CRITERIA FOR THE EVALUATION OF LANDSCAPE AS HERITAGE

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Produced on acid-free paper
Any landscape is a condition of the spirit

Henri-Frederic Amiel (1821-1881)

Echoes, remembrances, dusty documents, hunch and the hard footsteps of the investigator - all must be brought to bear upon the total landscape. For it is only that totality which can expose the rich history of a culture...[and] offer insights into how we might survive in tomorrow's landscape.

Grady Clay (1981)
ABSTRACT

The aim of the research is to develop key criteria for the evaluation of landscape as heritage. Evolution of the concept of heritage as it applies to landscape is examined to lay the foundation for establishing the criteria.

To set up an understanding of the criteria which could be useful, current landscape heritage theory is analysed. This analysis clarifies the modern concept of landscape heritage value, establishes the component values which contribute to it, and explains the relationship of the criteria to the components.

Two aspects of heritage practice are investigated to determine whether criteria identified from the theory are useful. Heritage organisations in Australia and the criteria they aim to use - or believe they use - are investigated. The investigation consists of a review of documents produced by selected heritage organisations and interviews with the staff responsible for landscape assessment. Statements of significance or listings (summary statements encapsulating the reasons why a place is considered to have heritage value) are then analysed using content and cluster analysis techniques. This determines the criteria that heritage organisations actually use for designating landscape heritage value.

Conclusions from the theoretical and practical investigations are synthesised and key criteria for evaluating landscape heritage are deduced.

Two groups of criteria are necessary: principal criteria and secondary criteria. Principal criteria are the components of value which determine the presence of landscape heritage value, and they include symbolic, aesthetic, historic, scientific, social and archaeological value. Secondary criteria are the measures of value which are applied to the components of value to determine the level of landscape heritage value. They include integrity, state of preservation or condition, authenticity, uniqueness, rarity, representativeness and example. Economic value is rejected as a criterion for assessment.
Landscape heritage typing assists in the evaluation process. Typical criteria profiles exist for each landscape type. A method of assessment is proposed in which criteria are systematically evaluated for each landscape type, bearing in mind the criteria profile. Thus the likely dominant criteria are anticipated for that landscape type. This method permits like to be compared with like, and streamlines and simplifies assessment.

The research provides a basis for any community or nation to gain a stronger sense of its own identity through greater understanding of its natural and cultural landscapes, their significance, and how they should be valued. Such improved understanding should contribute to Australia's efforts to define itself in the global community.
DECLARATION

This thesis does not contain any material which has been accepted for the award of any other degree or diploma in any university.

To the best of the writer's knowledge, this thesis contains no material previously published or written by another person except where acknowledgement is made in the text.

This thesis is less than 100,000 words in length, exclusive of tables, references and appendices.

signed

[Signature]

Janet A. Schapper

Dated 6.1.94
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This piece of research is the result of my increasing preoccupation with landscape heritage and the role it plays in shaping our view of ourselves and our world. Since 1980, when I first started working with the National Trust of Australia (Victoria) on their Landscape Committee, I have been intrigued by the interplay between natural and cultural environments, and how we perceive and value them. This early work led to a diverse range of heritage and conservation activities, including the assessment, planning and management of landscape heritage with the National Trust, the Victorian Conservation Trust, the Ministry for Planning and Development's Heritage Branch, and The University of Melbourne.

During this work I became increasingly convinced that there was a gap in the theoretical knowledge regarding landscape heritage. Organisations had various methods for assessing the heritage value of landscapes, some as simple as the consensus of experts, others incredibly complex and incomprehensible to the public-at-large. However, criteria for their assessment were rarely explicit, simple, easy to comprehend, or useful. I kept thinking, 'there has to be a simpler, more user-friendly way to identify landscape heritage.' 'Why are we setting these landscapes aside?' 'What are the specific reasons for designating certain landscapes as heritage?' This thesis is my attempt to answer some of these questions, and to provide a firm theoretical basis for identifying landscape heritage by establishing criteria for evaluation.

