Chapter 9

LANDSCAPE VALUES

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Abstract

In terms of landscape values, the Lesueur Area encompasses some of the most attractive countryside to be found in the northern kwongan. The Gairdner Range, with its distinctive mesa landforms, is an area of high scenic appeal. Within the Range, one is confronted by ever-changing vistas of steep breakaways, low hills and gullies with eucalypt woodlands set amongst heath-covered slopes. The heathlands themselves, when viewed more closely, reveal a rich tapestry of plant forms, colours and textures.

9.1 INTRODUCTION

Western Australians have in recent times demonstrated an increasing concern over the quality and appearance of the visual environment. This is perhaps a reflection of the growing interest in the community in national and global environmental issues as well as the accelerating rate of environmental change which is occurring locally. Whatever the reasons, public interest in land planning decisions and management operations is on the increase and in many instances it is at least partially linked to how sensitively changes to the landscape have been accommodated and managed.

Many land uses and management practices can and often do significantly change the character of the landscape. Such uses and practices, while they may be scientifically or technically correct, do not always result in visually attractive landscapes. Where operations are not carefully planned and executed, the result can be long term or permanent degradation of the visual resource. In many instances, it is this very loss of scenic quality associated with environmental change that is most apparent to the public and which results in criticism of land-use activities. Often this can be avoided through sensitive planning and management of the visual resource.

Landscape or visual resource management as it is frequently termed is concerned with the conservation and management of land, vegetation and water resources in ways that either maintain or improve the visual quality of the environment. The prime goal of landscape management is to ensure that all uses and activities are planned and implemented so as to complement rather than detract from the inherent visual qualities of the environments in which they occur. As such, landscape management is a positive and integral component in the land use planning and management process. It should not be regarded as a cosmetic exercise in which the results of careless land use planning and development are hidden from view or superficially treated to make them more palatable to the viewing public.

9.2 THE BASIS FOR LANDSCAPE MANAGEMENT ON PUBLIC LANDS MANAGED BY CALM

Landscape management is based on the premise that the visual quality of any landscape is a resource in its own right which can be assessed and managed in much the same way as other resource values such as fauna, flora, water, timber and recreation. As used in this context, the term landscape refers to the appearance or visual quality of an area as determined by its geology, soils, landforms, vegetation, water features and land use history.

Managing this visual resource is dependent on the knowledge and assessment of the landscape itself as well as a thorough understanding of proposed land use(s). After the various landscape elements have been identified and assessed, it is possible to evaluate how particular management alternatives will effect the appearance of any landscape and to develop subsequently appropriate landscape prescriptions compatible with other resource management objectives.

In the past two years, the Department of Conservation and Land Management (CALM) has adopted a systematic approach to compiling an inventory and assessing landscape values based on systems now operating in other Australian States and overseas. Referred to as the Visual Resource

Table 9.1.

Northern Kwongan Landscape Character Type

Scenic Quality	Landform	Vegetation	Waterform	Land Use
GENERAL DESCRIPTION	*Broad, flat to undulating sandplain ranging in elevation from 30-250 metres (highest in the eastern section) with pronounced escarpments and low ranges (up to 300 metres); some areas of exposed limestone and sandstone outcropping	*Coastal heathlands and scattered banksia/eucalypt woodland; extensive agricultural pastoral clearing throughout much of the type	*Numerous small streams and intermittent creeks; some larger streams and rivers which drain from east to west across the coastal plain; numerous wetland areas, primarily in the southern portion of the type.	*Combination of reserves and vacant Crown land supporting native vegetation with extensive freehold land supporting grazing and grain growing.
HIGH	*High rounded hills with steep slopes, mesa topped ranges and escarpments to 300 metres in elevation with sharp breakaways. *Steep sided gorges and strongly dissected valleys.	*Areas of high plant diversity (structural and/or species richness) which display distinctive textural and colour patterns. *Pockets or bands of vegetation which become focal points due to relative height, position in landscape, isolation or colour contrast..	*Larger wetlands, river pools and other permanent water features. *Steep sided gorges or valleys associated with major river drainages	*Large expanses free of human disturbance or developments such as roads/firebreaks and where edge contrasts are not evident. *Spot developments which are in harmony with naturally established forms, lines, colours and textures.
MODERATE	*Gently undulating plains and rounded hills similar in gradient to surrounding landforms and which are not visually distinctive or prominent.	*Some structural and seasonal colour patterns evident in vegetation, but lacking in uniqueness or distinction relative to surrounding vegetation. *Gradual transition between heathland and woodland communities.	*Seasonal wetlands, intermittent streams and creeklines.	*Pastoral/agricultural landscapes in which clearings, firebreaks, roads and other human imposed developments borrow significantly from natural patterns; some discordant visual impacts apparent.
LOW	*Expansive plains with little or no dissection and with limited topographic features of specific visual interest.	*Extensive areas/vistas of similar vegetation cover with little or no structural diversity or colour/texture changes.	*Waterforms absent.	*Developments in which the form, line, colour and texture of introduced elements contrast markedly with natural features.

