i>Angophora subvelutina</i>	Broad Leaf Apple
<i>Bursaria spinosa</i>	Blackthorn
<i>Callistemon pinifolius</i>	Bottlebrush
<i>Casuarina cunninghamiana</i>	River Oak
<i>Dodonaea triquetra</i>	Hops Bush
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Hakea sericea</i>	Needlebush
<i>Indigophera australis</i>	False Indigo
<i>Kunzea ambigua</i>	Tick Bush
<i>Leptospermum polygallifolium</i>	Tea Tree
<i>Melaleuca decora</i>	Paperbark

The planted tree cells were originally dominated by riparian species. Due to natural attrition the original ratio of plants has altered and the cells are now dominated by *Kunzea ambigua* with some species reduced to small numbers. As such the cells could not be described as representing a particular plant community at this stage.

Nineteen environmental weed species have been recorded from the site; these are identified in Table 2. None of these species are declared weeds under the NSW Noxious Weeds Act 1993.

Table 2 Environmental weeds observed within Cranebrook West.

SCIENTIFIC NAME	COMMON NAME
<i>Anagallis arvensis</i>	Blue Pimpernel
<i>Araujia hortorum</i>	Moth Vine
<i>Bidens pilosa</i>	Cobblers Pegs
<i>Chloris gayana</i>	Rhodes Grass
<i>Cirsium vulgare</i>	Spear Thistle
<i>Digitaria sp</i>	Crabgrass
<i>Ehrharta erecta</i>	Panic Veldtgrass
<i>Eragrostis curvula</i>	African Lovegrass
<i>Heliotropium amplexicaule</i>	Blue heliotrope

<i>Paspalum dilatatum</i>	Paspalum
<i>Pavonia hastate</i>	Pavonia
<i>Pennisetum clandestinum</i>	Kikuyu
<i>Phytolacca octandra</i>	Inkweed
<i>Rhynchelytrum repens</i>	Red Natal Grass
<i>Rumex sp</i>	Dock
<i>Sida rhombifolia</i>	Paddy's Lucerne
<i>Solanum pseudocapsicum</i>	Jerusalem Cherry
<i>Tagetes minuta</i>	Stinking Roger
<i>Verbena bonariensis</i>	Purple Tops

Forty one threatened fauna species listed on the TSC and/or EPBC Acts have either been recorded within 10 km of the study area or have potential habitat within 10 km of the Lakes Scheme.

The fauna habitat along the eastern portion of the Scheme is generally considered to be in poor to moderate condition. The poor condition of the understorey and ground habitat along the areas limits their value for ground based fauna and care should be taken to conserve habitat to improve potential for threatened fauna species survival.

No Flora or Fauna species protected by the NSW Threatened Species Act 1995 or the Environmental Protection and Biodiversity Conservation Act 1999 have been observed within the immediate vicinity of the Cranebrook West area.

4.0 IMPACT ASSESSMENT

There is no evidence of threatened fauna in the immediate vicinity of this site. The future presence of threatened fauna is not likely due to the close proximity of the busy Castlereagh Road on one side of the site and the residential area on the other sides.

Although the plant species used in revegetation of the site are indigenous to the local area, selection was based primarily on aesthetic appeal rather than habitat value. Due to natural attrition since maintenance in the form of irrigation stopped, the diversity in species has reduced with *Kunzea* becoming the dominant species at the site.

None of the trees present on site are large enough or old enough to provide habitat in the form of hollows for nesting.

Due to the poor habitat quality of the site and the lack of connection to larger areas of native vegetation the potential to impact upon threatened ecological communities or threatened species through the development of this site is minimal.

5.0 RECOMENDATIONS

Opportunities exist for urban development of this site.

Future development plans should consider the use of native species identified in Table 1 to be visually consistent with the surrounding environment.

Vegetation is to be retained on the batter on the western side of the site adjacent to Castlereagh Road to ensure bank stability.