This work has been carried out in conjunction with full-time lecturing, raising a family and contributing to community organisations, primarily those dealing with landscape heritage. While this may seem an unrealistic spread of interests, the interplay between teaching landscape heritage and landscape architecture, and the practical planning and management of landscape heritage, has provided many insights which would otherwise not have occurred to me.
The work has been greatly assisted by many people, and I particularly wish to thank the following:

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Chapter 1: INTRODUCTION

Plate 1: Pioneer cottage and early settlement landscape
Mornington Peninsula, Victoria
Photo: Mark Schapper
Chapter 1: INTRODUCTION

Since the beginning of time people have collected property and belongings to secure their own future and to hand down to their children. In their turn, succeeding generations have regarded property handed down to them as their inheritance, tangible evidence of generations past and their way of life, their heritage.

Heritage may be seen from an individual, family or tribal point of view, or more broadly from a national or global perspective, and may encompass contributions from a wide variety of fields, including the arts, technology, architecture and the natural sciences.

Certain heritage objects or places may be of limited significance or of only local interest. Others may be generally accepted as having significance at an international level, for instance Stonehenge, the Parthenon, Yosemite National Park, or places recognised by a World Heritage listing.

Landscape forms part of our heritage. Landscape is described by the U.S. Forest Service (1973) as the sum total of the characteristics, both natural and resulting from human occupancy, that distinguish a certain area of the earth's surface from other areas (Grinde and Kopf, 1986, p.311). Landscape heritage may be represented by a wide diversity of landscape types. These range from wilderness areas (pristine tracts of land essentially unmodified by human intervention), through a variety of cultural landscapes, landscapes managed by indigenous populations, pioneer settlements and farms, historic gardens, to urban environments.

The community has a significant investment, both emotional and financial, in landscape heritage. Interest in landscape heritage in Australia is demonstrated by the ten thousand or so heritage sites listed on the Australian Heritage Commission's Register of the National Estate and the size and diversity of the state government and National Trust Registers. The large investment in money, time and volunteer effort of the National Trusts in all Australian states, and the work of state and federal government departments, in preserving this landscape heritage also demonstrates its importance to the community.
In practical terms, the National Trusts manage large property portfolios. The property portfolio of the National Trust of Australia (Victoria) alone represents an investment of millions of dollars, and yet it does not always understand which key attributes differentiate these heritage properties from other properties, which properties are of greatest heritage significance, and which are in danger of losing important heritage components. Once the Trust understands these things, it will be in a position to set conservation priorities. But to understand the heritage value of the properties, the criteria for their evaluation as landscape heritage need to be clear.

State government departments manage large tracts of national park land, state forest, historic landscapes and other heritage areas. Local government regions must deal with landscape heritage and planning issues on a day-to-day basis. All these organisations require a very clear idea of why the place in question is valued. What are the major reasons for its continued conservation? How can it be utilised in a productive sense while maintaining conservation value?

In the past the decision as to which landscapes should be conserved may have been made in a relatively informal and unsystematic way. This approach is becoming harder to defend, as the community is becoming more sophisticated in its approach to heritage and more demanding in requiring its equitable conservation. Heritage issues are appearing more frequently in tribunals and courts of law, and the need to be accountable for heritage decisions is becoming increasingly apparent.

These changes have led to the need for more reliable, systematic and valid processes for the assessment of landscape heritage, based on clearly defined criteria. The first step in providing for more systematic and reliable assessment is the identification of the relevant criteria. Once identified, their relative importance and whether they can be qualitatively or quantitatively assessed can be established.

The objective of this research, therefore, is to establish criteria for the evaluation of landscape as heritage.
The search for these criteria will be carried out in an Australian context, although the findings have more universal applicability. The way in which this research is carried out is explained below.

