

11 February 2014

Ahmad Ali
Development Manager
Lend Lease
Level 2, 88 Phillip Street
Parramatta NSW 2150

**ECOLOGICAL RESPONSE TO PENRITH CITY COUNCIL CONDITION OF
CONSENT REGARDING *PIMELEA SPICATA* WITHIN THE RIPARIAN
CORRIDOR OF THE JORDAN SPRINGS DEVELOPMENT**

Cumberland Ecology
PO Box 2474
Carlingford Court 2118
NSW Australia
Telephone (02) 9868 1933
Mobile 0425 333 466
Facsimile (02) 9868 1977
Web: www.cumberlandecology.com.au

Dear Ahmad,

The purpose of this letter is to provide you with a brief assessment on the likelihood of occurrence of the threatened flora species, *Pimelea spicata*, within the Riparian Corridor of the Jordan Springs Development to address concerns raised by Penrith City Council (PCC) in the Conditions of Consent for DA 13/0065.

This assessment is supplementary to the Species Impact Statement (SIS) report prepared by Cumberland Ecology for the Riparian Corridor (December 2012), for impacts on Cumberland Plain Woodland (CPW), listed as Critically Endangered Ecological Community (CEEC) under the *NSW Threatened Species Conservation Act 1995* (TSC Act).

As you are aware, Condition 19 of PCC's Conditions of Consent states that "A suitably qualified ecological consultant is to be employed to supervise the clearing of further vegetation associated with the riparian corridor. If during the works any specimens of *Pimelea spicata* are identified they are to be translocated to a suitable location in the Regional Park [pending approval from Office of Environment and Heritage]"

One sub-population, consisting of two individuals of *Pimelea spicata*, was recorded in 2004 near what is now the eastern extent of the Riparian Corridor. Cumberland Ecology conducted surveys of the Riparian Corridor area and the wider Western Precinct in 2011 and 2012 and these individuals were not detected, despite targeted searches for the species. An assessment of the likelihood of occurrence of *Pimelea spicata* within the Riparian Corridor, as well as the potential impacts on this threatened flora species was conducted as part of the Riparian Corridor SIS.

Further desktop assessments and targeted searches for *Pimelea spicata* were conducted in February 2014 in response to PCC's concerns regarding the necessity for translocation of any potentially occurring *Pimelea spicata* individuals within the Riparian Corridor. These individuals once again were not detected in the Riparian Corridor. Further details of the 2014 surveys and assessments are provided in **Appendix A**.

Based on current conditions within the Riparian Corridor, specifically the area where *Pimelea spicata* was historically recorded, there is a very low likelihood that the two historically recorded individuals are still present on the site. Therefore, we conclude that a protocol for the proper translocation of any individuals of *Pimelea spicata* into the adjacent Regional Park is not required.

We would be happy to discuss any aspect of this assessment in further detail. If you have any queries please do not hesitate to contact me, or Dr David Robertson, on 98681933.

Yours sincerely



Gitanjali Katrak
Project Manager/Ecologist
gitanjali.katrak@cumberlandecology.com.au

Appendix A

**Pimelea spicata: Assessment of likelihood of
occurrence**

A.1 Purpose

The purpose of this report is to provide an assessment of the likelihood of occurrence of *Pimelea spicata*, a species listed as Endangered under the NSW *Threatened Species Conservation Act 1995* (TSC Act) within the Riparian Corridor of the Jordan Springs Development in the Western Precinct of the St Marys Property (SMP). *Pimelea spicata* is also listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). However, approval under Commonwealth legislation has been granted for the development of the SMP under the *Environment Protection (Impact of Proposals) Act 1974* and no further approvals are required under the EPBC Act.

Penrith City Council (PCC) has issued Conditions of Consent for DA 13/0065 (hereafter referred to as the Riparian Corridor). Condition 19 states that:

“A suitably qualified ecological consultant is to be employed to supervise the clearing of further vegetation associated with the riparian corridor. If during the works any specimens of Pimelea spicata are identified they are to be translocated to a suitable location in the Regional Park [pending approval from Office of Environment and Heritage].

