



8 April 2019

Our ref: 12294-3833-18L rev1

Jenni Andrews  
Senior Environmental Advisor  
City of Canning  
1317 Albany Highway  
CANNINGTON WA 6107

Dear Jenni

### **CLIFTON PARK CRICKET NETS EXTENSION, FLORA AND VEGETATION SUPPORTING DOCUMENTATION**

The City of Canning is planning to build a third practice cricket pitch on the bushland (northeastern) side of the existing wickets at Clifton Park. Ecoscape understands that the third pitch will be placed next to the existing wickets that will be realigned to reduce the vegetation clearing footprint. The length of the wicket proposed is 23 m and 3.6 m wide. The construction will require an extension to the proposed batter to the east plus an access track, as shown in the design below, as provided by the City of Canning. This extension requires the clearing of a 176 m<sup>2</sup> area of bushland.

Ecoscape was commissioned by the City of Canning to undertake an assessment of the flora and vegetation that would be impacted by the proposed construction of the cricket practice pitch including the following:

- floristic quadrats and flora inventory
- vegetation description
- targeted conservation significant flora searches
- ground truth the adjacent boundary with vegetation likely to represent a Threatened Ecological Community (TEC)
- photographs.





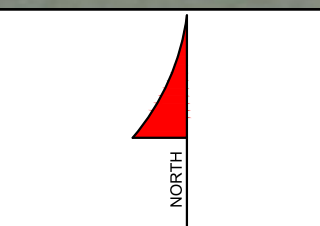
1	10/2018	Cricket net existing feature survey	MM	MM	MM
2	03/2019	Additional access track - proposed	MM	MM	MM
ISSUE	DATE	REVISION	DRN	REC	APPD

LEGEND n.t.s.	
	0.5 m CONTOUR
	2.5 m CONTOUR
	EXISTING TREES
	PROPOSED EXTENT OF WORKS

Note:  
 The boundaries shown in this plan have not been re-established as part of this survey. There accuracy can not be guaranteed and should not be used for any works. The content of this plan is correct as of the date of survey. See title block for date of survey.  
 The plans is not permitted to be used by anyone other than the intended client.

Client: CITY OF CANNING  
 Surveyor: Mathew Mattaboni  
 Drawn by: Mathew Mattaboni  
 Scale: 1:100 @ A1  
 Coordinates: MGA-50 Level: A.H.D.

**ASCON**  
 SURVEY AND DRAFTING  
 M:0410 343 012 E: mathew@asconsurvey.com.au



PROJECT: CLIFTON PARK, CANNINGVALE  
 TITLE: CRICKET NETS - EXISTING FEATURES SITE SURVEY  
 DRAWING: COC-CLIFTON PARK CRICKET NETS - PROPOSED.dwg



## METHODOLOGY

The site was first inspected on 20 September 2018, during which time the vegetation adjacent to the existing cricket pitches was described and a targeted search for conservation significant flora was conducted intensively within the area directly adjacent to the cricket pitches. A follow up assessment was undertaken on 22 November 2018 with the particular objective of establishing one floristic quadrat within the proposed clearing area and one in the adjacent vegetation considered likely to be representative of the *Banksia Woodlands of the Swan Coastal Plain* TEC (Australian Government 2016). Both assessments were undertaken by Stephen Kern (Associate Botanist, flora collecting permit SL012270).

### Floristic Quadrats

Two floristic quadrats were recorded, one within the area that is likely to be directly impacted and one outside this area within vegetation. The following parameters were recorded at each quadrat:

- photograph of the quadrat taken from the north-west corner, diagonally across the quadrat
- a vegetation description based on the height and estimated cover of dominant species, using the NVIS Level V (NVIS Technical Working Group 2017) methodology
- an inventory of all species (native and introduced) including:
  - estimated average height
  - percent foliage cover
  - number of individual plants
  - habit and lifeform
  - presence of TF or PF
- description of landform and habitat
- broad description of surface soil type and stony surface mantle
- percentage of litter cover and depth
- percentage of bare ground
- vegetation condition (Environmental Protection Authority 2016)
- notes on evidence of grazing, weed invasion, fires, rubbish dumping etc.
- other environmental values of the site e.g. habitat trees or presence of hollows.