Management (VRM) system, this approach enables scenic values to be described, evaluated, compared and mapped with a minimum amount of subjectivity (Leonard and Hammond 1984; Williamson and Calder 1979). To date, landscape values in the Department's Southern Forest Region and several National Parks throughout the State have been classified and mapped using this system.

9.3 REGIONAL LANDSCAPE CONTEXT

The significance and importance of the Lesueur Area as a landscape resource can only be appropriately evaluated by first placing the area in a broader, regional context. The identification and description of what are termed Landscape Character Types is central to the methodology employed by CALM in assessing visual resource values.

All landscapes have differing physical characteristics and hence visual qualities. These are a result of the effect which geologic, hydrologic and other natural processes as well as climate and land use have on landform and landcover patterns. In simple terms, a Landscape Character Type represents a broad-scale area of common distinguishing visual characteristics as identified by these elements.

Thus for the purpose of this assessment, it has been necessary to extend the classification into a region in which the visual resource has yet to be extensively surveyed, assessed and mapped. Consequently, the information contained in this report is of a preliminary nature and will require further field and office assessments to verify.

Two landscape character types have been identified in the area which is bounded by the Lesueur Area. The first is what has been tentatively labelled as the Northern Kwongan Landscape Character Type. This type covers the bulk of the reserve including Mt Lesueur and the other nearby peaks, slopes and drainages of the Gairdner Range. In addition, the seaward portion of the proposed reserve extends into a separate Coastal Landscape Character Type.

Delineation of each of these types has been based on a brief field assessment of the physical landscape and its overall visual appearance. For each type, descriptive criteria termed "frames of reference" have been established to help in assessing the scenic quality components which exist. While all landscapes have some value, some are of greater scenic attraction and importance than others. To assess such differences, CALM's Visual Resource Management System recognizes three classes of relative scenic quality - High, Moderate and Low. The description of these three classes for various landscape components - landform, vegetation, waterform and land use - is outlined in Tables 9.1 and 9.2.

The landscape encompassed by the Lesueur Area is of major regional significance and importance. The Gairdner Range, which includes Mt Lesueur, Mt Michaud and Mt Peron, contains some of the highest and most scenically attractive landforms within the Northern Kwongan Landscape Character Type. The first two of these peaks, with their distinctive tableland or mesa shapes, are visible on the skyline up to 15km away from various vantage points along the Jurien and Coorow-Green Head Roads and the Brand Highway. Only the Morseby Range north and east of Geraldton contains topography of comparable scenic appeal.

West of the Gairdner Range and Peron Fault, the Lesueur Area extends seawards across a broad, relatively flat sandplain to the coast. Here a line of outer reefs and small islands and an extensive chain of salt lakes which parallel the coastline provide added visual interest to an otherwise unspectacular seascape.

In terms of vegetation, much of the sandplain and uplifted lateritic range is dominated by low heath. This land cover is remarkably uniform in height and therefore displays little structural diversity when viewed from a distance. Nevertheless, the heathlands impart an attractive texture to the landscape and provide a distinctive contrast to the cleared grazing lands which border the areas proposed for reservation.

The real visual appeal of the heathland communities, however, is at a microscale. Closer inspection reveals a myriad of plant forms, colours and textures of incredible richness. This diversity is particularly evident during the winter and spring months, when a large proportion of the more than 800 species which are found in the Lesueur Area are in flower.