*Specimens are to only be translocated to regenerating areas of the regional park, not areas identified as being more mature or of good condition. These areas are to have similar topography biotic and abiotic conditions where possible. Specifics of the location and translocation are to be provided to the Office of Environment and Heritage under a Section 132C licence and they may request further detail or information. OEH may require the preparation of a Translocation Management Plan for any *Pimelea spicata* found. The Section 132C licence and any licence conditions and management plans are to be provided to Council and any conditions required by OEH in regards to this will form conditions of consent for this application.”*

This report responds to PCC’s concerns about the necessity for a protocol to translocate any potentially occurring individuals of *Pimelea spicata* within the Riparian Corridor.

A.2 Aims

The specific aims of this report are to:

- Describe vegetation present within the Riparian Corridor, identifying significant flora, including threatened species and communities listed under the TSC Act;
- Assess the likelihood that *Pimelea spicata* could occur in the Riparian Corridor; and
- Determine the necessity of a protocol for the translocation of any potentially occurring individuals of *Pimelea spicata* within the Riparian Corridor.

A.3 Location and site description

The St Marys Property (SMP) comprises 1,545 ha of land which is situated north of St Marys and north-east of Penrith on the Cumberland Plain in Western Sydney. The SMP is divided into six development “Precincts” (Western Precinct, Central Precinct, North and South Dunheved Precincts, Ropes Creek Precinct and Eastern Precinct) under the Regional Environment Plan for St Mary’s (SREP 30).

The Western Precinct is located in the far west of the SMP and is located within the Penrith Local Government Area (LGA). The Riparian Corridor application area is located towards the southern section of the Western Precinct and is bounded by Village 1 to the west, Village 2 to the north, Village 4 to the south and the Regional Park to the south-east.

The Western Precinct in general, consists primarily of grassland, with scattered trees and some areas of regrowth canopy vegetation. The vegetation within the Riparian Corridor is predominantly young and degraded and occurs in various stages of regeneration although some mature trees are present.

A.4 Threatened species

Several threatened species have been previously recorded across the SMP and are addressed in the relevant SIS reports.

Of these, one species *Grevillea juniperina ssp juniperina* (Vulnerable – TSC Act) has been recorded within the Riparian Corridor during recent surveys conducted by Cumberland Ecology (2010 – 2012). It is a broadly spreading to erect shrub to 2.5 m high. The leaves are prickly, narrow, often bright green, to 22 mm long and clustered along short lateral branches. This species is endemic to Western Sydney, centred on an area bounded by Blacktown, Erskine Park, Londonderry and Windsor with outlier populations at Kemps Creek and Pitt Town (OEH 2014). This species is well conserved within the Regional Park and is not addressed further in this assessment.

Two individuals of *Pimelea spicata* were also recorded within the area that forms part of the east-west channel of the Riparian Corridor in 2004 while another population has been historically recorded in the Regional Park. These populations were not detected during recent targeted surveys (2011 – 2012) conducted by Cumberland Ecology, nor in recent surveys in February 2014.

Pimelea spicata is a summer flowering shrub that grows to 50 cm tall, is erect or somewhat prostrate in habit. It has white, pink-tinged tubular flowers to 10mm long, with four spreading petals. This species was once widespread on the Cumberland Plain, however now it only occurs in two disjunct areas, the Cumberland Plain and the Illawarra. Threats to this species include: loss of habitat to urban development; high frequency fire; and habitat modification such as mowing, grazing and weed invasion.

A.5 Methods

A.5.1 Desktop assessments and literature review

Desktop assessments incorporating data from previous surveys conducted within the SMP as well as information held on government databases and archives were conducted by Cumberland Ecology in February 2014 to assess the likelihood of occurrence of *Pimelea spicata* within the Riparian Corridor.

Information on the occurrence of *Pimelea spicata* within the broader locality was obtained via interrogation of BioNet, the Atlas of NSW Wildlife database (OEH 2014). The BioNet search provided a list of approximate locations of all reported recordings of *Pimelea spicata* within the Penrith LGA.

There has been considerable ecological survey effort within the SMP since 1999. Relevant reports have previously been reviewed by Cumberland Ecology during the preparation of SIS reports for development applications within the Western Precinct of the SMP. The SIS reports prepared for the Riparian Corridor as well as those for surrounding approved development applications, in particular Village 4 () were reviewed to determine previous assessments on the occurrence of *Pimelea spicata* within the Western Precinct.