### Targeted Searches for Conservation Significant Flora

The entire area was traversed on foot at 5 m intervals (or commonly less) to search for conservation significant flora and opportunistic species to compliment the flora inventory.

A *NatureMap* (Department of Parks and Wildlife 2007-2018) search was conducted prior to the survey to identify conservation significant flora species known from within a 5 km radius of Clifton Park. The search identified 19 taxa of conservation significance (Threatened [TF], Priority Flora [P]) including seven TF, three P2, six P3 and three P4 taxa). None of these taxa identified have been recorded within or directly adjacent to the proposed cricket wicket area.

**Table 1: Conservation significant flora occurring within a 5 km radius of Clifton Park (DPaW 2007-2018)**

Species Name	Cons. Code	Flowering Period
<i>Austrostipa jacobiana</i>	TF	Oct-Jan
<i>Caladenia huegelii</i>	TF	Sep-Oct
<i>Diuris purdiei</i>	TF	Sep-Oct
<i>Drakaea elastica</i>	TF	Oct-Nov
<i>Drakaea micrantha</i>	TF	Sep-Oct
<i>Eremophila glabra</i> subsp. <i>chlorella</i>	TF	Jul-Nov
<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)	TF	Oct
<i>Acacia benthamii</i>	P2	Aug-Sep
<i>Poranthera moorokatta</i>	P2	Sep-Nov
<i>Stenanthemum sublineare</i>	P2	Oct-Nov
<i>Byblis gigantea</i>	P3	Sep-Jan
<i>Jacksonia gracillima</i>	P3	Sep-Nov
<i>Schoenus benthamii</i>	P3	Oct-Nov
<i>Schoenus capillifolius</i>	P3	Oct-Nov
<i>Stylidium paludicola</i>	P3	Oct-Dec
<i>Styphelia filifolia</i>	P3	Sep-Nov
<i>Aponogeton hexatepalus</i>	P4	Jul-Oct
<i>Tripterococcus</i> sp. <i>Brachylobus</i> (A.S. George 14234)	P4	Oct-Dec
<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	P4	Nov-Jan

## VEGETATION

The native vegetation within the proposed clearing area occurs in a flat, low-lying area with a substrate of grey sand. Vegetation is described as: *Eucalyptus todtiana* low open woodland over *Regelia inops* and *Xanthorrhoea preissii* mid shrubland over *Phlebocarya ciliata* and *Dasypogon bromeliifolius* low open forbland (**Plate 1, Plate 2, Plate 3, Plate 4**). Full flora quadrat data of CP1801, established within the proposed clearing area (**Map 1**), is attached. This vegetation does not match any listed Threatened Ecological Community (TEC) or Priority Ecological community (Department of Biodiversity Conservation and Attractions 2018). Approximately 20 m to the east of the proposed impact area, native vegetation is observed to be dominated by *Banksia attenuata* and *B. menziesii*, considered likely to be representative of the *Banksia Woodlands of the Swan Coastal Plain* TEC (Australian Government 2016). A floristic quadrat was established within the area of *Banksia* woodland (CP1802), demonstrating that this vegetation is likely to meet the criteria for inclusion in this TEC based on condition and size thresholds. The boundary of the *Banksia Woodlands* vegetation was ground truthed and is shown on **Map 1**. To the north of the proposed clearing area (approximately 30 m) the vegetation is dominated by *Kunzea glabrescens*, this area was not assessed in detail.



**Plate 1: Eastern edge of existing cricket pitches looking north**



**Plate 2: Eastern edge of existing cricket pitches looking south**



**Plate 3: Northern edge of existing cricket pitches looking east**



**Plate 4: Northern edge of existing cricket pitches looking west**

## FLORA

A total of 68 vascular flora species were recorded from within area surveyed (clearing footprint and directly adjacent) two floristic quadrats and opportunistic observations. Fifteen (22.1%) of these were introduced species. One could not be identified with certainty to species level due to insufficient diagnostic reproductive (flowering/fruitlet) material. It was a species of the genus *Leucopogon* and does not represent any known conservation significant flora known from the region.

