

LANDSCAPE CHARACTER TYPES OF WESTERN AUSTRALIA  
(REVIEW OF DRAFT STUDY)

COMPILED BY

BRIDIE KIRKPATRICK  
ANGELA STUART-STREET

TEL: 364 0777

PLEASE ADDRESS REVIEW COMMENTS TO:

ATTENTION: GRANT REVELL  
DEPARTMENT OF CONSERVATION & LAND MANAGEMENT  
50 HAYMAN ROAD  
COMO 6152 WA

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## **1. Kimberley Plateau**

### **Landform**

An intricate landscape of high dissected sandstone plateaux, gently undulating with low hills, and well defined linear escarpments, lateritic capped buttes and mesas. The deeply indented coastline features many imposing headlands and spectacular cliffs with many offshore islands. The extensive drainage network provides low swampy deltas and mudflats. .

### **Vegetation**

High grass savannah species of curly spinifex and annual sorghum with associated savannah woodland are found extensively throughout. Medium woodland species are found in isolated areas along streamlines and scarps. Mangroves feature on tidal mudflats and river estuaries.

### **Waterform**

The Kimberley area features many seasonal water courses including numerous streams and large rivers such as the Ord, Fitzroy and Prince Regent. The coastline is adjacent to both the Indian Ocean and the Timor Sea, and the rugged coast abutting these forms many gulfs and bays. Featured here also are numerous swamps, mudflats, estuaries and deltas. Precipitation 600-1200 mm pa, occurring mostly during summer months.

### **Landuse Patterns**

In suitable areas which are accessible, pastoral leases for the grazing of beef cattle is the most widespread landuse. Fire as a management tool is often used in association with this. Numerous mineral leases and Aboriginal reserves occur over this region.

### **Significant Features**

A great many features in this area are significant, which will be discussed further on in this study.

## **2. Cambridge Gulf Lowlands**

### **Landform**

Low lying, generally sandy alluvial plains which extend inland from the tidal mud flats of the north coast, to the ranges where it appears as broad, flat valleys. Isolated mesas, ridges and rocky sandstone hills.

### **Vegetation**

Mangroves features in the channel areas of the mudflats. On the plains, a combination of bunch grass, high grass savannah woodland and low mallee heath shrubland exists, and watercourses appear well vegetated.

### **Waterform**

In this small part of the Timor Sea drainage basin are the seaward terminations of some large rivers, including the Ord. The tidal mudflats and the Cambridge Gulf as well as the northern coastline are characteristics of this landscape.

### **Landuse Patterns**

Mining occurs in suitable areas and also open range grazing of beef cattle on pastoral leases.

### **Significant Features**

Rare endemic fauna and flora.

### **3. Leopold-Durack Ranges**

#### **Landform**

A narrow belt of steep sided, flat topped ridges adjacent to the Kimberley Plateau. These ridges are dissected by steep sometimes vertical sided valleys, giving the terrain a very rugged appearance.

#### **Vegetation**

Low, open, grassy woodland communities with scattered trees and shrubs over a mosaic of grasses.

#### **Waterform**

The ranges are dissected by many rivers and streams which create the characteristic erosional valleys. Precipitation 600-900 mm.

#### **Landuse Patterns**

Aboriginal reserves and Land Trusts occur in this region, and in suitable areas, open range grazing of beef cattle on pastoral leases.

#### **Significant Features**

Geologically, a unique area, featuring the rugged Elgee Cliffs, and also several rare endemic vegetation species.

#### **4. Yampi Peninsula**

##### **Landform**

This extremely inaccessible and rugged terrain features parallel flat-topped Yampi ridges with some extremely steeply eroded areas and irregular escarpments. A small, smooth-topped plateau is also evident here, and on the coastal fringes are low lying sandplains and river plains.

##### **Vegetation**

A mosaic of scattered trees with high grasses in some areas and low spinifex in others. Acacia thicket is also present. Suitable sheltered coastal areas feature mangroves.

##### **Waterform**

Only minor watercourses occur here. The Indian Ocean coastline does feature several bays and inlets.

##### **Landuse Patterns**

Mining occurs in some areas.

##### **Significant Features**

Still to be defined.

## **5. Ord Plain**

### **Landform**

A widespread, low lying area of plains and hills. Some rugged areas exist, with outcrops, boulders and mesas. Watercourses have cut narrow, vertical sided ravines in limestone, and rocky hills in sandstone areas. The Argyle Dam has flooded the lowest part of the plains.

### **Vegetation**

Varying vegetation from high grass savannah to sparse scattered trees and shrubs. Isolated areas of treeless clay plains with short grasses and other mixed grasslands.