First, the history of landscape heritage is explored in Chapter 2, to provide a basis for understanding our current attitudes to landscape heritage and criteria for its assessment. Next, current heritage theory is reviewed to determine which criteria might be useful for judging landscape heritage value. To do this, the concept of landscape heritage value is explored in Chapter 3, and its many facets and related criteria are outlined in Chapter 4. At the beginning of Chapter 5, a set of hypotheses is developed from this review. The remainder of Chapter 5 is devoted to the selection of sources and techniques for investigating them. The most appropriate techniques are: an analysis of heritage organisations and their criteria, as revealed in documents, combined with focussed interviews of staff who carry out landscape assessments; and content and cluster analyses of statements of significance, also known as listings. The hypotheses are then tested by application of these approaches.

Heritage organisations in Australia and the criteria they have developed are analysed in Chapter 6, providing an understanding of criteria organisations aim to use, or believe they use. Chapter 7 describes the content and cluster analyses carried out on statements of significance from the major heritage organisations in Australia, and demonstrates criteria actually used.

Chapter 8 brings together all these strands to establish the criteria which should be used for judging landscape heritage value. Chapter 9 summarises the work, and contains recommendations on criteria and their use in assessment.
Chapter 2: THE EMERGENCE OF THE CONCEPT OF LANDSCAPE AS HERITAGE

Plate 2: Children's playing cards, c. 1843, illustrating the popularisation of nature (Allen, 1976, p.100)
Chapter 2: THE EMERGENCE OF THE CONCEPT OF LANDSCAPE AS HERITAGE

2.1 Introduction

Heritage is about people. It is about the interaction of people and places over time, the flow of events at a particular place with time. It forms part of the cultural fabric that is the backdrop to our daily lives. Whether we wish to heed it or not, it signifies from where we come.

Throughout history people have collected property, both to use and enjoy, and to help secure their children's future. In their turn, succeeding generations have regarded this property as their inheritance, their heritage, tangible evidence of generations past and their way of life. This heritage may be passed down from one generation to another within a family, within a tribal or social group, within a religious group or, at a broader level, within a state or nation. In the past, the heritage of a particular group was more or less restricted to that group, whether it be family, religious order or class of society. More recently a broader approach to heritage has evolved, where the collective heritage of a community is being safeguarded by civic and governmental groups.

Lowenthal states that one of the most striking aspects of the modern impulse to preserve the past is its universality:

The need to find, keep, and display a tangible heritage characterises countries with an abundance of antiquities as well as those where the works of man are rare and mainly recent, countries whose regimes are communist or capitalist, former imperial powers along with newly liberated colonies.

(Lowenthal, 1981, p.12)

Certain landscapes can be regarded as having heritage value, that is, they are worthy of retention and of being passed on to future generations. Before defining landscape heritage for the present research (see Chapter 3), it is useful to examine the development of the concept of heritage
generally and landscape heritage in particular. This chapter examines early approaches to heritage, development of heritage in the built and natural environments, the way these two strands have come together in the twentieth century, and how heritage has come to apply to the landscape. Much of the detail has been placed in Appendix 1 and will be referred to as is appropriate.
2.2 Early approaches to heritage

2.2.1 Ancient civilisations and heritage
Since ancient times sites of worship, civic gathering places, burial grounds and battle grounds have all held meaning related to past associations. Fine objects and artifacts have been treasured for their beauty and for their association with events, places and people. In addition to tangible objects and physical sites, less tangible aspects of civilisation such as music, literature, folklore and cultural traditions have been designated as part of our heritage, to be treasured and passed on to future generations.

While certain individuals and groups have valued their heritage from ancient times, the systematic study of the remains of previous cultures and the consequent attachment of heritage value to certain things and places by society at large is a relatively recent phenomenon. There have been some exceptions to this generalisation, for instance Nabonidus in 556 B.C., who traced the origin of his nation and restored ancient temples (Wellard, 1972, pp.180-185).