There were no Threatened Flora or Priority-listed Flora recorded from the proposed clearing area or directly adjacent during either the September or November assessment. The timing of the two site assessments (including targeted searches) was during optimal timing for botanical surveys, when the majority of potential species of conservation species are known to be in flower (**Table 1**), it is considered unlikely that the proposed clearing area supports any flora species of conservation significance.

None of the introduced taxa are listed as Declared Pests or Weeds of National Significance.

## SUMMARY


The proposed reconstruction of the cricket pitches at Clifton Park requires only a small amount of vegetation clearing. The vegetation is not considered representative of any listed Threatened or Priority Ecological Community and there were no flora species of conservation significance recorded. However, vegetation considered likely to represent the *Banksia Woodlands of the Swan Coastal Plain* TEC is present approximately 20 m to the east of the existing cricket pitches.

Yours sincerely

**Ecoscape (Australia) Pty Ltd**

STEPHEN KERN

Associate Botanist

<b>Rev1 QA Approved by:</b>	Lyn Atkins Associate Environmental Scientist		<b>Date:</b>	8/04/2019
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Australian Government 2016, *Banksia Woodlands of the Swan Coastal Plain - Draft Description and Threats*.

Department of Biodiversity Conservation and Attractions. 2018. *List of Threatened Ecological Communities (TECs) endorsed by the Western Australian Minister for Environment (28 June 2018)*. Available from: [https://www.dpaw.wa.gov.au/images/plants-animals/threatened-species/threatened\\_ecological\\_communities\\_endorsed\\_by\\_the\\_minister\\_for\\_the\\_environment\\_june\\_2018.pdf](https://www.dpaw.wa.gov.au/images/plants-animals/threatened-species/threatened_ecological_communities_endorsed_by_the_minister_for_the_environment_june_2018.pdf).

Department of Parks and Wildlife. 2007. *NatureMap: Mapping Western Australia's Biodiversity*. Available from: <http://naturemap.dpaw.wa.gov.au>.

Environmental Protection Authority. 2016. *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: <http://www.epa.wa.gov.au/policies-guidance/technical-guidance-flora-and-vegetation-surveys-environmental-impact-assessment>.

NVIS Technical Working Group 2017, *Australian Vegetation Attribute Manual: National Vegetation Information System, Version 7.0*, Department of the Environment and Energy, Canberra.



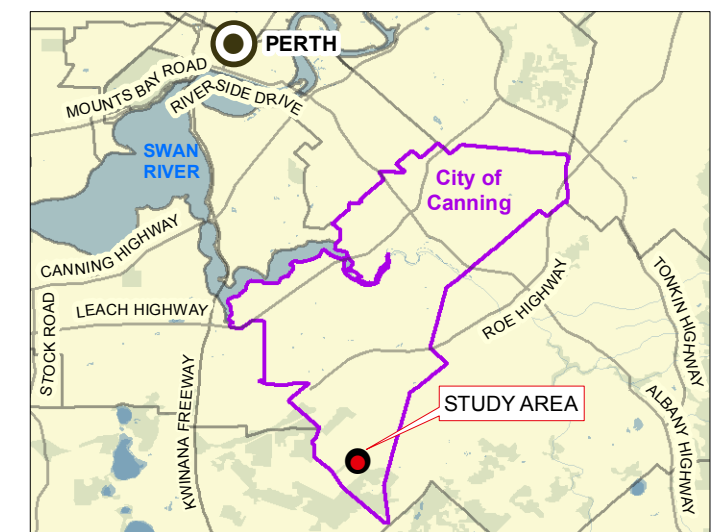


**LEGEND**

- Vegetation Quadrats (2018-11-22)
- TEC Boundary
- Existing Batter
- Proposed batter
- Proposed Cricket Pitch
- Proposed Clearing Area (117m<sup>2</sup>)