### **Waterform**

Three major rivers dominate this area, the Ord, Nicholson and Negri. The immense man-made Lake Argyle features here also. Precipitation: 400-700 mm.

### **Landuse Patterns**

In suitable areas, open range grazing of beef cattle occurs.

### **Significant Features**

Lake Argyle, the Ord River Dam.

## **6. Springvale Hills**

### **Landform**

An extremely rugged and varied region of ranges with dominant escarpments, ridges and rounded hills, dissected by deep gullies and gorges. This includes the tilted sandstone ( "hog-back") strata of the Osmond Ranges. Irregular undulating plains occur in isolated areas.

### **Vegetation**

Found here are low, open, occasionally sparse, eucalypt woodlands combined with areas of high and low grasslands.

### **Waterform**

An area with intricate drainage pattern. The fast runoff from the steep sided landscape causes many streams and rivers to originate here, forming deep gullies and gorges in some areas.

### **Landuse Patterns**

Open range grazing of beef cattle is predominant and mining occurs in some areas.

### **Significant Features**

Unique ranges e.g. Bungle Bungles.

## **7. Fitzroy Plains**

### **Landform**

Many areas of extensive sandplains often with longitudinal ridges to the south form a boundary of rocky plateaus and hilly terrain. The Oscar Ranges on the northern boundary create another rugged border with plateaus and gorges. Through the centre are wide floodplains and incised valleys. The coast is generally low lying with swamps and mudflats adjacent to the bays and estuaries.

### **Vegetation**

Combination of shrubland with scattered, often sparse trees and spinifex grass, and acacia eucalypt woodland. Mangroves appear on the coast.

### **Waterform**

Broad hypersaline tidal mudflats and swampy areas on bays and estuaries on the Indian Ocean. The Fitzroy River and other streams and rivers drain towards the coast and form an extensive deltaic zone.

### **Landuse Patterns**

Open range grazing and mining are the major activities. Aboriginal settlements and Land Trusts occur here also.

### **Significant Features**

Gorges (e.g. Geikie) formed by the Fitzroy River.



## **8. Dampier Tablelands**

### **Landform**

Very gently undulating monotonous and featureless sandplain with closely spaced linear dunes. Flood plains and shallow swamp lands on coast.

### **Vegetation**

Generally, a low open eucalypt and acacia woodland and thicket (pindan) with a hummock grass understorey and impenetrable vine thickets in some areas. On the coast, a melaleuca savannah features and mangroves appear on the mudflats.

### **Waterform**

Numerous creeks dissect the peninsula, which is surrounded by the Indian Ocean. Mudflats, swamps and floodplains on the coast. Precipitation: 600-900 mm.

### **Landuse Patterns**

In suitable areas, open range grazing of beef cattle on pastoral leases.

### **Significant Features**

Still to be defined.

## **9. Eighty Mile Plain**

### **Landform**

Occuring between the Indian Ocean and the Great Sandy Desert, this is an area of gently undulating sandplains and E-W oriented seif dunes and estuarine plains of grey mud.

### **Vegetation**

Tall shrubland featuring acacia thicket, gaining height away from the coast. Patches of treeless areas with short grasses and mangrove communities appear on mudflats.

### **Waterform**

Minor intermittent watercourses, salt lakes and saline mudflats which are susceptible to inundation. Some estuarine plains occur and meet the Indian Ocean.

### **Landuse Patterns**

An area of Aboriginal Land Trust is situated in this region. Open range grazing of beef cattle occurs in suitable areas.

### **Significant Features**

Eighty mile beach.

## **10. Sturt Plateau**

### **Landform**

Flat elevated plain dissected by meandering creeks, which in some areas has eroded the landscape to form mesas, and some extensive sandplain exist in the valleys.

### **Vegetation**

The savannah plain is virtually treeless except along drainage areas where low open eucalypt woodland occurs.

### **Waterform**

Indeterminate drainage areas here with large clay pans. Some slow meandering creeks such as Sturt Creek cut into the plain. Precipitation: 300-400 mm.

### **Landuse Patterns**

No significant landuse.

### **Significant Features**

Wolf Creek Crater.

## **11. Great Sandy Desert Dunefields**

### **Landform**

A rolling plain consisting almost entirely of linear sand ridges with a NNW-SSE orientation. Clearly marked valleys apparent, forming part of an ancient drainage system.

### **Vegetation**

Sparse savannah with desert oaks and other isolated trees in the northern section and sparse shrubland and spinifex in the southern areas. In the salt lake regions, samphire and saltbush communities dominate.

### **Waterform**

Man-made wells along the stock route. Ancient drainage system with chains of narrow salt lakes.

