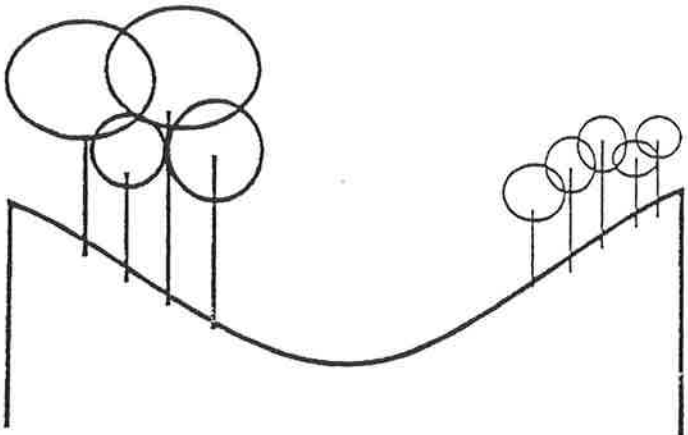


Summary of

The Visual Landscape Management System

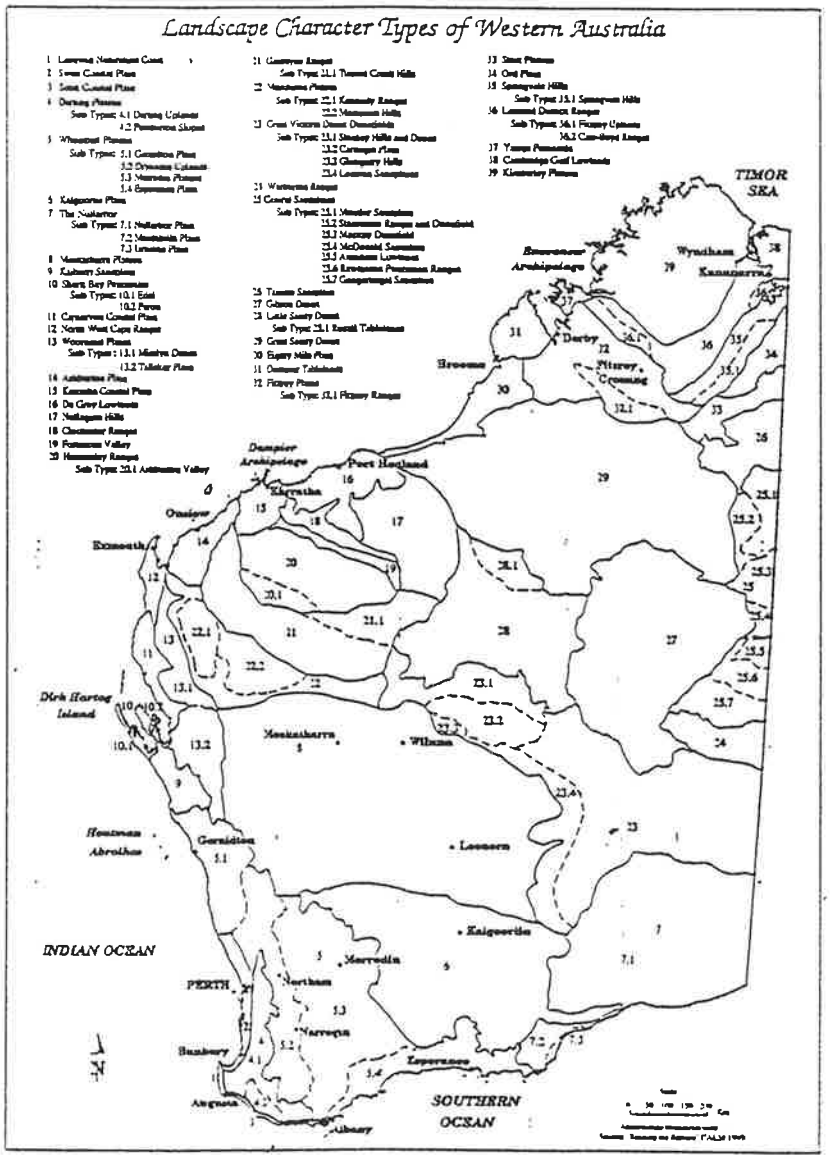
DEPARTMENT OF CONSERVATION
AND LAND MANAGEMENT
WESTERN AUSTRALIA
1989

The Visual Landscape Management System utilises a resource base with two major components:

1. Physical Landscape and
2. Social Considerations (people's concern for scenic quality).

A brief step by step summary of the Visual Landscape Management System process follows, refer Figure 1:

Step 1: VISUAL LANDSCAPE CHARACTER TYPING requires identification and description of Visual Landscape Character Types, which are areas of common distinguishing visual characteristics based upon landform and landcover patterns in vegetation, water and landuse. The 39 Landscape Character Types of Western Australia are shown on the map below.



