

LAND RESOURCES of TJUWALIYN (DOUGLAS) HOT SPRINGS PARK

For further information contact:
 Department of Environment, Parks and Water Security
 Director, Land Assessment, Rangelands Division
 Ph. (08) 8999 4478 Email: rangelands@nt.gov.au Web: <https://depws.nt.gov.au>
 Level 3, Goyder Centre, 25 Chung Wah Terrace, Palmerston, Northern Territory of Australia.
 NT Maps: <https://ntmaps.nt.gov.au>

Map Reference: DEPWS2021196 Tjuwalyin-Douglas-Park_Land-Resources

LAND UNIT DESCRIPTIONS

LOW HILLS
2c Hilly terrain, 5 - 15% slope, rocky and boulder strewn. Shallow or skeletal. (Rudosols). *Erythrophleum chlorostachys* and *Owenia verrucosa* dominated woodland with an understorey consisting of *Buchanania obovata*, *Petalostigma pubescens* and *Planchonina careya*, with grasses of *Aristida* sp. and *Panicum* sp.

LOW RISES
2e Gently undulating crests and upper slopes, up to 5%. Either very shallow (Rudosols) or gravelly, or sandy with frequent exposures of sandstone or laterite. *Eucalyptus tectifica* and *Corymbia foelscheana* woodland with a well developed understorey of *Petalostigma pubescens* and *Cochlospermum fraseri* and mixed grasses of annual sorghum, *Heteropogon contortus* and *Heteropogon triticeus*.

PLAINS
3d Flat to gently sloping (less than 2%) with indistinct drainage floors. Red massive earths (Kandosols) with small areas of hard apedal and sandy apedal mottled yellow duplex soils (Yellow and lateritic podzolics) (Hydrosols). *Corymbia foelscheana*, *Corymbia polysciada* and *Eucalyptus tectifica* woodland to low woodland with perennial grasses including *Setima nervosum* and *Themeda triandra*.

3f Flat to gently sloping (less than 2%), generally associated with land unit 3d. Mottled yellow and grey massive earths (Kandosols). *Corymbia foelscheana*, *Corymbia polysciada*, *Corymbia foelscheana*, *Eucalyptus tectifica* and *Eucalyptus tectifica* low open woodland to woodland with grasses dominated by *Heteropogon contortus* and *Heteropogon triticeus*.

5a Mainly crests and upper slopes, up to 4% slope, frequent outcrops on crests (quartzite or laterite). Hard apedal mottled yellow duplex soils. (Lateritic podzolics) (Chromosols), with minor occurrences of earthy or siliceous sands (Tenosols). *Erythrophleum chlorostachys*, *Corymbia bella* and *Corymbia polycarpa* open forest with a well developed understorey of *Planchonina careya* and *Terminalia grandiflora* and grasses of *Heteropogon contortus*, *Mnesithea rottoeoloides*, and *Aristida* spp.

5c1 Either valley floors or low-lying seepage areas in sandy country; frequently abut drainage lines or backplains. Predominately pale sands with a mottled B horizon (Hydrosols), brownish sands, or less commonly sandy apedal mottled yellow duplex soils (Chromosols). *Corymbia grandifolia* and *Erythrophleum chlorostachys* open woodland to woodland and a sparse understorey of *Petalostigma pubescens*, *Melaleuca viridiflora* and *Panicum* sp. with grasses of annual Sorghum sp., *Chrysopogon laticus* and *Aristida* spp.

5c2 Low lying undulating areas in sandy country, frequently abutting drainage lines and land units 5c1 or 5c3. Predominately pale sands with a mottled B horizon (Hydrosols), brownish sands, or less commonly sandy apedal mottled yellow duplex soils (Chromosols). *Corymbia grandifolia* and *Erythrophleum chlorostachys* open woodland to woodland and a sparse understorey of *Petalostigma pubescens*, *Melaleuca viridiflora* and *Panicum* sp. with grasses of annual Sorghum sp., *Chrysopogon laticus* and *Aristida* spp.

5c3 Low lying undulating areas in sandy country, frequently abutting drainage lines and land units 5c1 or 5c2. Predominately pale sands with a mottled B horizon (Hydrosols), brownish sands, or less commonly sandy apedal mottled yellow duplex soils (Chromosols). *Eucalyptus tetradonta* and *Erythrophleum chlorostachys* open woodland to woodland with an understorey of *Terminalia grandiflora*, *Terminalia lewiniana* and *Petalostigma pubescens* with grasses of annual Sorghum sp., *Chrysopogon laticus* and *Aristida* spp.

5d Undulating terrain; slopes generally less than 3%. Predominately hard apedal mottled yellow duplex soils (Chromosols) with minor occurrences of pale sands with colour B horizons (Tenosols). *Lophostemon grandiflorus*, *Corymbia grandifolia* and *Brachychiton diversifolium* low-woodland to shrubland with dense understorey of *Melaleuca viridiflora* and *Petalostigma pubescens*. Grasses consist mainly of annual Sorghum sp. and *Themeda triandra*.

5d1 Undulating terrain; slopes generally less than 3%. Predominately hard apedal mottled yellow duplex soils (Chromosols) with minor occurrences of pale sands with colour B horizons (Tenosols). *Eucalyptus tetradonta* tall open woodland with an open understorey of *Petalostigma pubescens*, *Planchonina careya* and *Terminalia grandiflora*, and a wide variety of grasses.

