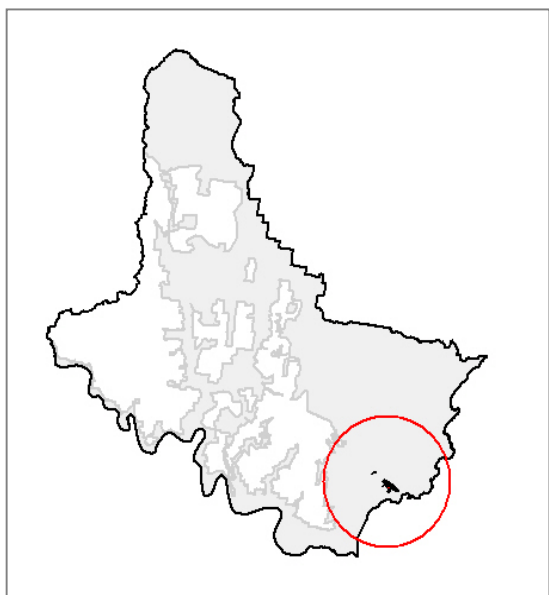


# Killcare Hawkesbury Woodland

## Exposed Hawkesbury Woodland

Unit E26c  
REMS Unit 26



### General Description:

At Killcare Heights on the Bouddi Peninsula, an outcrop of Hawkesbury Sandstone geology supporting soils of the Somersby landscape occurs. Much of this area has been cleared for horticultural pursuits, and only remnant vegetation remains. Sandy colluvial soils support a canopy of *Angophora costata*, *Eucalyptus piperita*, *Corymbia gummifera*, *Syncarpia glomulifera* subsp. *glomulifera*, *Eucalyptus sieberi*, and *Eucalyptus resinifera*, with an understorey of *Pultenaea flexilis*, *Leptospermum polygalifolium*, *Ceratopetalum gummiferum*, *Glochidion ferdinandi*, *Polyscias sambuccifolia*, and *Entolasia stricta*. In places, *Syncarpia glomulifera* subsp. *glomulifera* is particularly dominant, and the weed *Lantana camara* is becoming invasive. There are strong similarities to vegetation in the Somersby area of the Somersby Plateau, but several aspects differ, such as the occurrence of the Killcare Hawkesbury Woodland less than two kilometres from the coast and at a much lower elevation (100-150m vs 250-300m ASL). Further survey and analysis may allow a better understanding of the relationships between the two.

### Known Floristic/ Structural Variations:

No variants have been recognised within this sub-community, however drainage lines can be expected support higher abundances of *Eucalyptus piperita* and *Syncarpia glomulifera*.

### Distribution:

*Within Gosford LGA* – restricted to the Killcare Heights/ Wards Hill area of the Bouddi Peninsula.

*Within LHCC Region* – NPWS (2000) have modelled 16504ha of their Exposed Hawkesbury Woodland (Unit 26) as remaining in the region, which would include this sub-community.

### Examples Within Gosford LGA

- Wards Hill Road, Killcare Heights
- Maitland Bay Road, Killcare Heights

Extent: *Extant* - 59.64ha

### Relationship to Other Communities:

Killcare Hawkesbury Woodland is most similar to the Somersby Plateau Forest (Unit E26d), with which it shares a number of characteristic species such as *Eucalyptus sieberi*, *Syncarpia glomulifera* subsp. *glomulifera* and *Eucalyptus piperita* in the canopy. However, the occurrence of Unit E26c so close to the coast and at a considerably lower elevation sufficiently distinguishes the two. Understorey vegetation in Unit E26c also appears to comprise a greater proportion of more mesic species (such as *Polyscias sambuccifolia* and *Glochidion ferdinandi*), replacing the sclerophyllous heath species found in Unit E26d. Other forests and woodlands on Hawkesbury Sandstone remnants in the eastern parts of the LGA support Katandra Hawkesbury Woodland (Unit E26b), which comprises *Eucalyptus pilularis* as an important component of the canopy, and *Eucalyptus sieberi* is absent.

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### Equivalent Vegetation Types:

• Benson 1981 (Mangrove Creek):		n/a
• Benson & Fallding 1981 (Brisbane Water)	(?) Open-forest to low open-forest – plateau tops (Unit 4P)	
• Benson 1986 (Gosf-Lake Mac):	(?) Low Woodland (Unit 10a)	
• Clarke & Benson 1986 (Dharug):		n/a
• Strom 1986 (Bouddi Peninsula):	Woodland (Units 5.1.1, 5.1.2 & 5.1.3) & Low open woodland (Unit 6.2)	
• Clarke & Benson 1987 (Mt White/ Mt Olive):		n/a
• McRae 1990 (Bouddi Peninsula):	Woodland/ open-heath (Unit 2.2)	
• Binns 1996 (SF MFD):	(?) MORf 20 <i>Banksia serrata</i> – <i>Eucalyptus gummifera</i> – <i>Eucalyptus haemastoma</i>	
• Payne 1997 (Cockle Bay/ Bouddi):	Woodland/ open-heath (Unit 2.2)	
• Bell 1998 (Popran NP):		n/a
• Bell 2002 (Wyong LGA):		n/a

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### Significant Species:

- Undescribed species – *none recorded*
  - Threatened (TSC Act) – *none recorded*
  - Rare (ROTAP) – *none recorded*
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### Community Conservation Status:

*Reserve Representation* - this vegetation type is almost entirely in private ownership, with only a very small proportion within Bouddi NP.

