

VEGETATION SURVEY OF SUSSEX LOCATION 413 YALLINGUP

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Map 2:	Vegetation associations as mapped during 2001 field survey

1. BACKGROUND INFORMATION

Two vegetation surveys have been undertaken of Sussex Location 413. The first by Keating and Trudgen (1986), during a detailed survey of the coastal strip from Forrest Beach to Cape Naturaliste. The second by ATA (2000), as part of an environmental appraisal of the area.

Keating and Trudgen (1986) identified several vegetation types for the whole area surveyed, including three at Location 413. These are:

- Low Heath GH4 – *Pimelea ferruginea*, *Melaleuca systema*, *Hakea trifurcata* and *Spyridium globulosum*;
- Closed Scrub LH3 – *Acacia divergens*, *Melaleuca huegelii*, *Dryandra sessilis*; and
- Low Woodland to Low Open Forest AW2 – *Agonis flexuosa*, *Corymbia calophylla*, *Eucalyptus marginata* subsp. *marginata*, *Hakea oleifolia*, *Xanthorrhoea preissii*, *Melaleuca huegelii* subsp. *huegelii*.

ATA (2000) using the description and mapping of the vegetation consistent with that of Keating and Trudgen (1986) identified and mapped the following vegetation types at Location 413. These are:

- Low Heath GH4 – as above;
- Closed Heath LH1 – *Melaleuca lanceolata*, *M. huegelii* subsp. *huegelii*;
- Closed Scrub LH6 – *Melaleuca huegelii* subsp. *huegelii*;
- Low Woodland to Low Open Forest AW2 – as above;
- Low Closed Heath SH9 – *Allocasuarina humilis*, *Melaleuca systema*, *Olearia axillaris*;
- Low Open Forest BaAgJM – *Banksia attenuata*, *Agonis flexuosa*, *Eucalyptus marginata* subsp. *marginata*; and an
- area cleared of native vegetation.

2. OBJECTIVES

The objectives of this survey were:

- to determine the vegetation associations present at Location 413 using the descriptions of Keating and Trudgen (1986); and
- map the vegetation associations.

3. METHODS

A field survey was undertaken on 25th October 2001. Location 413 was traversed on foot, locating the different vegetation associations apparent on the aerial photograph.

Prior to undertaking the field work an attempt was made to locate two vegetation associations identified by Keating and Trudgen (1986) off site. These were SH9 identified at Location 413 by ATA (2000) and LH3 identified by Keating and Trudgen (1986). SH9 is listed in Keating and Trudgen (1986) as occurring “about 0.5km south of Cape Naturaliste” and LH3 as “on both sides of Canal Rocks Road (west of Smith’s Beach)”.

4. RESULTS

The vegetation associations located and identified at Lot 413 are illustrated in Map 2. Five of the six vegetation associations identified agreed with those mapped by ATA (2000). The distribution of some within the area was found to be different to that originally mapped.

This current survey determined that the *Banksia attenuata*/*Agonis flexuosa* Low Woodland (BaAjJM) and the *Allocasuarina humilis*/*Melaleuca systena*/*Olearia axillaris* Low Closed Heath (SH9), identified by ATA (2000), should be combined as one vegetation association BaAgJM as in the field it was impossible to separate into two communities. The association was a Low Woodland with open (degraded?) areas dominated by low shrubs of *Allocasuarina humilis* and *Melaleuca systena*. The area of this vegetation association included a substantial amount of the area listed as “Cleared” by ATA (2000).

As mapped (Map 1) by ATA (2000) BaAgJM occurred to the east of SH9 but when the vegetation associations were observed in the field (Map 2) the upper canopy species, especially *Eucalyptus marginata* subsp. *marginata*, *Corymbia calophylla* and *Agonis flexuosa* extended further west than indicated on Map 1. The understorey species were common throughout the Woodland and the open areas. Keating and Trudgen (1986) stated that in vegetation association SH9 “occasional stunted Peppermints (*Agonis flexuosa*, 2.0-2.5m) occur” but no mention was made of the occurrence of *Banksia attenuata* and *Eucalyptus marginata* subsp. *marginata* as dominant species. *Olearia axillaris* is also listed as a dominant species by Keating and Trudgen (1986) in vegetation association SH9, a species not dominant at Location 413.