Step 2 : VISUAL QUALITY CLASSIFICATION requires delineation of the total landscape into Visual Quality Classes (High, Moderate, and Low) using aerial photographs and descriptive Frames of Reference which are based upon diversity, uniqueness, prominence and naturalism of landform, vegetation and waterform within each Visual Landscape Character Type. See overleaf for a Frame of Reference example.

Visual Quality Classification - Frame of Reference - Swan Coastal Plain			
SCENIC QUALITY	LANDFORM	VEGETATION	WATERFORM
HIGH	• Rounded foothills with steep slopes e.g. Kelmscott. • Dunal formations of distinctive height, configuration or combination which provide obvious contrast to the landform patterns common in the character type e.g. Spearwood dunes. • Dissected calcareous dunes featuring rugged limestone cliffs, caves and outcrops e.g. Blackwall Reach. • Gently inclined or level areas with distinctive drainage patterns e.g. Pinjarra Plain. • Large stretches of coastal landscape free of disturbance. • Coastal dunes which display areas of active weathering, steep and irregular slopes and ridges e.g. Lancelin. • Prominent limestone cliffs and headlands e.g. Cape Peron. • Off-shore and estuarine sandbars and reefs and islands e.g. Garden Island.	• Scattered remnant vegetation forming an open parkland. • Remnant or other areas of native vegetation exhibiting an unusual diversity of colour, height or species e.g. Tuart forest. • Distinctive displays of seasonal colour e.g. W A Christmas Tree. • Wind-shaped, gnarled or dwarfed vegetation unusual in form, colour or texture e.g. coastal heath. • Strongly defined patterns of woodland, dune and wetland vegetation e.g. Lake Cooloongup.	• All estuaries, wetlands and swamps e.g. Lake Joondalup. • Watercourses of permanent or intermittent flow with continually changing flow character e.g. Serpentine River. • Reservoirs with dominant natural characteristics.
MODERATE	• Expanses of beach with uniform width and colour. • Regular coastal edges without bays, inlets or cliffs. • Areas of plains with common patterns of dissection evident but not distinctive. • Areas of uniform undulation with less distinct drainage. • Dunal formations of uniform height and configuration.	• Less diversity in vegetation with regular patterns in height, colour and texture evident. • Vegetation patterns found commonly in the surrounding landscape.	• Intermittent watercourses with long stretches of unchanging flow characteristics. • Reservoirs with some natural characteristics.
LOW	• Areas of uniform indistinctly dissected plains with few features of visual interest. • Coastal landscapes in which natural elements remain dominant are of special visual significance and therefore rate no lower than moderate scenic quality.	• Extensive areas of vegetation with repetitive patterns or showing little variations or diversity.	• Waterbodies with little evident natural characteristics. • Irrigation and drainage canals.

Step 3: OBSERVER ANALYSIS requires identification and classification of Observer Volumes and Observer Types for all travel routes and use areas.

Step 4 : **SENSITIVITY LEVELLING** requires classification of all travel routes and use areas into Levels of Public Sensitivity (Level 1 - High, Level 2 - Moderate, Level 3 - Low, Level 4 - Very Low) based upon public perceptions of landscape and the criteria listed below.

Level 1 - Viewer Sensitivity

1. State highways and other main roads (sealed or unsealed) with high levels of vehicle usage.
2. Designated tourist, scenic drive, or **scenic** forest tour roads (sealed or unsealed).
3. Recreation, conservation, cultural or scenic sites, areas, viewpoints, and lookouts of, national, or state significance. (Including their access routes as per 1 and 2 above).
4. Walking tracks of national or state significance.
5. Residential areas.
6. Rail and tram lines of cultural, historic or scenic significance.
7. Navigable rivers and streams, lakes and reservoirs of national or state recreation significance.
8. Any Level 2,3 or 4 travel routes or use areas planned for upgrading to Level 1 within 5 years.

Level 2 - Viewer Sensitivity

1. Main roads with moderate levels of vehicle usage (sealed or unsealed).
2. Recreation, conservation, cultural or scenic sites, areas, viewpoints, and lookouts of regional or high local significance (including their access routes as per 1 above).
3. Navigable rivers and streams, lakes and reservoirs of regional recreational significance.
4. Walking tracks of regional significance.
5. Any Level 3 or 4 travel routes or use areas planned for upgrading to Level 2, or Level 1 planned to be downgraded, within 5 years.