A.5.2 Field surveys

Targeted searches for *Pimelea spicata* were conducted within the East-West channel of the Riparian Corridor on the 10th February 2014 by Cumberland Ecology. The searches were mostly restricted to areas where *Pimelea spicata* had historically been recorded in order to determine if the two historically recorded individuals were still present on site. Searches were not conducted within the North-South channel of the Riparian Corridor as *Pimelea spicata* has not been previously recorded within this area despite targeted searches during previous surveys. Site conditions and dominant plant species within the search areas were also noted during the targeted searches.

A.6 Results

A.6.1 Desktop assessments

The Atlas of NSW Wildlife database indicate that there are a total of seven records for *Pimelea spicata* within the Penrith LGA. Two of these records coincide with the previous recordings for *Pimelea spicata* within the east-west channel of the Riparian Corridor and the Regional Park. These records have been included in likelihood of occurrence assessments conducted for the Riparian Corridor SIS.

A.6.2 Site conditions

The East-West channel of the Riparian Corridor is a disturbed area. In addition to prior drainage works, the area shows strong indications of recent land modification including clearing and shoring works (**Photographs 1 and 2**). The Riparian Corridor is also surrounded by areas that have been cleared as part of other approved DAs (**Photograph 3**).



Photograph 1 **Drainage construction within east-west channel of the Riparian Corridor**



Photograph 2 **Cleared drainage pathway within the east-west channel of the Riparian Corridor**



Photograph 3 **Cleared areas towards the eastern extent of the Riparian Corridor (east-west channel)**

A.6.3 Vegetation communities

The vegetation within the east-west channel of the Riparian Corridor largely conforms to a degraded version of the Endangered Ecological Community (EEC) River-flat Eucalyptus Forest (RFEF) with traces of Cumberland Plain Woodland (CPW) in the form of a low diversity Derived Native Grassland along the higher, drier sections of the banks of the channel.

The canopy mainly consists of regenerating *Eucalyptus teretecoris* (Forest Red Gum) and *Angophora floribunda* (Rough-barked Apple) with some occurrences of *Eucalyptus moluccana* (Grey Box) and *Eucalyptus crebra* (Narrow-leaved Ironbark). The understorey is largely dominated by exotic species such as *Eragrostis curvula* (African Love grass), *Setaria parviflora* (Pigeon Grass), *Echinochloa crus-galli* (Barnyard Grass), *Paspalum dilatatum* (Paspalum), *Juncus acutus* (Sharp rush) (*Bidens pilosa* (Cobblers pegs), *Cirsium vulgare* (Spear Thistle) *Conyza bonariensis* (Flaxleaf fleabane), *Heliotropium amplexicaule* (Blue Heliotrope), *Plantago lanceolata* (Lambs tongue), *Sida rhombifolia* (Paddy's Lucerne), *Senecio madagascariensis* (Fireweed) and *Anagallis arvensis* (Scarlet Pimpernel). Native species present include *Themeda australis* (Kangaroo Grass), *Aristida vagans/ramosa* (Three-awned grass), *Microlaena stipoides* (Weeping meadow grass), *Eclipta platyglossa*, *Praetia purpurens* (Whiteroot), *Calotis cuneifolia* (Purple Burr-daisy), *Commelina cyanea* (Native Wandering Jew) and *Persicaria decipiens*.

A.6.4 Threatened flora

Previously recorded occurrences of *Grevillea juniperina ssp juniperina* were confirmed within the east-west channel.

No individuals of *Pimelea spicata* were located within the east-west channel despite targeted searches within the area in which this species has been historically recorded. The area and surrounds where this species has been previously recorded has largely been cleared as part of other approved DAs (**Photographs 4 – 6**). It is therefore highly unlikely that the previously recorded individuals of *Pimelea spicata* still exist on site.



Photograph 4 Site conditions within a 5m radius of historically recorded location of *Pimelea spicata*



Photograph 5 Site conditions within a 5m radius of historically recorded location of *Pimelea spicata*



Photograph 6 Site conditions within a 5m radius of historically recorded location of *Pimelea spicata*

A.7 Conclusion

The east-west channel of the Riparian Corridor is in a highly modified condition. Vegetation within the Riparian Corridor is highly disturbed and is dominated by a weedy understory.

No individuals of *Pimelea spicata* were recorded despite targeted searches in locations where this species had been historically recorded. The highly altered conditions within the Riparian Corridor and surrounding areas since *Pimelea spicata* was recorded make it highly unlikely that the sub-population is still present within the Riparian Corridor.

We therefore conclude that no clearance supervision or protocol for translocation of *Pimelea spicata* is required during continued development of the Riparian Corridor.