### **Landuse Patterns**

A number of Aboriginal Reserves occur in this region.

### **Significant Features**

Most pronounced development of seif dunes in the state.

## **12. Tanami Sandplains**

### **Landform**

An extensive area of desert sandplains without linear sand ridges. Scattered low ranges and tablelands, and occasional granitic hills and small areas of sandridges.

### **Vegetation**

Acacia shrubland with hakea featured in some areas. Scattered trees in small regions, and grasses are widespread throughout.

### **Waterform**

Occasional salt lakes and minor creeks of indeterminate drainage terminating through evaporation.

### **Landuse Patterns**

Balgo Aboriginal Settlement in the central Tanami. Sparse open range grazing for beef cattle.

### **Significant Features**

Still to be defined.

### **13. Central Sandplains**

#### **Landform**

This region comprises of a combination of dissected sandstone ranges and escarpments surrounded by sandplains, with characteristic linear dunal ridges of varying intervals.

#### **Vegetation**

Tall, open acacia and eucalypt shrubland with small areas of casuarina woodland generally occurring between sand ridges. Heathland is present, with mallee, teatree and wattle shrub and mulga, all combined with a scattered grass understorey.

#### **Waterform**

Numerous salt lakes are the dominate water form, including the quite extensive Lake Mackay. Evidence of floodplains also appears.

#### **Landuse Patterns**

Other than the Giles Meteorological Station, Aboriginal Settlements occur.

#### **Significant Features**

The large area of desert oak is a particular feature of this region.

## **14. Gibson Desert**

### **Landform**

At the west of the Rawlinson Range, this is the central and most elevated section of the region, consisting of an extensive area of gently undulating laterite plains broken only by rare mesaform hills and some linear ridges.

### **Vegetation**

Hardy vegetation in these conditions consists of mainly poor spinifex grasses and stunted mulga scrub and parkland.

### **Waterform**

Situated in the centre of the Western Plateau drainage system, only a few salt lakes (dry) and wells exist. Precipitation: 200-300 mm.

### **Landuse Patterns**

No significant landuse in this area.

### **Significant Features**

Still to be defined.

## **15. Warburton Ranges**

### **Landform**

A low plateau with numerous small ranges, in two distinct groups.

### **Vegetation**

Mainly low woodland and shrubs associated with spinifex savannah. Larger trees featured on major drainage lines.

### **Waterform**

Definite waterforms absent. Dry salt lakes and wells.

### **Landuse Patterns**

The permanent settlement of the Warburton Range Native Mission is the only significant landuse.

### **Significant Features**

Still to be defined.



## **16. Great Victoria Desert**

### **Landform**

Gently undulating sandy plain with linear sand ridges predominating in the south-east and irregular plains and ridges in the north west.

### **Vegetation**

Extensive mulga woodland, especially in less sandy areas, as well as other scattered trees and shrubs and associated savannah. Heath shrubs predominate between dune ridges.

### **Waterform**

Scattered fresh water lakes on the western side, as well as numerous salt lakes.

### **Landuse Patterns**

As well as the Cosmo Newberry Native Mission, there are several pastoral properties in the Mulga country to the west.

### **Significant Features**

Still to be defined.

## **17. Eucla Basin**

### **Landform**

An extensive, arid, limestone plain, sloping gently upward from the continuous cliff occurring at the southern margin. Long, low parallel ridges are apparent, as are occasional low, rounded depressions and limestone caves, sinkholes and outcrops. An isolated coastal plain with extensive mobile dunes occurs between the steep cliffs and the seas with a broad open beach.

### **Vegetation**

A variety of tree and shrub cover saltbush and bluebush plains, with samphire communities in saline areas. Small areas of mallee shrub and taller woodland exist, with isolated patches of heath, wattle and teatree scrub.

### **Waterform**

Extensive underground water system through limestone caves and caverns and a shallow chain of salt lakes on the plain. Abrupt steep sea cliffs meet the Great Australian Bight at the southern margin.

### **Landuse Patterns**

Some sheep and cattle grazing, but largely undeveloped, apart from tourism from Eyre Highway traffic.

### **Significant Features**

Extensive, karst features, sheer sea cliff, limestone caves, sinkholes and blowholes.

## **18. Israelite Plain**

### **Landform**

Low lying, narrow coastal plain with a broad, open beach. Younger, mobile dunes near the coast with older stable longitudinal dunes further inland. A limestone scarp borders the northern margin, and isolated low hills project through dunes in the south.

### **Vegetation**

Heath predominates on younger dunes with scattered taller shrubs, and dense mallee scrub further inland.