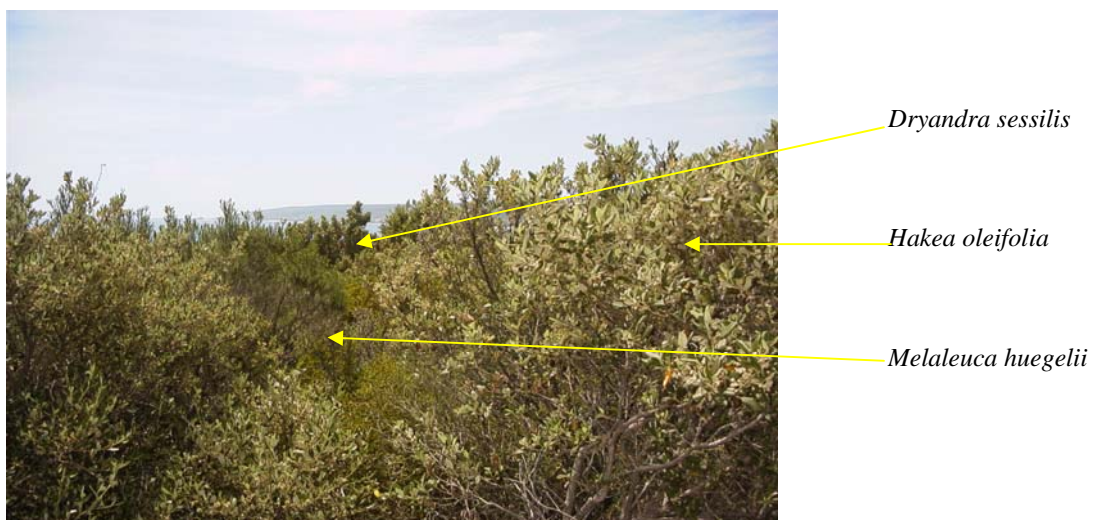
Where vegetation associations BaAgJM intergrades with vegetation association AW2 understorey species characteristic of AW2 become included in BaAgJM. The interzone is quite wide with *Banksia attenuata* and *Agonis flexuosa* trees reaching up to 5m tall.



Photograph 1: Vegetation association BaAgJM, *Banksia attenuata*/Agonis flexuosa Low Woodland with open areas dominated by *Allocasuarina humilis* and *Melaleuca systema*

The vegetation association LH3 was identified by Keating and Trudgen (1986) as occurring at Lot 413 but identified by ATA (2000) as LH6. Vegetation association, LH3, was recorded along Canal Rocks Road. To ensure recognition of this vegetation association it was located on the Canal Rocks Road prior to undertaking the vegetation survey. At Canal Rocks Road the vegetation was dominated by *Melaleuca huegelii* subsp. *huegelii* with *Dryandra sessilis* as a major dominant species.

This survey identified the vegetation association at Location 413 as LH6 not LH3 as there were less than 10 *Dryandra sessilis* plants recorded. It was not a dominant species here, compared to its occurrence along the Canal Rocks Road. However as LH6 on Canal Rocks Road occurred higher up the slope than Lot 413 it is possible tha LH6 may become LH3 at a higher contour, but if this occurred it would be to the south of Lot 413 and in the Leeuwin-Naturaliste National Park.



Photograph 2: Vegetation association LH6 at Location 413



Photograph 3: Vegetation association LH3 photographed at Canal Rocks Road

The cleared area identified by ATA (2000) has commenced to regrow and is dominated by *Acacia saligna* with other *Acacia* species, but at present is too young to be allocated to a vegetation association.