**DATASOURCES:**  
 SOURCE DATA: VEGETATION QUADRATS AND TEC BOUNDARY (ECOSCAPE 2018)  
 AERIAL: NEARMAP (2019-02-24)  
 SERVICE LAYERS:

**OVERVIEW**



**NVCP MAP  
VEGETATION SURVEY  
CLIFTON PARK CRICKET PITCH**

**CITY OF CANNING**

COORDINATE SYSTEM: GDA 1994 MGA ZONE 50  
 PROJECTION: TRANSVERSE MERCATOR  
 DATUM: GDA 1994  
 UNITS: METER



PROJECT NO: 3833-16			
REV	AUTHOR	APPROVED	DATE
00	SB	SK	26/03/2019

MAP  
01



**Table 2: Flora inventory**

Family	Name	Weed	CP1801	CP1802	Opp.
<b>Anarthriaceae</b>	<i>Lyginia barbata</i>		X		
	<i>Lyginia imberbis</i>			X	
<b>Apiaceae</b>	<i>Xanthosia huegelii</i>			X	
<b>Araliaceae</b>	<i>Trachymene pilosa</i>		X	X	
<b>Asparagaceae</b>	<i>Lomandra caespitosa</i>		X	X	
	<i>Lomandra hermaphrodita</i>				X
	<i>Lomandra preissii</i>		X	X	
	<i>Lomandra sericea</i>		X	X	
	<i>Thysanotus triandrus</i>			X	
<b>Asteraceae</b>	<i>Arctotheca calendula</i>	*			X
	<i>Hypochaeris glabra</i>	*	X	X	
	<i>Lactuca serriola</i>	*			X
	<i>Sonchus oleraceus</i>	*	X	X	
	<i>Urospermum picroides</i>	*		X	
	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	*	X	X	
<b>Brassicaceae</b>	<i>Brassica tournefortii</i>	*			X
<b>Centrolepidaceae</b>	<i>Centrolepis drummondiana</i>		X		
<b>Colchicaceae</b>	<i>Burchardia congesta</i>			X	
<b>Crassulaceae</b>	<i>Crassula colorata</i>		X		
<b>Cyperaceae</b>	<i>Schoenus brevisetis</i>			X	
<b>Dasypogonaceae</b>	<i>Dasypogon bromeliifolius</i>		X	X	
<b>Dilleniaceae</b>	<i>Hibbertia huegelii</i>			X	
	<i>Hibbertia subvaginata</i>		X	X	
<b>Ericaceae</b>	<i>Astroloma xerophyllum</i>		X		
	<i>Conostephium pendulum</i>			X	X
	<i>Leucopogon conostephioides</i>		X	2	
	<i>Leucopogon</i> sp.		X		
<b>Euphorbiaceae</b>	<i>Euphorbia terracina</i>				X
<b>Fabaceae</b>	<i>Acacia pulchella</i>		X	X	
	<i>Aotus procumbens</i>				X
	<i>Bossiaea eriocarpa</i>		X	X	
	<i>Euchilopsis linearis</i>			X	
	<i>Gastrolobium linearifolium</i>		X	X	
	<i>Gompholobium tomentosum</i>		X	X	
	<i>Hovea trisperma</i>		X		
	<i>Lupinus cosentinii</i>	*			X