Amongst the dissected landforms of the Gairdner Range, the vegetation displays more structural diversity. Here, pockets of wandoo and marri woodland are scattered across many of the lower hillsides and along the valleys, adding considerably to the scenic appeal of this escarpment. A brief description of the more distinctive visual attributes and values of these landforms follows.

9.4 LANDSCAPE DESCRIPTION AND ASSESSMENT

The Lesueur Area contains a number of distinct and mappable landforms. Three of these, the Quindalup, Spearwood and Bassendean Dunes, combine to form the Coastal Landscape Character Type (LCT). Another five landforms, referred to as the Peron Slopes,

Table 9.2

Coastal Landscape Character Type

Scenic Quality	Landform	Vegetation	Waterform	Land Use
GENERAL DESCRIPTION	*Coastal Landforms include extensive sand beaches, dunes (both consolidated and mobile), offshore reefs, stacks and islands, high cliffs, headlands and coastal gorges.	*Range of vegetation communities including dune grasses, coastal heathlands, woodlands and mangrove thickets.	*Indian Ocean, numerous streams and rivers, extensive embayments and tidal estuaries.	*Several urban centres and numerous smaller coastal towns; some squatter settlements and scattered shacks; various recreation access points, some with developed areas and facilities.
HIGH	*Cliffs and headlands. *All islands, stacks, offshore sandbars and reefs. *Rock features, caves, faultlines, obviously banded sedimentary rocks. *Irregular coastline edges often emphasised by distinctive rock outcropping bays, inlets, and sand deposition patterns. *Primary dunes which display areas of active weathering, steep slopes and/or sandblown edges.	*Windshaped, gnarled or dwarfed vegetation unusual in form, colour or texture. *Single tree, shrubs or patches of vegetation which become focal points due to isolation or position in relation to rocks or water. *Strongly defined patterns of woodland, dune vegetation Melaleuca scrub, mangrove thickets and/or barren rock.	*All estuaries, inlets, lakes and swamps. *Unusual ocean shoreline motion as eddies due to islands, reefs, surf zones and shoreline configuration.	*Long stretches of coastal landscape free of human development and disturbance. *Spot developments which are in harmony with naturally existing forms, lines, colours and textures.
MODERATE	*Expanses of beach of uniform width and colour without rock outcroppings or local features. *Regular coast edges without bays, inlets, promotories, stacks or cliffs.	*Predominantly heath or beach grasses with some variation in colour, texture or pattern. *Some contrast caused by different colours.	*Uniform ocean shoreline and motion characteristics with little diversity.	*Coastal areas in which human-imposed developments/disturbance s borrow significantly from natural landscape patterns; some discordant visual impacts apparent.
LOW	*Expanses of uniform (indistinctly dissected) landform.	*Extensive areas of similar vegetation such as heath or beach grass, with very limited variation in colour or texture.	*Water, where present rates no lower than moderate in this LCT.	

*Highly developed or disturbed areas with little or no vegetation cover.
*Townsite, housing, harbour and other developments in which form line, colour and texture of introduced elements contrast markedly with natural features.

Lesueur and Gairdner Dissected Uplands, Banovich Uplands and Bitter Pools Rises, make up the Northern Kwongan LCT. These landform units are referred to in describing the visual resources of the Lesueur Area.

9.41 Coastal Landscape Character Type

The portion of the coast adjacent to the Lesueur Area boundaries is of Moderate Scenic Quality (refer to Table 9.2 for descriptive criteria). Along the coastline, the Quindalup Dune system appears as a series of low (10-25 metre high), sparsely vegetated sandhills. Many of these appear poorly consolidated and there are several large expanses of mobile dunes.

Immediately east of the foredunes, a chain of salt lakes and swamps extend in a north-south direction parallel to the beach front. These water bodies are a prominent and attractive coastal feature, particularly when viewed from the Upper Peron Slopes along Cockleshell Gully Road or from on top of the Range. To the west, the seascape is enhanced by the wave break over the reef, rock stacks and small islands which are situated within a few kilometres of the coast. Collectively, these features provide visual diversity to the landscape in the form of edge and colour contrast.