### **Waterform**

Salt lakes on the plain and the Great Australian Bight forms the coast.

### **Landuse Patterns**

No significant landuse in this area.

### **Significant Features**

The Wylie Scarp

## **19. Little Sandy Desert**

### **Landform**

This region of widely spaced linear sand ridges of NW-SE orientation, forms a drainage basin with Lake Disappointment at its lowest point. Some hills and low ranges are also evident.

### **Vegetation**

Mostly grasses with sparse mulga cover. Mixed shrubs, acacia and scattered tall eucalypt (notably desert bloodwood) occurs between the dune ridges.

### **Waterform**

The large Lake Disappointment drainage basin featured, with other associated seasonal saline lakes.

### **Landuse Patterns**

No significant land use in this area.

### **Significant Features**

Still to be defined.

## **20. De-Grey Lowlands**

### **Landform**

A low-lying coastal plain which slopes gently toward the sea with substantial delta and floodplain features, including wide and braided riverbeds. Low coastal limestone ridges appear in some areas. Inland small stony hills and elongated ridges occur.

### **Vegetation**

Inland, the plain has isolated grass hummocks and low scattered shrubs, with many areas appearing treeless except along watercourses which are better wooded. Along the coastal margins, dwarf shrubs and a mosaic of grasslands give way to samphire and low shrubby mangroves.

### **Waterform**

These lowlands are traversed by many north flowing rivers and streams forming extensive deltas and floodplains. Tidal lagoons and mudflats occur as many areas on the Indian Ocean coastline are subject to seasonal inundation. Precipitation: 300 mm.

### **Landuse Patterns**

Some extensive mining areas occur here, as well as widespread sheep and beef cattle grazing. Aboriginal Land Trusts and settlements are situated in this area also.

### **Significant Features**

Still to be defined.

## **21. Nullagine Hills**

### **Landform**

Steep ranges and dissected flat topped hills which rise abruptly from the surrounding plain. Several rivers travel through the landscape creating narrow gorges and valley plains.

### **Vegetation**

Scattered low eucalypt savannah and acacia shrubland with mulga, and mixed grasses. Sparse in some areas.

### **Waterform**

The hills are traversed by several rivers including the Nullagine, Oakover and Shaw. There are also occasional wells associated with the Canning Stock Route. Precipitation: 250-300 mm.

### **Landuse Patterns**

Beef cattle grazing is predominant, with some areas of sheep grazing also. Mining occurs in some parts of this region.

### **Significant Features**

Still to be defined.

## **22. Chichester Ranges**

### **Landform**

A long, narrow range with a gently undulating plain forming a plateau. The northern, western and eastern perimeters become rugged with escarpments to the plains below. The southern margin is a gradual but rough descent to the Fortescue Valley.

### **Vegetation**

Wide spread spinifex and mixed grasses associated with heath, scattered trees and taller shrubs. Vegetation is sparse in many areas.

### **Waterform**

These ranges are a division between two drainage basins. Numerous rivers flow from the northern side of the Ranges. Fortescue River drainage occurring to the south. Precipitation: 300 mm.

### **Landuse Patterns**

Beef cattle and sheep grazing, and also mining is predominant. Aboriginal settlements also occur in this area.

### **Significant Features**

Deep gorges at western end and the Python Pool grasslands.

## **23. Fortescue Valley**

### **Landform**

Long, generally narrow U-shaped valley with wide open sandy plains at its eastern perimeter.

### **Vegetation**

At the western end of the valley a thick hummocky grasses underlies scattered tall eucalypts and acacias. The central valley area features low woodland heath with mulga and on eastern plains, savannah and scattered shrubs are common. A heath of saltbush and samphire are associated with salt marsh which occur on the eastern plains.

### **Waterform**

An enormous salt marsh features at the eastern end of the valley where the floodplains become narrower. The Fortescue River remains intermittent until it reaches the Millstream area at the western edge of the valley. Here numerous powerful springs convert the river into a permanent watercourse with several large pools. In this area, several permanent creeks, such as the Millstream, feed into the river. Precipitation 300 mm p.a.

### **Landuse Patterns**

Sheep and cattle grazing are predominant, but tourism is also widespread, and mining occurs in some areas.

### **Significant Features**

The Millstream Oasis, deep permanent pools such as Deep Reach and unusual flora, notably an endemic palm tree.



## **24. Karratha Coastal Plain**

### **Landform**

Very gently undulating coastal plain with low rocky hills inland. On the coastline, rugged headlands and cliffs separate small beaches and some areas of tidal mudflats and swamps.