5e Generally flat (slopes less than 1%). Hard apedal or sandy apedal mottled yellow duplex soils. (Lateritic and yellow podzolics) (Chromosols). *Eucalyptus tectifica*, *Corymbia polysciada*, *Corymbia foelscheana* and *Erythrophleum chlorostachys* low woodland to woodland with scattered shrubs of *Buchanania obovata* and *Planchonina careya* and grasses, sedges and herbs.

6d Either valley floors or flat to gently sloping areas associated with creeklines and rivers, slopes are generally less than 1%. Variable, but predominantly hard apedal and sandy apedal mottled yellow duplex soils (Yellow podzolics) (Chromosols). Also occurring are grey self mulching cracking clays (Grey, brown and red clays) (Vertosols) and calcareous earths (Calcarsols). *Corymbia grandifolia*, *Corymbia bella* and *Erythrophleum chlorostachys* open woodland to woodland, with an understorey of *Melaleuca nevosa*, *Terminalia grandiflora* and grasses of *Bothriochloa biadhi*, *Capillipedium parviflorum* and *Alloteropsis semialata*.

ALLUVIAL PLAINS
7a3 Almost flat plains up to one mile wide, occasional scattered limestone outcrop. Grey self mulching, and massive cracking clays (Grey, brown and red clays) (Vertosols). *Lophostemon grandiflorus* and *Corymbia bella* tall woodland to open woodland with an understorey of *Terminalia platyphylla* and *Planchonina careya* and grasses of *Panicum trachytrichis* and annual Sorghum sp.

7a4 Almost flat plains up to one mile wide, occasional scattered limestone outcrop. Grey self mulching, and massive cracking clays (Grey, brown and red clays) (Vertosols). *Lophostemon grandiflorus* open forest with understorey of *Timonius timon*, *Melaleuca viridiflora* and grasses consisting mainly of *Ophiurus exaltatus*.

7a5 Almost flat plains up to one mile wide, occasional scattered limestone outcrop. Grey self mulching, and massive cracking clays (Grey, brown and red clays) (Vertosols). *Ophiurus exaltatus*, *Imperata cylindrica*, *Panicum trachytrichis*, *Pseudoraphis spinescens* and *Xerochloa* sp. grassland.

DRAINAGE SYSTEMS
7e Major creeks and severely gullied tributaries. Soil undescrbed. Vegetation undescrbed.

8b Young river levees with backflaps rarely in excess of 2%; up to half a mile wide. Alluvial red earthy sands or red massive earths (Kandosols). *Eucalyptus miniata*, *Eucalyptus tectifica*, *Corymbia polycarpa* and *Corymbia bella* woodland with an open understorey of *Terminalia grandiflora* and *Petalostigma pubescens* and grasses of *Panicum trachytrichis* and annual Sorghum sp. and *Heteropogon contortus*.

8c Low lying areas behind the younger levees, older levees, or minor drainage floors within the younger levees; slopes generally very slight. Red and yellow earths of alluvial origin (Kandosols). *Eucalyptus tectifica* and *Corymbia grandifolia* open forest to woodland, often with dense understorey of *Petalostigma pubescens*, *Terminalia grandiflora* and grasses of *Aristida holthera*, *Aristida hygrometrica*, *Digitaria* sp. and *Eriacne squarrosa*.

8e All severely eroded areas associated with major river alluvials. Soil undescrbed. Vegetation undescrbed.

SWAMPS
8d Swamps, more or less permanent. Hydrosols. *Melaleuca leucadendria*, *Melaleuca viridiflora* and *Lophostemon grandiflorus* forest to open forest and grasses of *Capillipedium parviflorum*, *Ophiurus exaltatus*, *Germainia grandiflora* and *Mnesithea rottoeoloides*.

WATER BODIES
 Douglas River or water body.

SIGNIFICANTLY DISTURBED LANDSCAPES
 Depression. Landform undescrbed. Soil undescrbed. Vegetation undescrbed.

GENERAL FEATURES
 Land unit boundary: Dotted line
 Survey boundary: Dashed line
 Property boundary: Solid line
 Park boundary: Thick solid line
 Minor road / track: Thin solid line
 Drainage line: Blue line

Base Information Data Sources:
 Department of Infrastructure, Planning and Logistics, NT of Australia
 Geoscience Australia, Australian Government.

MAP LOCALITY and STUDY AREA

Example of Land Unit Descriptions

ALLUVIAL PLAINS
7a5 Almost flat plains up to one mile wide, occasional scattered limestone outcrop. Grey self mulching, and massive cracking clays (Grey, brown and red clays) (Vertosols). *Ophiurus exaltatus*, *Imperata cylindrica*, *Panicum trachytrichis*, *Pseudoraphis spinescens* and *Xerochloa* sp. grassland.

Landform description: Landform description
 Soil description: Soil description
 Land unit: Land unit
 Vegetation description: Vegetation description

MAP DISCLAIMER:
 Land resource information has been derived from aerial photograph interpretation and field data describing landform, soil and vegetation. Mapping has been collected according to the national standards and prepared at a scale of 1:10 000. Enlarging this map beyond this scale will not provide further detail. Map scale is 1:15 000.

A site inspection should always accompany mapping for specific areas.

BIBLIOGRAPHIC REFERENCE:
 H.R.M. van-Cuylenburg
 Land resource survey of the Douglas Hot Springs Nature Reserve.
 Land Conservation Unit, Conservation Commission of the N.T.
 Darwin, N.T. 1980.

TECHNICAL REFERENCES:
 Northcote K.H. (1979). *A Factual Key for the Recognition of Australian Soils*.
 4th Edition. Rellim Publications, Glenelg, SA.

Isbell R.F. (2002). *The Australian Soil Classification*.
 Second Edition. CSIRO Publishing, Melbourne.