Some interest in prehistoric remains was evident in the Middle Ages. The great monuments and treasures uncovered by chance or by tomb-robbing were a focus of this interest. The old German and Nordic laws decreed that any treasure which was discovered by chance and remained unclaimed went to the sovereign. This was expressly stated in the old provincial enactments, such as the Jutish law, codified in 1241: 'If any man should find gold or silver in a barrow or turned up by his plough or in any other way, it must be handed over to the king' (Hermansen, translated and explained in Klindt-Jensen, 1975, p.9).

The same type of provision, adapted to ensure some division of the spoils between crown and finder, was contained in Swedish laws of the time. A find at sea, which was more difficult to salvage than treasure found in the fields, returned the finder a larger share.
2.2.2 The development of an interest in antiquities in Europe

During the Middle Ages in Europe, respect was demanded for certain relics, monuments and objects of historical importance. This respect was largely informally enforced, but was supported by sanctions against desecration of religious objects and sites, and the laws of sacrilege and *lèse-majesté*. The latter operated in quite a real and effective way to protect the heritage and enjoyment of the particular ruler in question and his relatives. Legend, partly based on fact, abounds of rulers killing or maiming artists and craftsmen to prevent others obtaining similar works of art (Erh Soon Tay, 1985, p.108).

From the fifteenth century onwards, the Roman Catholic Church collected antiquities and classical art. Kings as well as popes developed antiquarian interests. In England in the sixteenth century, an office of the King's Antiquary was created but there was only one incumbent, John Leland in 1533. Leland toured England and Wales, listing and describing objects of antiquarian interest, including prehistoric sites. In late sixteenth century England in the reign of James 1 some antiquarian interests developed, including the formation in 1572 of the precursor of the Society of Antiquaries of London (Daniel, 1976, p.18; Ehr Soon Tay, 1985, p.109).

The Renaissance stimulated an interest in antiquity and the Italian humanistic enthusiasm for classical culture was reflected in other European countries. Klindt-Jensen (1975, p.14) describes the scholars and statesmen who felt it their duty to inform themselves about the founders of their nations. Written sources and folk lore were obvious sources, but enquiry expanded to include prehistoric monuments and, in the case of the northern countries of Europe, the rune-stones and inscriptions left by earlier occupants. During this Renaissance time classical antiquity was the focus of study. Traditionally historians fitted their knowledge of ancient and distant civilisations into a rigid, general pattern of world evolution, where each civilisation was assigned its place according to how primitive or advanced it appeared (see Appendix 1: The Renaissance).

At that time the unbounded enthusiasm for the art and buildings of ancient Greece and Rome gave rise to what Daniel (1971, p.6) calls the first type of archaeology, based on the civilisations of ancient Greece, Rome and the lands of the Bible. This had as its basis a fine-arts tradition. The
second type of archaeology was of more recent origin, dating from the time of Darwin (1859), and was underpinned by the upsurge of interest in the natural and social sciences. It was concerned more with cultures outside the western tradition and in prehistory. This increasing interest in social sciences also led to a new type of archaeology, that of 'everyday life'.

2.2.3 The Scandinavian contribution to establishing archaeology
There is a well-accepted view that the strong interest in antiquities in the Scandinavian countries from the late Middle Ages into the Renaissance had a great influence on the development of archaeology (Daniel, 1971; Klindt-Jensen, 1975; Ehr Soon Tay, 1985, pp. 109-138). This early interest was fuelled by national pride and some sense of rivalry between Sweden and Denmark. It was partly motivated by the need to prove which nation had the older and more distinguished origin, and was evidenced by the zeal applied to locating and interpreting antiquities and archaeological finds. The Danish law of treasure-trove, or danefae, dating from the early Nordic interest in antiquities, ancestors, and possibly ancestor-worship, was incorporated into the Danish constitution of 1683, and is still valid in present-day Danish law, forming an unbroken tradition from the early Middle Ages and perhaps from prehistoric time (McBryde, 1985, p.3, Klindt-Jensen, 1975, p.10).

