

Site Inspection – Norseman Road Sand Extraction

Land: R33195 Crown land Reserve- Management Order for Shire of Esperance

Location: Norseman Road, Esperance (Between Fairfield Street and Barney Road)

Area: 3.4 hectares

The Shire of Esperance wishes to clear an area within a 3.4 hectare footprint area for the purpose of sand extraction as part of the foreshore renourishment program.

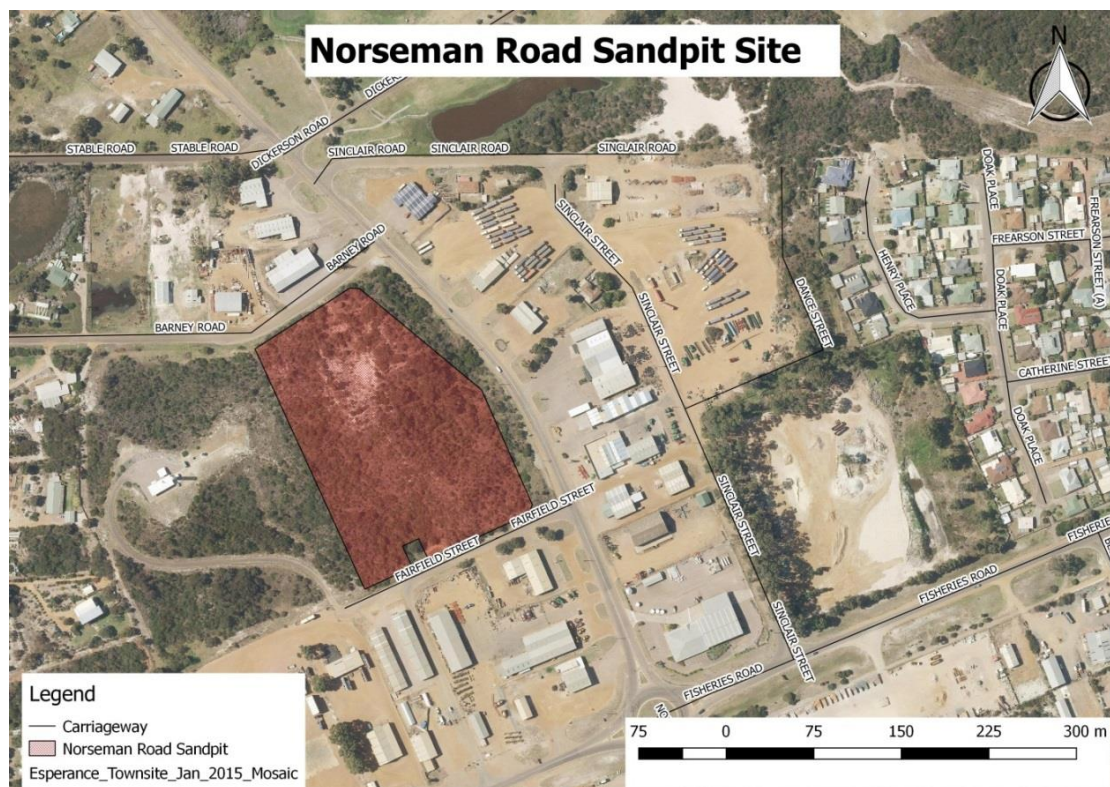


Figure.1 Map showing the proposed clearing area

Desktop Survey

Level plain with moderately inclined dune ridges and associated swales with occasional swamps. Calcareous deep sands associated pale deep sands and minor calcareous shallow sands.

Soils

Southern coastal part of the Esperance Sandplain Zone made up of quaternary coastal sands mostly calcareous and unconsolidated.

Vegetation

This area of land is classified by Beard as being within the Fanny Cove_42 system. This consists of shrubland and coastal heath of Melaleuca, Banksia, Acacia and Eucalyptus species.

Dieback

The nearest dieback sample is recorded 1.7km north east of the site (within the Windabout Lakes system) (DIDMS, 2017)

Rare Flora (Within a 10km radius of the proposed site)

Species	DRF	P1	P2	P3	P4
<i>Damperia sericantha</i>				2	
<i>Eucalyptus missilis</i>					1
<i>Grevillea baxteri</i>					1
<i>Hibbertia carinata</i>		1			
<i>Hibbertia turleyana</i>			1		
<i>Lepidium fasciculatum</i>		1			
<i>Leucopogon rotundifolius</i>				1	

Threatened Ecological Communities

Kwonkgan site NOT LIKELY TO OCCUR



Figure.2 Contour lines showing the height and slope of the sand hill

Field Survey

The proposed clearing area was inspected on 14/03/2017 by Shire Environmental Officers .

