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**Summary of landform, soil, vegetation and floristic data for the proposed
threatened ecological community: “Low heathland on acidic grey-brown
sands of the Gracetown soil-landscape system”.**

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December 2005**

Summary of landform, soil, vegetation and floristic data for the proposed threatened ecological community: "Low heathland on acidic grey-brown sands of the Gracetown soil-landscape system"

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Soil type and land form

Apparently a variant of the Keenan sand (Uc 5.11) – a brownish sand with (usually) a dark organic surface, and often containing granitic fragments or ironstone gravel overlying granite at 50 cm or less¹. At Gracetown the soil appears to be influenced by a shallow layer of Bleached Sand (Uc 2.3) that has washed down from the ridge upslope where it is over 1 metre deep and carries a low woodland of *Banksia attenuata* (P. Tille, pers. comm.).

The heathland is situated near the junction of the Cowaramup (Cowaramup Deep Sandy Rises land unit) and Gracetown (Gracetown Exposed Slopes and Willyabrup Granitic Headlands land units) soil landscape systems.

Floristics and vegetation type

A partial species list is presented below, this is partly derived from unpublished data collected from a quadrat (CB1) apparently placed within the plant community as part of the floristic survey of Warren bioregion (Lyons, Gibson and Keighery, Department of CALM, Science Division). A total of 51 species was recorded for this 100 m² quadrat. A further 25 species were recorded during this survey, bringing the total for the community to 76 species.

Structurally the vegetation is an Low Heathland to Open Low Heathland using the structural formation terminology of the Australian Vegetation Attribute Manual.² It is generally below 1 metre in height, rising to 1.5 metres at the margins where it grades into a Heathland on granite gneiss at the seaward margins and a *Banksia* Woodland upslope.

Dominant or characteristic shrub species include;

Calothamnus sanguineus, *Darwinia citriodora*, *Hakea prostrata*, *Hakea trifurcata*,
Jacksonia horrida, *Kunzea ferruginea*, *Pimelia rosea*, *Spyridium globulosum*,
Verticordia plumosa var. *plumosa*, *Xanthorrhoea brunonis*

Common herbs, grasses and sedges include;

Asteridea pulverulenta, *Austrodanthonia setacea*, *Austrostipa compressa*,
Brachyscome iberidifolia, *Lepidosperma squamatum*, *Platysace haplosciadia*,
Tricholcline spathulata, *Velleia trinervis*

The 'mix' of species within the Gracetown heathland community appears to be substantially different from other plant communities identified on the Leeuwin-Naturaliste ridge. It appears to have a higher proportion of herbaceous and graminoid species than the heathland on granite gneiss downslope (although it shares many species with that community) and is quite distinct floristically from the *Banksia* Woodland upslope and the Tall Shrublands on limestone sands that occur nearby.

¹ Tille, P. and Lantzke, N. (1990). Busselton-Margaret River-Augusta land capability study; methodology and results. Technical Report 109, Western Australian Department of Agriculture.

² National Vegetation Information System: <http://www.deh.gov.au/erin/nvis/avam/section-2-2.html>

Species list for an occurrence of low heathland on grey-brown sands associated with granite gneiss outcrop near Gracetown³.

Latitude: 33° 51' 19.8"

Longitude: 114° 59' 25.7"

Acacia pulchella
Acacia rostellifera
Agonis flexuosa
Anarthria prolifera
Anigozanthos bicolor
Asteridea pulverulenta
Astroloma pallidum
Austrodanthonia setacea
Austrostipa compressa
Brachyscome iberidifolia
**Briza maxima*
Burchardia umbellata
Calothamnus quadridus
Calothamnus sanguineus
Cassytha racemosa
Comesperma confertum
Conostylis aculeata subsp. aculeata
Conostylis setigera subsp. setigera
Cryptandra arbutiflora var. tubulosa
Darwinia citriodora
Daviesia divaricata
Daviesia horrida
Desmocladius fasciculatus MS
Desmocladius flexuosus MS
Dodonaea ceratocarpa
Dryandra nivea
Eutaxia obovata
Eutaxia parvifolia
Gastrolobium bilobum
Gompholobium tomentosum
Hakea prostrata
Hakea trifurcata
Hibbertia hypericoides
Hibbertia racemosa
Hovea chorizemifolia
Jacksonia horrida
Kunzea ciliata
Laxmannia sessiliflora subsp. australis
Lepidosperma squamatum
Leucopogon carinatus
Leucopogon cordatus
Levenhookia pusilla
Lomandra nigricans
Lyginia barbata

³ Partly derived from unpublished data (Lyons, Gibson and Keighery, floristic survey of Warren bioregion).

Species list for an occurrence of low heathland on grey-brown sands associated with granite gneiss outcrop near Gracetown (continued).

Melaleuca systema
Mesomelaena tetragona
Neurachne alopecuroidea
Opercularia vaginata
**Parentucellia viscosa*
Patersonia occidentalis
Persoonia longifolia
Phyllanthus calycinus
Pimelea ferruginea
Pimelea rosea ssp. *rosea*
Platysace haplosciadia
Podotheca angustifolia
Pseudanthus virgatus
Ptilotus manglesii
Santalum acuminatum
Spyridium globulosum
Stylidium bulbiferum
Stylidium piliferum
Stylidium repens
Stypandra glauca
Thomasia macrocarpa
Thysanotus dichotomus
Thysanotus tenellus
Trichocline spathulata
Tripterococcus brunonis
Velleia trinervis
Verticordia plumosa var. *plumosa*
Viminaria juncea
Xanthorrhoea brunonis
Xanthorrhoea preissii
Xanthosia candida