### **Vegetation**

Sparse grassland and shrubs with heath, and isolated low trees. Mangroves occur on tidal mudflats.

### **Waterform**

Some large rivers such as the Fortescue form estuaries and floodplains on the coast. Tidal mudflats susceptible to inundation by the Indian Ocean. Precipitation: 250-300 mm p.a.

### **Landuse Patterns**

Combined with sheep and cattle grazing mining and salt evaporation is undertaken. An Aboriginal Land Trust is in this area also.

### **Significant Features**

Still to be defined.

## **25. Ashburton Plains**

### **Landform**

Extensive sandplain with low rocky hills further inland. The coastal dunes are interrupted salt flats and tidal swamps.

### **Vegetation**

Mangroves are extensive on the inter tidal zone, succeeded inland by samphire scattered on mudflats giving way to low marshy grassland. Other areas covered by sparsely scattered trees and shrubs over mixed low grasses.

### **Waterform**

Deltaic features occur on the coast with inundated mudflats, and swampy areas, where large rivers such as the Ashburton and Cane meet the Indian Ocean. Precipitation 250 mm.

### **Landuse Patterns**

Grazing of sheep and beef cattle predominant with mining occurring in some areas. An area of Aboriginal Land Trust is situated here also.

### **Significant Features**

Still to be defined.

## **26. Hamersley Ranges**

### **Landform**

A very undulating plateau of rounded hills and ranges with abrupt escarpments, especially rugged on the southern perimeter. Several valleys dissect the plateau, some in the form of steeply incised gorges.

### **Vegetation**

Generally savannah with scattered low trees and shrubs, featuring mulga, wattle and teatree scrub. Very sparse in some areas.

### **Waterform**

Well dissected by several intermittent watercourses which form the headwaters of larger rivers.

### **Landuse Patterns**

Tourism is an extensive activity here. Mining and sheep and cattle grazing also occur. Aboriginal settlements and Reserves are also in this area.

### **Significant Features**

Spectacular gorges such as Wittenoom, Yampire and Dales.

## **27. Gascoyne Ranges**

### **Landform**

Rugged country with steep ranges and low stony hills. Narrow valley plains between sharp dissections, surrounded by gently sloping plains.

### **Vegetation**

Mulga scrub dominant with sparse, scattered woodland and shrubs over an understorey of mixed grasses.

### **Waterform**

Headwaters of several river and their tributaries originate here. Precipitation 250-300 mm.

### **Landuse Patterns**

Grazing of beef cattle predominant in suitable areas, and mining occurs also.

### **Significant Features**

Still to be defined.

## **28. North West Cape**

### **Landform**

At the northern tip and on the eastern edge of the peninsula, rugged and steeply dissected limestone ranges occur, with seacliffs facing to the Indian Ocean. This landscape gradually smooths out to the south to become a narrow, occasionally dissected coastal plain with saline flats and dunes.

### **Vegetation**

Generally lightly wooded with scattered trees and acacia scrub over mixed grasses, sparse in many areas. Saltbush occurring in saline regions.

### **Waterform**

Lyndon and Minilya Rivers empty into the immense saline Lake McLeod. The Cape Range Peninsula is surrounded by sea, having the Indian Ocean on its western side and Exmouth Gulf on its eastern perimeter. Precipitation 200-250 mm.

### **Landuse Patterns**

Large salt evaporators on Lake McLeod are a feature and sheep grazing in suitable areas is predominant.

### **Significant Features**

Lake McLeod

**29.**

### **Landform**

Alluvial plains with extensive claypans, and red sandhills which run parallel to the coast. Saline flats bordered by dunes and lunettes flank coastal marshes and tidal mudflats. Further inland, a flat uniform sandplain occurs with occasional low sandridges and linear dunes. A broad, shallow trench features at the northern margin.

### **Vegetation**

Open growth of acacia and melaleuca scrub with an irregular ground layer of herbaceous woody plants and shrubs. A combination of wattle and teatree scrub and mallee, with an area of scattered trees occurs away from the coast. Scattered mangroves along the coast, and saltbush and bluebush in saline regions.

### **Waterform**

Erosional trenches have been formed by the Wooramel and Murchison Rivers, dissecting the plains. The extensive Gascoyne River reaches the Indian Ocean here, creating deltaic features, swamps, etc along the coast. Hamelin Pool is a significant area off the coast.

### **Landuse Patterns**

Sheep grazing appears to be the most predominant use here.

### **Significant Features**

Still to be defined.

### **30. Murchison Plateau**

#### **Landform**

An extensive area with a combination of landforms such as broad, gentle undulating sandplains, and areas of escarpments, gorges, floodplains, hills and ranges.