Family	Name	Weed	CP1801	CP1802	Opp.
	<i>Medicago polymorpha</i>	*			X
	<i>Vicia sativa</i>	*			X
<b>Goodeniaceae</b>	<i>Dampiera linearis</i>		X	X	
	<i>Lechenaultia floribunda</i>				X
<b>Haemodoraceae</b>	<i>Conostylis juncea</i>		X	X	
	<i>Phlebocarya ciliata</i>		X	X	
<b>Haloragaceae</b>	<i>Gonocarpus pithyoides</i>			X	
<b>Iridaceae</b>	<i>Gladiolus caryophyllaceus</i>	*			X
	<i>Patersonia occidentalis</i>			X	
<b>Loranthaceae</b>	<i>Nuytsia floribunda</i>				X
<b>Myrtaceae</b>	<i>Calytrix flavescens</i>		X		
	<i>Eucalyptus todtiana</i>		X	X	
	<i>Hypocalymma angustifolium</i>				X
	<i>Kunzea glabrescens</i>			X	
	<i>Melaleuca seriata</i>		X		
	<i>Melaleuca thymoides</i>				X
	<i>Regelia inops</i>		X		
<b>Poaceae</b>	<i>Scholtzia involucreta</i>			X	
	<i>Amphipogon turbinatus</i>				X
	<i>Avena barbata</i>	*			X
	<i>Briza maxima</i>	*	X	X	
<b>Proteaceae</b>	<i>Ehrharta calycina</i>	*	X		
	<i>Adenanthos obovatus</i>		X		
	<i>Banksia attenuata</i>			X	
	<i>Banksia menziesii</i>		X	X	
<b>Restionaceae</b>	<i>Petrophile linearis</i>			X	
	<i>Hypolaena exsulca</i>			X	X
<b>Rutaceae</b>	<i>Boronia dichotoma</i>				X
	<i>Philothea spicata</i>				X
<b>Xanthorrhoeaceae</b>	<i>Xanthorrhoea preissii</i>		X	X	
<b>Zamiaceae</b>	<i>Macrozamia riedlei</i>				X



## CP1801

**Staff** SOK                      **Date** 22/11/2018                      **Season** A  
**Revisit**  
**Type** Q 10 m x 10 m  
**Location**  
**MGA Zone** 50                      396700 mE                      6448625 mN                      **Lat.** -32.0940                      **Long.** 115.9053  
**Habitat** Flat  
**Aspect** N/A                      **Slope** N/A  
**Soil Type** Light grey sand  
**Rock Type** Nil  
**Loose Rock** 0% cover ;                      **Litter** 20 % cover ; 0-3 cm in depth  
**Bare ground** 20% cover                      **Weeds** 1 % cover  
**Vegetation** U+ ^*Eucalyptus todtiana*^tree mallee\6i;M ^*Regelia inops*,^*Xanthorrhoea preissii*^shrub,grass tree\3c;G ^*Phlebocarya ciliata*,^*Dasypogon bromeliifolius*^forb\1c  
**Veg. Condition** Very Good  
**Disturbance** Edge effects  
**Fire Age** >10 years  
**Notes** Quadrat aligned parallel to existing cricket pitches to encompass most of vegetation to be impacted



Species	WA Cons.	Height (m)	Cover (%)
<i>Acacia pulchella</i>		0.5	<1
<i>Adenanthos obovatus</i>		0.5	<1
* <i>Arctotheca calendula</i>			<1
<i>Astroloma xerophyllum</i>		0.8	1
<i>Banksia menziesii</i>		0.5	<1
<i>Bossiaea eriocarpa</i>		0.3	<1



	Clifton Park	
* <i>Briza maxima</i>	0.3	<1
<i>Calytrix flavescens</i>	0.5	1
<i>Centrolepis drummondiana</i>	0.05	<1
<i>Conostylis juncea</i>	0.3	<1
<i>Crassula colorata</i>	0.05	<1
<i>Dampiera linearis</i>	0.3	<1
<i>Dasyogon bromeliifolius</i>	0.4	4
* <i>Ehrharta calycina</i>	1	<1
<i>Eucalyptus todtiana</i>	3.5	12
* <i>Euphorbia terracina</i>		<1
<i>Gastrolobium linearifolium</i>	0.4	<1
<i>Gompholobium tomentosum</i>	0.3	1
<i>Hibbertia subvaginata</i>	0.4	1
<i>Hovea trisperma</i>	0.3	<1
* <i>Hypochaeris glabra</i>	0.2	<1
<i>Leucopogon conostephioides</i>	0.3	1
<i>Leucopogon</i> sp.	0.6	2
<i>Lomandra caespitosa</i>	0.3	<1
<i>Lomandra hermaphrodita</i>		<1
<i>Lomandra preissii</i>	0.4	<1
<i>Lomandra sericea</i>	0.3	1
* <i>Lupinus cosentinii</i>		<1
<i>Lyginia barbata</i>	0.4	2
* <i>Medicago polymorpha</i>		<1
<i>Melaleuca seriata</i>	1	5
<i>Philothea spicata</i>		<1
<i>Phlebocarya ciliata</i>	0.4	10
<i>Regelia inops</i>	1.8	60
* <i>Sonchus oleraceus</i>	0.3	<1
<i>Trachymene pilosa</i>	0.1	<1
* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	0.3	<1
<i>Xanthorrhoea preissii</i>	1.5	5