Royal Societies in various countries played an important role in spreading scientific and cultural information. The Danish Royal Society, for instance, published an article on archaeological excavations in its first issue in 1744, and the Norwegian Royal Society, founded in 1760, was active in archaeology.

2.2.4 Travellers, invaders and antiquities
In Britain there were many distinguished collectors from the sixteenth century onwards. Gentlemen travellers or diletanti (the Italian word, diletanti - those who delighted in the arts, Daniel, 1976, p.17), particularly from England, travelled to the cultural centres of Europe, and most frequently to Italy, with a view to enriching their own experience and bringing back culture from the great centres of civilisation. To this experience, many travellers added adventure and the thrill of hunting for
rare objects through dusty tombs and bazaars. Daniel (1971, pp.36-42) has a wonderful account of the difficulties of robbing Egyptian tombs and the cut-throat (sometimes literally) competition for fine pieces. The Society of Dilettanti, formed in England in 1732, mounted serious expeditions and systematised and popularised the information collected.

At the same time as the British dilettanti were travelling to Europe, observations were being made at home about features in the English landscape such as tumuli and crop marks. Not all could afford the grand tour and Dr. William Borlase, in his *Antiquities of Cornwall* (1754) says that he carried out his Cornish researches as a substitute for the classical travels he could not undertake (Daniel, p.22). Study of the Picturesque, an aesthetic ideal favouring landscapes exhibiting the qualities of landscape paintings in the style of Claude Lorrain or Poussin and demonstrating wildness, mystery and romance, promoted an interest in features such as ancient barrows, forts, standing stones and hut circles, about which written history of the time said so little.

Interest in antiquities was not confined to English gentlemen. When Napoleon invaded Egypt in 1789, a large body of scholars - artists, antiquaries and scientists, accompanied him and his formidable army. Their task was to complete a record of the land of the Nile and its monuments and curiosities. The French Institute, which was founded by these scholars, initiated a serious and organised approach to the study of the past which was to supplant the efforts of the antiquarians and dilettanti. One of the prizes of this expedition was the Rosetta Stone (Daniel, 1971, pp.44-45; Daniel, 1976, p.22).

Nations gradually developed an appreciation of antiquity as part of Romantic nationalism, and legislation to protect sites and objects followed slowly in the wake of the strengthening interest in archaeology (Erh Soon Tay, 1985, p.109). This was encouraged by the threats posed by the breaking up of large estates and the cultivation of land previously unploughed.

2.2.5 An increasingly egalitarian approach to heritage
In the 18th century in the Western World, following the French
Revolution of 1789, there was a fundamental change in the outlook of historians and political and social theorists. With a growing liberalism, writers began to stress that each civilisation should be judged on its own merits and by its own criteria. This heightened an appreciation of different philosophies, cultural backgrounds and approaches to life and led to the preservation of certain objects and places which were considered to be of importance. These objects and places represented what was considered to be the cultural heritage of the civilised world (see Section 2.3).

An increased interest in history and a view that history should be accessible to the public led to the establishment of many more museums in Britain and Europe (selected milestones in museum development which are relevant to heritage are outlined in Appendix 1: Development of museums). Enlightenment philosophies of the 18th century widened the understanding of the role of the museum to the extent that some, particularly in England and the German states, were opened to the public. As collections became available to the community at large, public interest developed. The Enlightenment was a seventeenth and eighteenth century philosophy concerned with the inter-related concepts of God, reason, nature and man. Its basic conviction was that through reason, mankind could find knowledge and happiness (Encyclopædia Britannica, Micropaedia).