#### **Vegetation**

Mulga dominating a widespread area with mixed grasses and other scattered trees and shrubs including thickets of acacia and teatree. Saltbush is apparent along many watercourses.

#### **Waterform**

The plateau is dissected by several watercourses including the extensive Murchison River with many intertwining floodplains. Headwaters for numerous rivers and tributaries begin here, such as the Greenough River, with westward drainage. Salt lakes are also a feature. Precipitation: 175-300 mm.

#### **Landuse Patterns**

Pastoral lands for sheep grazing is predominant, and to some extent combined with beef. Mining also occurs in some areas and Aboriginal Reserves are in this region also.

#### **Significant**

Still to be defined.

## **31. Shark Bay Peninsulas**

### **Landform**

The peninsula is generally a combination of N-S trending sandhills and limestone outcrops, with salt pans. Large relict transverse dunes and broad mobile dunes of red sand are seen over the peninsula, and the Zuytdorp Cliffs feature on the coastline south of the peninsula.

### **Vegetation**

Spinifex, heath and treeless savannah on the sandplains. Saltbush in saline areas and some scattered low trees and shrubs.

### **Waterform**

Small salt pans occur on the peninsulas, which are surrounded by Shark Bay and Freycinet Reach. Precipitation: 200 mm.

### **Landuse Patterns**

Recreation is extensive in this areas, as well as sheep and cattle grazing and mining.

### **Significant Features**

Zuytdorp Cliffs .



## **32. Yilgarn Plateau**

### **Landform**

Generally an extensive area of sandplains with some linear dunes and mesas. Low ridges, hills and rises are scattered throughout..

### **Vegetation**

Mulga parkland dominates here, with an understorey of grasses and scattered shrubs. Isolated areas of heath and spinifex on some sandplains and saltbush predominates in saline regions..

### **Waterform**

Several large salt lakes are scattered throughout..

### **Landuse Patterns**

Other than several mining ventures here, pastoral land for sheep grazing predominates.

### **Significant Features**

Still to be defined.

### **33. Dandaragan Plateau**

#### **Landform**

Gently undulating dissected plateau. Limestone cliffs at the coastline and a gently undulating sandplain behind, with belts of reddish brown to yellow sandridges. Behind the coastal limestone headlands and mobile dunes is an area of rolling hills and gentle undulations. Isolated granite domes feature and evidence of an ancient dissected plateau is supported by the common appearance of scattered mesas. Extensive sand cover in lower sections with dry erosional valleys.

#### **Vegetation**

Mosaic of woodland vegetation with marri becoming dominant over jarrah. Low banksia woodlands and extensive scrubland and heath. Toward the coast a cover of low acacia forest, heath and scrub with scattered trees and taller shrubs. A small patch of taller eucalypt woodland in the southern area. Samphire is present on the salt flats.

#### **Waterform**

The Moore and other prominent rivers dissect the plateau. Shallow lake sand floodplains are also features. Several large rivers, including the Murchison, Hutt and Greenough terminate here, flowing into the Indian Ocean. Lagoons, swamps, floodplains and saltflats also appear. The Indian Ocean meets the Zuytdorp Cliffs and the Murchison and Greenough Rivers dissect the sandplain.

#### **Landuse Patterns**

Pastoral land and cereal crops are most common. Mining in the central areas, and fishing and tourism on the coast.

#### **Significant Features**

Gingin and Darling Scarps forming the east and west boundaries, and the Zuytdorp cliffs on the coast. A notable vegetation feature in this area is trees, which due to the wind strength and dessication, virtually grow horizontally.

## **34. Swan Coastal Plain**

### **Landform**

Low lying, gently undulating coastal plain between the Indian Ocean and the Darling Scarp. Foothills of the Scarp are gently inclined. Dunal formations and ridges apparent overall and limestone cliffs and outcrops are featured on the coastline.

### **Vegetation**

Remaining native vegetation includes jarrah forests and tuart forests (to the south) with low casuarina/banksia woodlands. Heathland and thickets are found on coastal regions while reeds and sedgeland combined with paperbarks dominated the swampy wetlands.

### **Waterform**

The Swan River flows into the Indian Ocean here, and other major rivers, inlets and estuaries feature, including the Peel-Harvey Inlet. Lakes, wetlands and swamps are common.

### **Landuse Patterns**

Mostly grazing, with some crops including orchards, vineyards and timber. Mining is an occurrence and many coastal recreation areas are prominent.

### **Significant Features**

Wetlands which provide a vital waterfowl habitat. Estuaries and inlets providing important fish breeding areas. Limestone coastal formations.