*TSC Act (1995) Status* - not currently listed.

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### Mapping Reliability & Included Units:

*High Resolution Area* – this vegetation type has been mapped from aerial photographic interpretation and ground truthing.

*Low Resolution Area* – this community is not expected to occur within the low resolution area.

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### Vegetation Structure:

Stratum	Mean height (m)	Min height (m)	Max height (m)	Mean cover (%)	Sdev	n
Emergent						
Tallest	21.00	18.00	24.00	65		1
Middle 1	10.00	5.00	15.00	35		1
Middle 2	3.00	2.00	4.00	15		1
Middle 3						
Lowest	0.55	0.10	1.00	15		1

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### Key Diagnostic Species [based on 1 plot]:

Life Form	Species	Community		All others		Fidelity
		c/a	Freq.	c/a	Freq.	
Tree	<i>Syncarpia glomulifera</i> subsp. <i>glomulifera</i>	4	100%	2	28%	positive
	<i>Angophora costata</i>	3	100%	2	31%	positive
	<i>Corymbia gummifera</i>	3	100%	2	30%	positive
	<i>Eucalyptus piperita</i>	3	100%	2	13%	positive
	<i>Eucalyptus resinifera</i> subsp. <i>resinifera</i>	3	100%	2	2%	positive
	<i>Eucalyptus sieberi</i>	2	100%	3	5%	positive
	<i>Eucalyptus deanei</i>	1	100%	3	6%	uninformative
	<i>Eucalyptus punctata</i>	1	100%	2	14%	uninformative
	<i>Euroschinus falcata</i> var <i>falcata</i>	1	100%	1	0%	uninformative
Small tree	<i>Ceratopetalum gummiferum</i>	3	100%	2	5%	positive
	<i>Allocasuarina littoralis</i>	2	100%	1	14%	positive
	<i>Glochidion ferdinandii</i>	2	100%	2	28%	positive
	<i>Acacia irrorata</i> subsp. <i>irrorata</i>	1	100%	1	2%	uninformative
Shrub	<i>Leptospermum polygalifolium</i>	3	100%	2	24%	positive
	<i>Cassinia longifolia</i>	2	100%	1	0%	positive
	<i>Polyscias sambucifolia</i>	2	100%	1	17%	positive
	<i>Acacia ulicifolia</i>	1	100%	1	24%	uninformative
	<i>Breynia oblongifolia</i>	1	100%	1	33%	uninformative
	<i>Hibbertia empetrifolia</i> subsp. <i>empetrifolia</i>	1	100%	1	10%	uninformative
	<i>Macrozamia communis</i>	1	100%	2	11%	uninformative
	<i>Notelaea longifolia</i>	1	100%	1	16%	uninformative
	<i>Persoonia linearis</i>	1	100%	1	26%	uninformative
	<i>Pittosporum undulatum</i>	1	100%	1	14%	uninformative
	<i>Platylobium formosum</i>	1	100%	2	10%	uninformative
	<i>Pultenaea flexilis</i>	1	100%	1	11%	uninformative
Sub-shrub	<i>Lasiopetalum parviflorum</i>	1	100%	2	0%	uninformative
Herb	<i>Opercularia hispida</i>	2	100%	1	4%	positive
Grass	<i>Entolasia stricta</i>	2	100%	2	53%	constant
	<i>Imperata cylindrica</i> var <i>major</i>	1	100%	2	29%	uninformative
	<i>Oplismenus imbecillis</i>	1	100%	2	17%	uninformative
Graminoid	<i>Lomandra multiflora</i> subsp. <i>multiflora</i>	2	100%	1	6%	positive
	<i>Lomandra longifolia</i>	2	100%	2	44%	constant
	<i>Dianella caerulea</i>	1	100%	1	51%	uninformative
Ground fern	<i>Pteridium esculentum</i>	1	100%	2	42%	negative
Ground orchid	<i>Cryptostylis erecta</i>	1	100%	1	2%	uninformative
Climber	<i>Cissus hypoglauca</i>	2	100%	1	18%	positive
	<i>Geitonoplesium cymosum</i>	2	100%	1	24%	positive
	<i>Glycine clandestina</i>	2	100%	2	22%	positive
	<i>Pandorea pandorana</i> subsp. <i>pandorana</i>	2	100%	1	24%	positive
	<i>Smilax glycyphylla</i>	2	100%	1	19%	positive
	<i>Hibbertia dentata</i>	1	100%	1	10%	uninformative
	<i>Morinka jasminoides</i>	1	100%	1	15%	uninformative
	<i>Parsonsia straminea</i>	1	100%	1	19%	uninformative
	<i>Stephania japonica</i> var <i>discolor</i>	1	100%	1	17%	uninformative
	Sedge/ Rush	<i>Lepidosperma laterale</i>	2	100%	2	27%
<i>Gahnia sieberiana</i>		1	100%	1	6%	uninformative