5. DISCUSSION

A survey of Location 413 undertaken on 25th October 2001 identified the following five vegetation associations as present, using the vegetation descriptions of Keating and Trudgen (1986):

- GH4 – *Pimelea ferruginea*, *Scaevola crassifolia*, *Acacia divergens*, *Spyridium globulosum* Low Heath;
- LH1 – *Melaleuca lanceolata*, *M. huegelii* Closed Heath;
- LH6 – *Melaleuca huegelii* Closed Scrub;
- AW2 – *Agonis flexuosa*, *Corymbia calophylla*, *Eucalyptus marginata* Low Woodland to Low Open Forest; and
- BaAgJM – *Banksia attenuata*, *Agonis flexuosa*, *Eucalyptus marginata* subsp. *marginata* Low Woodland over a heath dominated by *Allocasuarina humilis* and *Melaleuca systema*.

In addition the area identified as cleared by ATA (2000) is now regrowing but consists of mixed *Acacia* species, which at present, cannot be allocated to one of the above units.

Vegetation Associations LH3 and SH9 were recorded as restricted in the area (Keating and Trudgen, 1986). Neither was recorded at Lot 413. Vegetation association LH3 possibly occurs higher up the slope to the south of Location 413.

One area of vegetation association SH9 was located by Keating and Trudgen (1986) at “about 0.5km south of the Cape Naturalists Lighthouse”. Over an hour was spent walking the area approximately 0.5km to the south down to the Sugar Loaf track, both

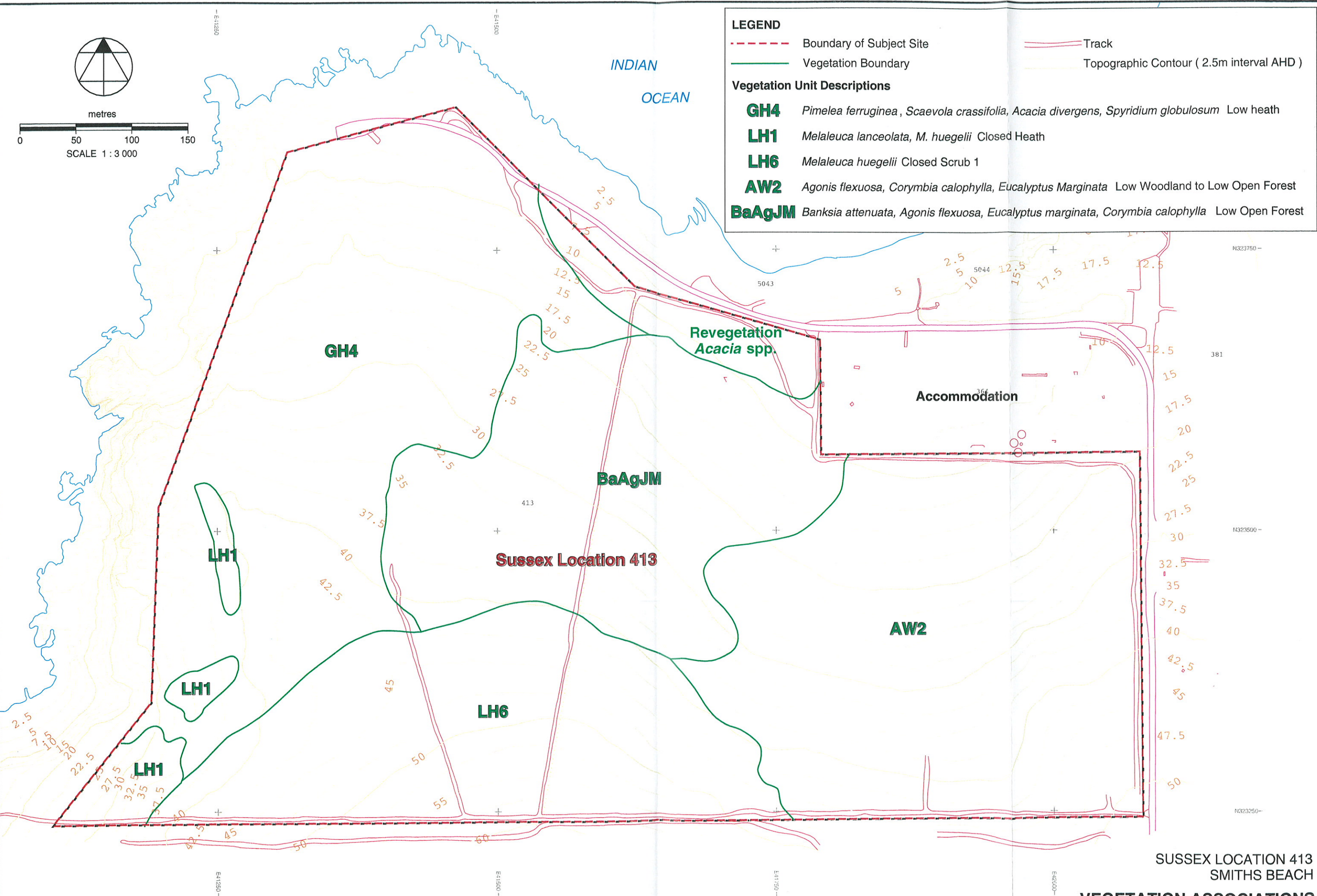
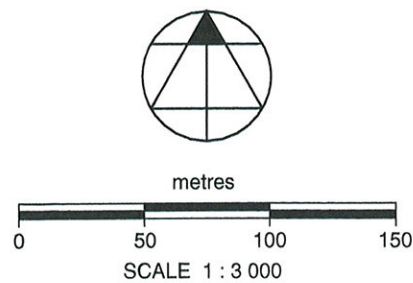
east and west of the lighthouse, both across the vegetation and along the walk trails, but it was not located. Vegetation association SH9 is described as consisting of *Allocasuarina humilis*, *Melaleuca systema*, *Olearia axillaris* with other shrubs including *Acacia cochlearis*, *Cryptandra arbutiflora*, *Hibbertia hypericoides* with herbs of *Desmocladus fasciculatus*. The area traversed included several shrubs of *Melaleuca systema*, *Olearia axillaris*, *Acacia cochlearis* and *Hibbertia hypericoides*. Vegetation association BaAgJM at Location 413 included a low shrub understorey dominated by *Allocasuarina humilis*, *Melaleuca systema* and *Spyridium globulosum*, but *Olearia axillaris*, *Cryptandra arbutiflora* and *Desmocladus fascicularis* were not dominant species. Most of the area identified as vegetation association SH9 by ATA (2000) included the degraded area, which is currently regenerating and which in this survey was included in vegetation association BaAgJM.