## **35. Darling Plateau**

### **Landform**

Gently undulating plateau with a steep western fault line dissected by deeply incised valley systems of oceanward drainage. Irregular slopes and occasional granite hills and outcroppings are also features.

### **Vegetation**

Dominant jarrah-marri forest varying at the northern extremity becoming a mixture of marri-wandoo woodland with associated blackbutt and bullich. Wandoo predominates in the valleys. The southern extremity is quite unique, featuring the picturesque tall karri forests in a combination with patches of jarrah forest.

### **Waterform**

The plateau features many streams rising locally and a number of rivers which originate interiorally. Large reservoirs associated with these river systems include Wellington Dam and Serpentine Dam as well as other important catchment areas, providing the Perth metropolitan water supply and also that for the goldfields region.

### **Landuse Patterns**

The Plateau is mostly forested with extensive timber resources, and some areas are cleared for agricultural land. Mining occurs in some areas and in the south, tourism and recreation are prominent activities.

### **Significant Features**

Magnificent forests of picturesque karri and a unique stand of towering tingle trees in the southern section.

## **36. Leeuwin Naturaliste Ridge**

### **Landform**

Small beaches nestled between limestone cliffs and headlands, with associated coastal dunes, are apparent on the western perimeter. Inland from the coast, the landscape is gently undulating with broad shallow valleys and swampy plains.

### **Vegetation**

Tall forests of jarrah and marri dominate (severely dieback effected). Thickets of acacia and casuarina closer to the coast, in combination with other low woodland types.

### **Waterform**

Indian Ocean forms the western boundary. One major river and associated intermittent tributaries and springs apparent. Ground-water is significant here, creating many extensive cave system. Precipitation: 950-1200 mm p.a.

### **Landuse Patterns**

Much of the area is cleared for pasture, orchards and more recently viticulture. Many recreation and tourist sites.

### **Significant Features**

Rugged coastline and large number of limestone caves and sinkholes.

## **37. Blackwood Plateau**

### **Landform**

Gently undulating to low hilly terrain with broad depressions. Some moderately incised valleys are apparent.

### **Vegetation**

Dieback effected jarrah-marri forest dominates this type, with an associated low woodland understorey.

### **Waterform**

Plateau dissected by the Blackwood River catchment as well as the headwaters of many other rivers, including the Vasse and Margaret. Small wetlands apparent over the landscape. Precipitation: 920-1100 mm p.a.

### **Landuse Patterns**

A large area of state forest and pine plantations indicate timber production as the major land use. Grazing and fruit growing are also widespread.

### **Significant Features**

The Darling and Dunsborough fault lines and scarps, and the Whicher Range at the northern boundary.

## **38. Scott Coastal Plain**

### **Landform**

Mainly low lying and swampy with some areas of rounded granite headlands and inlets with lagoons. Dunal remnants form scattered hills and ridges. Lithified mobile dunes, and blowouts front the coastline and extensive sandy beaches meet the Southern Ocean.

### **Vegetation**

The northern perimeter of this area contains combinations of jarrah-marri forests, tall karri forests, and a mixture of other woodland species. Closer to the coast, low heath and scrubland vegetation types are dominant. The many swampy wetlands have a predominant over of a sedge/reed understorey or open sedgeland.

### **Waterform**

This area is an extensive drainage network for several major watercourses including the Blackwood River. The numerous wetlands, swamps and lagoons are resultant from dunal blockage of drainage channels. A number of large inlets drain into the Southern Ocean. Precipitation: 1200-1400 mm p.a.

### **Landuse Patterns**

Tourism and recreation is widespread in this area owing to the many attractions available. Grazing of sheep and cattle, and logging and mining occur.

### **Significant Features**

Scattered prominent exposures of granite along the coast.

## **39. Esperance Plains**

### **Landform**

A gently undulating plain with small rounded depressions and numerous massive granite domes often appearing as headlands. Swampy areas occur behind the coastal dune systems.

### **Vegetation**

The plains are covered generally by a scrubby heath with isolated patches of mallee. A coastal dune scrub occurs in the swampy regions and dunal systems.

### **Waterform**

Several small rivers flow across the plains to the Southern Ocean and swampy areas and saline lakes also occur.

### **Landuse Patterns**

Pasture land for the grazing of sheep and cattle predominates here, and mining occurs also.

### **Significant Features**

The large granite domes and headlands.



## **40. Narrogin-Ongerup Plateau**

### **Landform**

A very gently undulating sandy plain appears here, with a remnant plateau exhibited by mesa's buttes and shallow valleys apparent on the western margin.