. The vegetation of the reserve consisted of Acacia mixed scrub dominated, and an area of *Eucalypts angulosa* woodland on the east side of the site towards the top of the hill. *Melaleuca pentagonia* var. *latifolia* dominated the disturbed area in the northern mid-section of the reserve which was previously used for sand extraction.



Figure3. Vegetation condition of the site. Darker colours indicating better health

Vegetation condition: The site consisted of dunal vegetation which was in a very good condition in the southern part and good/degraded on the northern and eastern parts. There was a medium weed load over at least 1/3 of the reserve.



Figure 4. Map indicating vegetation communities. See details below

Vegetation Communities

The area consists of three main vegetation communities. Dominated by acacia scrub (Green shading). The hill area to the north east is classified as *Eucalyptus angulosa* woodlands (Blue shading) and the scar of the existing clearing is made up of mostly small *Melaleuca pentagonia var. latifolia* plants (Red shading).

Species List

The site was traversed by foot noting species present and collecting herbarium specimens. No TF or PF were located within the field survey. There were many weeds present at the site although these were mostly confined to the boundaries and eastern side of the slope.

Family	Genus	Species	Notes
<i>Aizoaceae</i>	<i>Carpobrotus</i>	<i>virescens</i>	
<i>Asparagaceae</i>	* <i>Agave</i>	<i>americana</i>	Only one plant noted in existing scar
<i>Asparagaceae</i>	* <i>Asparagus</i>	<i>asparagoides</i>	
<i>Asteraceae</i>	* <i>Gazania</i>	<i>linearis</i>	
<i>Asteraceae</i>	* <i>Conyza</i>	<i>bonariensis</i>	
<i>Cyperaceae</i>	<i>Lepidosperma</i>	<i>longitudinal</i>	
<i>Cyperaceae</i>	<i>Leptospermum</i>	<i>gladiatum</i>	
<i>Ericaceae</i>	<i>Leucopogon</i>	<i>apicularis</i>	
<i>Ericaceae</i>	<i>Leucopogon</i>	<i>sp</i>	
<i>Fabaceae</i>	<i>Acacia</i>	<i>cochlearis</i>	
<i>Fabaceae</i>	<i>Acacia</i>	<i>cyclops</i>	
<i>Fabaceae</i>	<i>Acacia</i>	<i>saligna</i>	
<i>Fabaceae</i>	<i>Templetonia</i>	<i>retusa</i>	
<i>Geraniaceae</i>	* <i>Pelargonium</i>	<i>littorale</i>	
<i>Hemerocallidaceae</i>	<i>Dianella</i>	<i>divaricata</i>	
<i>Myrtaceae</i>	<i>Eucalyptus</i>	<i>angulosa</i>	
<i>Myrtaceae</i>	<i>Melaleuca</i>	<i>pentagon var. latifolia</i>	
<i>Myrtaceae</i>	* <i>Agnois</i>	<i>flexulosa</i>	
<i>Poaceae</i>	* <i>Cenchrus</i>	<i>clandestinus</i>	
<i>Restionaceae</i>	<i>Desmocladius</i>	<i>sp.</i>	
<i>Rhamnaceae</i>	<i>Spyridium</i>	<i>globulosum</i>	
<i>Solanaceae</i>	* <i>Lycium</i>	<i>Ferocissimum</i>	Only one plant noted
<i>Verbenaceae</i>	* <i>Lantana</i>	<i>camara</i>	Only one plant noted. Sprayed since inspection

*indicates weed species



Figure.5 (PP1) Sedges in low lying areas



Figure.5 (PP)



Figure.6 (PP3) *Eucalyptus angulosa* woodlands on eastern side of sand hill



Figure.7 (PP4) The bare sand hill which has been dug out facing west



Figure.8 (PP5) The top of the exposed hill facing south west.



Figure .9 (PP6) The sand hill facing south.



Figure .10 Photo Points