6. REFERENCES

- ATA. (2000). *Vegetation and Flora*: in Environmental Appraisal Sussex Location 413 Smiths Beach.
- Keating, C., and Trudgen, M. (1986). *A Flora and Vegetation Survey of the Coastal Strip from Forrest Beach – Cape Naturaliste –Woodland*. Prepared for the Department of Conservation and Environment, W.A.

APPENDIX

- Map 1: Vegetation associations as mapped by ATA (2000)
Map 2: Vegetation associations as mapped during 2001 field survey



SUSSEX LOCATION 413
SMITHS BEACH
VEGETATION ASSOCIATIONS
MAP 2



metres

0 200

SCALE 1:4,000

SMITHS BEACH

GH4

SH9

BaAgJM

AW2

LH6

LH1

C

LEGEND

Property Boundary

VEGETATION ASSOCIATIONS

GH4

Pimelea ferruginea, *Scaevola crassifolia*,
Acacia divergens, *Spyridium globulosum*
Low Heath

LH1

Melaleuca lanceolata, *M. huegelii* Closed
Heath

LH6

Melaleuca huegelii Closed Scrub 1

AW2

Agonis flexuosa, *Corymbia calophylla*,
Eucalyptus marginata Low Woodland to
Low Open Forrest

SH9

Allocasuarina humilis, *Melaleuca acerosa*,
Olearia axillaris Low Closed Heath

BaAgJM

Banksia attenuata, *Agonis flexuosa*,
E. marginata, *C. calophylla* Low
Open Forest

C

Cleared of Native Vegetation



SUSSEX LOCATION 413, SMITHS BEACH
VEGETATION ASSOCIATIONS

MAP 1