## CP1802

**Staff** SOK                      **Date** 22/11/2018                      **Season** A  
**Revisit**  
**Type** Q 10 m x 10 m  
**Location**  
**MGA Zone** 50                      396724 mE                      6448624 mN                      **Lat.** -32.0940                      **Long.** 115.9055  
**Habitat** Flat  
**Aspect** N/A                      **Slope** N/A  
**Soil Type** Grey sand  
**Rock Type** Nil  
**Loose Rock** 0% cover ;                      **Litter** 45 % cover ; 0-3 cm in depth  
**Bare ground**                      **Weeds** <1 % cover  
**Vegetation** U+ ^*Banksia attenuata*^tree\6\c;M ^*Kunzea glabrescens*^shrub\4\c;G ^*Phlebocarya ciliata*,  
^*Dasypogon bromeliifolius*^forb\1\i  
**Veg. Condition** Very Good  
**Disturbance** Edge effects  
**Fire Age** >10 years

## Notes



Species	WA Cons.	Height (m)	Cover (%)
<i>Acacia pulchella</i>		0.5	<1
<i>Banksia attenuata</i>		8	40
<i>Banksia menziesii</i>		1	<1
<i>Bossiaea eriocarpa</i>		0.3	<1
* <i>Briza maxima</i>		0.3	<1
<i>Burchardia congesta</i>		0.5	<1
<i>Conostephium pendulum</i>		0.5	2



	Clifton Park	
<i>Conostylis juncea</i>	0.2	<1
<i>Dampiera linearis</i>	0.3	<1
<i>Dasyogon bromeliifolius</i>	0.4	4
<i>Eucalyptus todtiana</i>	3	1
<i>Euchilopsis linearis</i>	0.5	1
<i>Gastrolobium linearifolium</i>	0.5	<1
<i>Gompholobium tomentosum</i>	0.4	<1
<i>Gonocarpus pithyoides</i>	0.3	<1
<i>Hibbertia huegelii</i>	0.2	<1
<i>Hibbertia subvaginata</i>	0.2	<1
* <i>Hypochaeris glabra</i>	0.3	<1
<i>Hypolaena exsulca</i>	0.4	<1
<i>Kunzea glabrescens</i>	3	30
<i>Leucopogon conostephioides</i>	0.3	<1
<i>Leucopogon conostephioides</i>	0.5	<1
<i>Lomandra caespitosa</i>	0.3	<1
<i>Lomandra preissii</i>	0.4	<1
<i>Lomandra sericea</i>	0.3	<1
<i>Lyginia imberbis</i>	0.5	<1
<i>Patersonia occidentalis</i>	0.5	1
<i>Petrophile linearis</i>	0.5	<1
<i>Phlebocarya ciliata</i>	0.4	5
<i>Schoenus brevisetis</i>	0.4	<1
<i>Scholtzia involucrata</i>	0.4	1
* <i>Sonchus oleraceus</i>	0.3	<1
<i>Thysanotus triandrus</i>	0.4	<1
<i>Trachymene pilosa</i>	0.1	<1
* <i>Urospermum picroides</i>	0.3	<1
* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	0.3	<1
<i>Xanthorrhoea preissii</i>	1.5	3
<i>Xanthosia huegelii</i>	0.2	<1