Level 3 - Viewer Sensitivity

1. All remaining roads with low levels of vehicle usage (sealed or unsealed).
2. Recreation and other use areas of local significance (including their access routes as per 1 above).
3. Navigable rivers and streams, lakes and reservoirs of local recreational significance.
4. Walking tracks of local significance.
5. Any Level 4 travel routes or use areas planned for upgrading, or Level 2 planned to be downgraded, to Level 3, within 5 years.

Level 4 - Viewer Sensitivity

1. Management roads with infrequent traffic- very low levels of vehicle usage.
2. Any other remaining forest tracks with infrequent usage.

Step 5 : SEEN AREA MAPPING requires identification and delineation of Seen Areas and Distance Zones - Foreground (0 - 0.5 km), Middleground (0.5 - 6.5 km) and Background (6.5 - 16 km) from all Level 1, 2 and 3 travel routes and use areas either manually or by using the computer software programs.

Step 6 : COMPOSITING requires integration of the Physical Landscape and Social Considerations data by an overlay process resulting in Visual Landscape Management Zones and associated Visual Management Priorities and Objectives.

The matrix used to determine Visual Landscape Management Zones and correlative Visual Management Priorities and Objectives follows:

MATRIX

		2. VISUAL EXPOSURE ZONE - SENSITIVITY LEVEL							
		fg-1	mg-1	bg-1	fg-2	mg-2	bg-2	fg-3	U
1. SCENIC QUALITY CLASS	1 H	A	A	A	A	B	B	B	B
	2 M	A	B	B	B	B	C	C	C
	3 L	B	B	B	B	C	C	C	C
		3. VISUAL LANDSCAPE MANAGEMENT ZONE							

Matrix Key:

1. Scenic Quality Classes
   - H - High
   - M - Moderate
   - L - Low

2. Visual Exposure Zones
   - fg - foreground
   - mg- middleground
   - bg - background
   - u - uninventoried levels 3 or 4 and unseen in levels 1, 2 or 3

2. Sensitivity Levels
   - 1 - High
   - 2 - Moderate
   - 3 - Low
   - 4 - Very Low

3. Visual Landscape Management Zone Priorities and Objectives
   - A
   - B
   - C
   - Preservation
   - Rehabilitation

Matrix Formula:

1. Scenic Quality Class
\+ 2. Public Exposure Zone - Sensitivity Level

\= 3. Visual Landscape Management Zone

The Visual Landscape Management Objectives provide measurable standards or objectives for the visual management of subject lands. The objectives for the Landscape Management Zones generated by the previous matrix are defined below.

VISUAL LANDSCAPE MANAGEMENT (VLM) OBJECTIVES

• **Visual Landscape Management Zone A :**

VLM Priority- **High**
VLM Objective- **Maximum Retention of Visual Quality:**
- Avoid operations which lead to a major change in scenic quality in the short term.
- Focus on the maximum protection of all existing visual landscape features.
- The recommended landscape alteration level would be low, least accommodating to visual change.

• **Visual Landscape Management Zone B :**

VLM Priority- **Moderate**
VLM Objective- **Moderate Retention of Visual Quality:**
- Landscape alterations may be visually apparent.
- Focus on the protection of the dominant existing visual landscape features.
- The recommended alteration level would be moderately accommodating to visual change.

• **Visual Landscape Management Zone C :**

VLM Priority- **Moderate**
VLM Objective- **Partial Retention/Enhancement:**
- Landscape alterations may be visually dominant but should reflect the existing lines, forms, colours and textures of the surrounding landscape.
- Where possible, seek to optimise and enhance visual quality over the medium to longer term.
- The recommended alteration level would be highly accommodating to visual change.

• **Special Visual Landscape Management Area -**

Preservation:

VLM Priority- **High**
VLM Objective- **Preservation:**
- These preservation areas include those landscapes where visual values are of very high aesthetic importance and have equal priority with other critical natural resource values.
- The recommended alteration level for these areas allows for little more than natural change or very low impact changes which are carefully planned to accommodate and/or enhance the special visual qualities of the preservation area.

• **Special Visual Resource Management Area-**

Rehabilitation:

VLM Priority- **High/Moderate.**
VLM Objective- **Rehabilitation:**
- Landscape alterations which have resulted from past management practices or natural events and do not satisfy the desired visual quality objective will require rehabilitation. This priority should be retained until the desired standard of visual quality is attained.