Museums were not the only model for public cultural institutions. The humbler mechanics institutes, initiated in Scotland, taken to England in the early 19th century, and thence to the colonies, provided a place of learning for the working man (Galbally, 1992, pp.9-10).

Sir Redmond Barry, lawyer, patron of the arts, and first Chancellor of The University of Melbourne (1853-80), told his audience at the first Convezazione of the Victorian Institute for the Advancement of Science in 1854 'Men are no longer content that the search for knowledge should be delegated to the exclusive charge of any particular body' (quoted in Galbally, 1992, p.8).

The selection of things to retain from the past has always been an issue fraught with problems. Some things were kept for their beauty or because
of their perceived power to influence events. Other more utilitarian items were preserved by continuing to remain in service. Some objects were buried with the dead in certain cultures because they were thought necessary for use in the afterlife, and by this means they were retained as a collection. It was this type of collection that Howard Carter, Lord Carnarvon, and his daughter, Lady Evelyn Herbert, first glimpsed in 1922, when the sealing stone was removed from the tomb of Tutankhamen. This archaeological find was the culmination of one hundred years of increasing interest in archaeology, Egyptology and in the civilisations of the Middle East. These finds fired the imagination regarding lost civilisations and, when linked with scriptural writings and other documentary records such as the Rosetta Stone, established the reality of many legendary events and people (Desroches-Noblecourt, 1963, p15).

Initially archaeologists and those studying past civilisations were primarily concerned with recovering spectacular objects and works of art. As the progression to a more scientific and systematic approach occurred, and as new attitudes and techniques were introduced during the late 1800s, archaeology became more concerned with studying the remains of past civilisations in order to build up a picture of their activities and their way of life. Many archaeological sites were characterised not by great works of art, but rather by the commonplace evidence of habitation, the cast-off goods and chattels of civilisation, burial grounds, quarries and the remains of structures. It was this shift within archaeology which influenced the shift in the meaning of heritage towards the more commonplace and permitted a broader emphasis than that of focussing only on rare and fine art as evidence of a culture's heritage. This shift within archaeology caused it to look towards architecture, an area with which it had always been allied, for explanations of how past civilisations functioned and for what was to be valued in the built environment.

The strong archaeological underpinning of the Australian Heritage Commission today is evidence of the ongoing role of archaeology in the conservation of Australia's National Estate and underlines the influence archaeology has had on the understanding of heritage places (see Sub-section 2.5.3).
2.3 Development of the concept of heritage in the built environment

The shift towards a more egalitarian approach to heritage forged a stronger link between archaeology and architecture than had previously existed and promoted consideration of heritage in the built environment. This section explores the evolution of heritage in the built environment, how it was influenced by archaeology, and how it in turn, when combined with the influence of the movement to preserve nature, affected the development of the concept of landscape heritage.

2.3.1 Early attitudes to heritage in the built environment

The people of Europe in the Middle Ages showed little interest in consciously preserving the buildings, structures and landscape elements of past civilisations. This was in part due to the belief of the early Christians that pagan idols should be destroyed, and in part due to a general lack of interest in the systematic study of past civilisations and their relics, prior to the development and acceptance of archaeology. However some sites and artifacts were preserved.

The Anglo-Saxon and Norman invaders of Britain showed little respect for her native architecture. They treated Roman remains as useful quarries and ancient religious sites as a base upon which to build grander structures (Boulting, 1976, p.9). In England during the sixteenth and seventeenth centuries some steps were taken to preserve historic monuments (Boulting, 1976, p.11).

In Europe in the eighteenth century there was an emerging awareness of the concept of preserving history in the built environment. The growing liberalism of the eighteenth century led to the idea that each civilisation should be judged on its own merits and by its own criteria. This was accompanied by a changing perception of architectural values, and led to a breakdown of the old system of using strict architectural rules. Traditionally in architecture, pleasure and satisfaction were to be derived from the correct application of these rules. Now, not only were these breaking down, but there were also the unpredictable elements of variety and surprise to be considered (Dixon and Muthesius, 1978, p.20). This
shifting emphasis led to the Picturesque and the Romantic movement in the late 18th and early 19th centuries.