Towards the east of the coastal plain, the Spearwood Dunes and a narrow band of Bassendean Dunes gradually rise to join the lower slopes of Mt Peron and the Gairdner Range. Cockleshell Gully, which traverses the coastal plain to the south of the Lesueur Area represents the only significant drainage within this viewshed.

Development within the Coastal LCT is primarily restricted to the Jurien and Green Head townsites and the major access roads which service these centres. In addition, there are numerous squatter shacks sprawled among the dunes north of Green Head. Adjoining the proposed reserve some freehold land has been cleared for grazing and there are several farms situated along Cockleshell Gully Road. While some of these developments are visually intrusive, they do not dominate or significantly detract from the natural character of the coastal landscape between Jurien and Green Head. The squatter shacks north of Jurien are an obvious visual blight, particularly when viewed at close range, but many of these structures are partly hidden from view and are not evident from within the Lesueur Area.

9.42 Northern Kwongan Landscape Character Type

When viewed from the coast, the Gairdner Range appears as an elongated ridge which rises above the flat coastal plain. This western flank of the Range comprises the Peron Slopes, a gradual incline with relatively little dissection apart from Cockleshell Gully. Covered in kwongan with emergent "forests" of scattered blackboys, these slopes are of Low to Moderate Scenic Quality.

Cockleshell Gully Road, which dissects this landform unit in a north-south direction, affords panoramic views over the coastal plain. East from this road, several narrow sand tracks and fire breaks lead to the summit of the escarpment and the dissected uplands beyond. Some of these tracks cut directly across the contour, visually scaring these largely unblemished slopes.

Immediately east of the escarpment, the landscape dramatically unfolds, revealing numerous hills, valleys and breakaways to the east and north. These are the Lesueur and Gairdner Dissected Uplands (Figure 3.3), the central core of the Gairdner Range and a landscape of High Scenic Quality. Further to the east and north, portions of the Banovich Uplands and Bitter Pool Rises as well as other more distant landforms, some up to 25 km away, are clearly visible. To the west, views of the coastline and Indian Ocean complete this superlative panorama.

Once on top of the escarpment, one can look down upon a large basin partially enclosed by the steep eastern flanks of Mt Peron, Mt Michaud and Mt Lesueur and by the Lesueur Fault further east. Cockleshell Gully, which arises on the eastern side of the Range, passes through this depression. The basin floor is in fact quite undulating, consisting of a maze of low hills, ridges, breakaways and shallow valleys. Some of the steeper slopes and breakaways have exposed outcrops of sandstone and extensive pockets and bands of eucalypt woodland scattered across the heath-covered slopes and valleys.

From the eastern edge of the Range, the distinctive tabletop forms of Mt Lesueur and Mt Michaud are particularly prominent, while Mt Peron dominates the northwestern skyline. One is also afforded a spectacular enframed ocean view across the dissected uplands, where Cockleshell Gully cuts through the Peron Slopes.

This is, in summary, an area of high scenic appeal owing to the diversity of landforms and vegetation associations and the textural and colour patterns associated with these. In virtually every direction, one is confronted by an everchanging landscape of steep breakaways, low hills and gullies with sculptural eucalypt woodlands set amongst the heath-covered ranges. The only negative visual intrusion on this otherwise pristine landscape is the network of firebreaks and access tracks which crisscross the

Ranges. While many are reasonably located, others are situated on steep slopes and extend across prominent viewsheds, partially spoiling what would otherwise be outstanding views.

East of the Lesueur and Gairdner Uplands, the landscape broadens out into a series of low undulating hills, flats and broad valleys. Topographic relief is more pronounced to the south, gradually decreasing further northwards. This is the area referred to as the Banovich Uplands and Bitter Pool Rises, a zone of Moderate Scenic Quality.

The eastern section of the Lesueur Area is covered with kwongan with emergent blackboys and scattered, stunted eucalypts. Sweeping views are available to the north, east and south across a mosaic of pasture lands and heath-covered hills while to the west, the eastern margin of the Gairdner Range forms a visual enclosure. Apart from some adjoining and more distant agricultural clearing, the only human visual intrusions on this landscape are several tracks, firebreaks, cleared mining drill rig sites, fencelines and a small number of scattered farm structures.