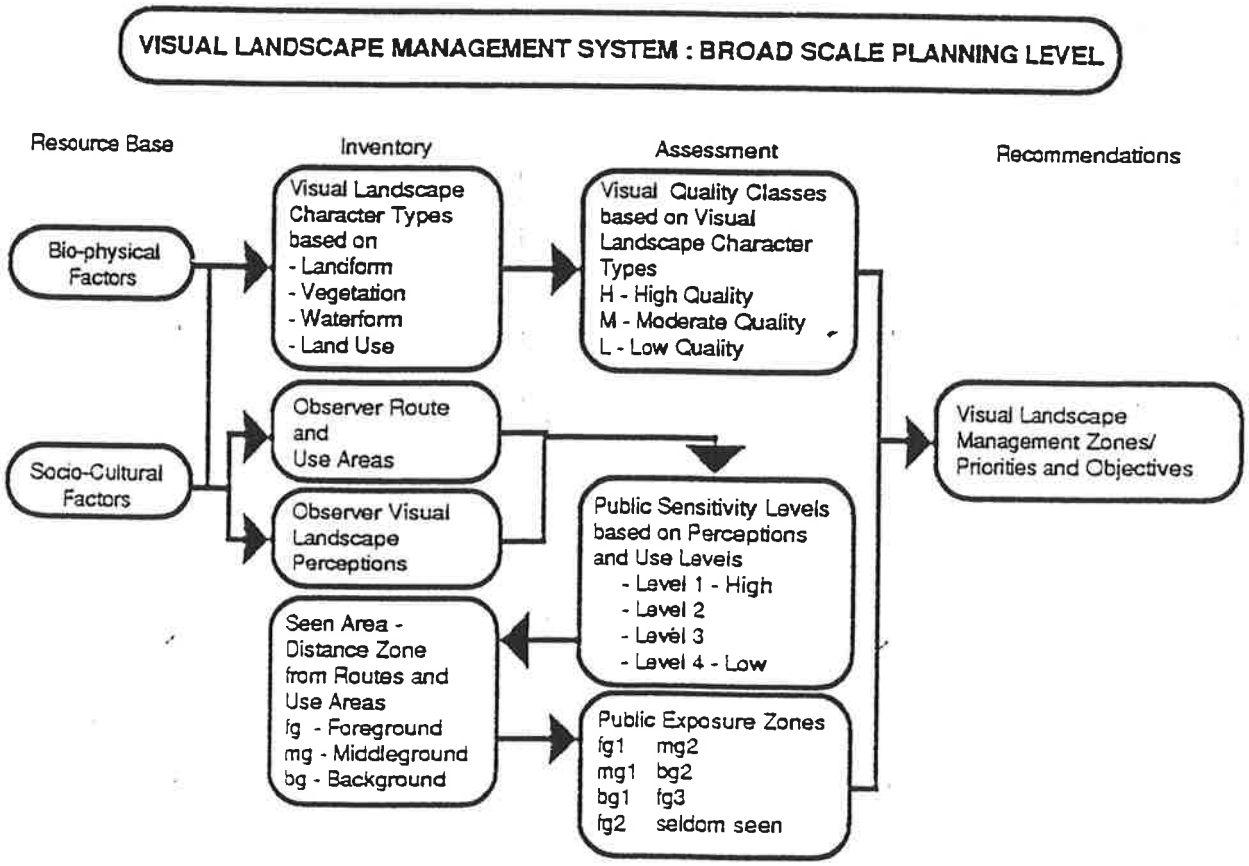
At this time, the Visual Landscape Management System has been completed at the Broad Scale Planning Level for the southwest land division of Western Australia. Each District office has comprehensive assessment maps of Scenic Quality Classes, Seen Area Sensitivity Levels and Visual Landscape Management Zones. The system is being effectively implemented on various alteration projects throughout WA. It is planned that the basic assessments made by the system will be updated every five years, responding to changes in land use patterns over time.

PROJECT APPLICATION LEVEL

The second stage of the Visual Landscape Management System is developed for the Project Application Level. This stage allows for the integration of Visual Management Objectives (recommended in the Broad Scale Planning Level) with other environmental resources in the process of land use allocation and management planning. Once the attainable Visual Management Objectives are determined and other resource development plans are made, the Visual Absorption Capability assessment can be used to estimate Management Constraint Levels and recommend Project Guidelines for the development plans. The system applied at the Project Application Level is illustrated as Figure 2.