### **Vegetation**

Tall eucalypt shrubland dominates with medium woodland and tall shrubland species scattered throughout. Saltbush occur in the vicinity of salt lakes and an unusual mosaic of woodland and mallee occurs in the eastern corner.

### **Waterform**

The headwaters of several rivers, including the Avon, form the western margin. Several large seasonal salt and freshwater lakes are evident.

### **Landuse Patterns**

Cereal crop production is the predominant use and pasture for sheep grazing is also common. Mining also occurs in some areas.

### **Significant Features**

The unusual Wave Rock formation at Hyden.

## **41. Kalgoorlie Plain**

### **Landform**

An extensive tract of gently undulating country with saline flats and broad valleys. Scattered granite outcrops and occasional rocky hills and ridges disrupt the uniform terrain. This is an intermediate zone between the forests of the south-west and the arid interior, and exhibits features of both.

### **Vegetation**

Mostly a woodland of medium height associated with a heathland and tall shrubland ticket. Patches of low mulga woodland occur in northern sections and an isolated blackbutt woodland features also. Saltbush and bluebush are common in saline areas.

### **Waterform**

The seasonal playa lakes occurring here are the largest in the state, and are associated with extensive salt flats.

### **Landuse Patterns**

Mining is widespread in this area. Pasture for sheep grazing is common, as is tourism.

### **Significant Features**

Still to be defined.

# VISUAL CHARACTER TYPES OF WESTERN AUSTRALIA (DRAFT)

- 1 KIMBERLEY PLATEAU
- 2 CAMBRIDGE GULF LOWLANDS
- 3 LEOPOLD-DURACK RANGES
  - 3.1 FITZROY UPLANDS
  - 3.2 CARR-BOYD RANGES
- 4 YAMPI PENINSULA
- 5 ORD PLAIN
- 6 SPHINGVALE HILLS
  - 6.1 SPRINGVALE HILLS
- 7 FITZROY PLAINS
  - 7.1 FITZROY RANGES
- 8 DAMPIER TABLELANDS
- 9 EIGHTY MILE PLAIN
- 10 STURT PLATEAU
- 11 GREAT SANDY DESERT
- 12 TANAMI SANDPLAIN
- 13 CENTRAL SANDPLAINS
  - 13.1 MUELLER SANDPLAIN
  - 13.2 STANMORE RANGES AND DUNEFIELD
  - 13.3 MACKAY DUNEFIELD
  - 13.4 McDONALD SANDPLAIN
  - 13.5 AMADEUS LOWLANDS
  - 13.6 RAWLINSON PETERMANN RANGES
- 14 GIBSON DESERT
- 15 WARBURTON RANGES
- 16 GREAT VICTORIAN DESERT DUNEFIELDS
  - 16.1 STANLEY HILLS AND DUNES
  - 16.2 CARNEGIE PLAIN
  - 16.3 GLENGARRY HILLS
  - 16.4 LEE MAN SANDPLAIN
- 17 EUCLA BASIN
  - 17.1 CARLISLE PLAIN
  - 17.2 NYANGA PLAIN
  - 17.3 NULLARBOR PLAIN
  - 17.4 HAMPTON TABLELANDS
  - 17.5 ROE PLAIN
- 18 ISRAELITE PLAIN
- 19 LITTLE SANDY DESERT
  - 19.1 RUDALL TABLELANDS
- 20 DE GREY LOWLANDS
- 21 NULLAGINE HILLS
- 22 CHICHESTER RANGES
- 23 FORTESCUE VALLEY
- 24 KARRATHA COASTAL PLAIN
- 25 ASHBURTON PLAIN
- 26 HAMMERSLEY RANGES
  - 26.1 ASHBURTON VALLEY
- 27 GASCOYNE RANGES
  - 27.1 TUNNELCREEK HILLS
- 28 NORTH WEST CAPE RANGES
- 29
- 30 MURCHISON PLATEAU
  - 30.1 KENNEDY RANGES
  - 30.2 MACADAM HILLS
- 31 SHARK BAY PENINSULA'S
- 32 YILGARN PLATEAU
- 33 DANDARAGAN PLATEAU
- 34 SWAN COASTAL PLAIN
- 35 DARLING PLATEAU
  - 35.1 BANNISTER UPLANDS
  - 35.2 DARLING PLAIN
- 36 LEEUWIN-NATURALISTE RIDGE
- 37 BLACKWOOD PLATEAU
- 38 SCOTT COASTAL PLAIN
- 39 ESPERANCE PLAIN
- 40 NARROGIN-ONGERUP PLATEAU
  - 40.1 MECKERING UPLANDS
  - 40.2 MARDABILLA PLAIN
- 41 KALGOORLIE PLAIN