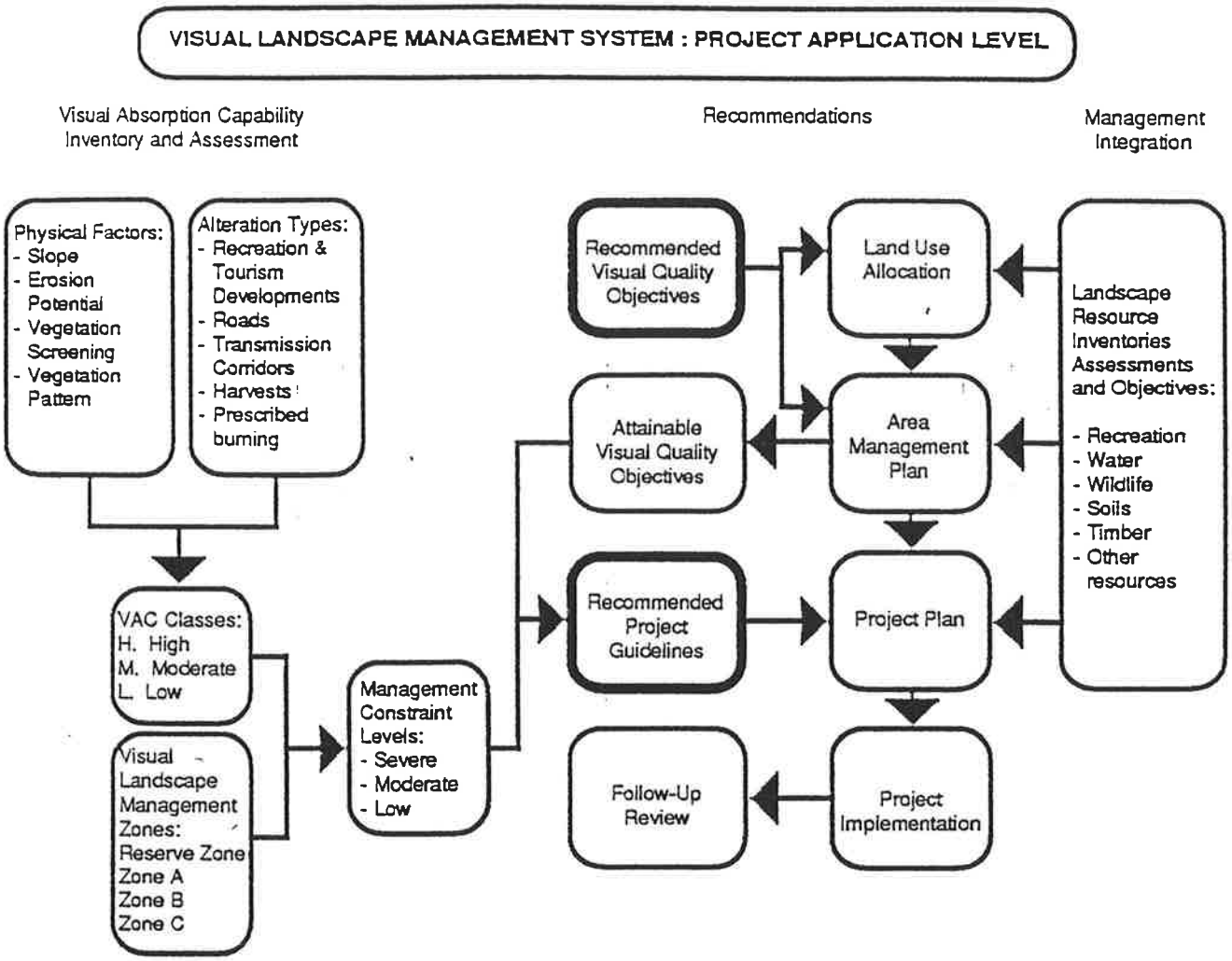
In conclusion, the Visual Landscape Management System offers a comprehensive inventory and assessment of visual resources in Western Australia's landscapes. The system is designed for Broad Scale Planning Levels as well as Project Application Levels. It considers the scenic quality of the physical landscape and public sensitivity to visible landscapes. It recommends a range of objectives for different Visual Landscape Management Zones and recognises the importance of other resources in land management. Finally the system considers different landscape alteration types in terms of the landscape's Visual Absorption Capability, offering guidelines for project planning and implementation.

Figure1



Visual Landscape Management System, Department of CALM (adapted from U.S. Bureau of Land Management, 1975)

Figure 2



For a more detailed discussion of the Visual Management System, see Williamson and Calder, 1979, 'Visual Resource Management of Victoria's Forests : A New Concept for Australia'; Landscape Planning 6:313-341, Elsievier Scientific Publishing Co., Amsterdam, The Netherlands.

For a full explanation of the Visual Absorption Capability assessment procedure, see Williamson, Murray, Moss and Hammond, 1981, Visual Absorption Capability in the Blue Range Study Area : An Assessment Procedure for Victoria's Landscapes, Landscape Management Series, Forests Commission Victoria, Melbourne, Australia.