The notion of the 'Picturesque' was the most important English aesthetic idea to have influenced architecture in Europe. Originally it was derived from the landscape and was characterised by wild ruggedness exhibited in features such as deep chasms, dark impenetrable woods and rushing streams. In architecture it was characterised by the assymetrical disposition of forms and variety in texture evident in buildings such as italianate or castellated Gothic country houses (Fleming et al., 1991, pp.333-334).

The Romantic movement was a response to the logical and analytical approach of the Enlightenment. It involved the spontaneous, subjective and imaginative response to art and to the landscape. It influenced mainstream thinking during the late eighteenth and early nineteenth century and coloured the way the landscape was perceived. It focussed attention on nature and the natural and was responsible for the reintroduction of landscape painting and the newly awakened sense for history. It was closely linked with development of the Picturesque (Osborne, 1987, p.1007; Myers, 1969, p.540). The Romantic movement and the Picturesque were to influence the later amenity movement and the national parks movement.

2.3.2 The French Revolution and changing values
The French Revolution of 1789 brought about many changes in Europe. One of these changes was related to perceptions of the past and the symbolism of the old order. The revolutionaries, while destroying many of the buildings associated with royalty and the aristocracy, also saw the need to retain some of their major buildings and monuments. These were made the property of the state, and subsequent measures were taken to ensure their preservation (Caron, 1986, p.12). Preservation was highly selective and was related to the building as symbol. Buildings and places which symbolised the church and state were vulnerable, while buildings which might symbolise the rise of the people and the new order were candidates for retention and conversion to new uses. Thus at the
The Cathedral of Notre Dame—the statues lost their heads and the stained glass windows were destroyed, Notre Dame being representative of the church, and the archbishop being associated with the crown. Stained glass windows in the cathedrals of Amiens and Rheims, where the French kings were crowned, were also destroyed. The Abbey of Saint Denis, where French kings had been buried for generations, was sacked, while the Louvre was retained and converted to a new use (King, 1991, p.71, expanded by pers. comm., Aug 22nd, 1991).

Versailles was retained, partly because it was in the country rather than the city and was therefore less vulnerable to what King (King, R., 1991, also pers. comm. August 22nd) refers to as 'revolution as theatre'. 'Not only was the revolution largely played out as an urban spectacle and display,...but it had to reestablish, if only for the time of the ceremony of revolution itself, the unity of city and state.' (King, 1991, p.56). Ozouf (1988, pp.8-12) also draws attention to the urban spectacle and festival or fête aspect of the French Revolution, and its essentially city-based nature. While the countryside was chaotic during the French Revolution, it nevertheless sustained less destruction than Paris and other regional centres. Versailles, which was the administrative centre, was retained, while many other buildings representing the old order were defaced or destroyed.

Lowenthal (1986, p.42) links the rise of national self-consciousness in war-torn Europe after Napoleon with a broadening interpretation of the meaning of heritage to include physical monuments and collective folkways. Nations, like individuals, could hold collective property which held significance because of its associations with the past.

Many revolutionaries have a strong sense of the need for symbols and for continuity. During the Russian Revolution Lenin gave orders that buildings of historical value were not to be touched and it was by later neglect rather than revolution that many of the historic buildings of Russia fell into decline. Maintaining evidence of the past in times of revolution and rapid change helps legitimise the succession and paves the way for a smoother transition to a new era (King, R., 1991, pers. comm., Aug 22nd.).
In the peace following the Revolution, Napoleon founded the Académie de Beaux Arts. Later, the French were to establish the Commission des Monuments Historiques, to classify and repair historic buildings (Caron, 1986, p.12).

2.3.3 Changing attitudes to heritage in the built environment in Victorian England

At the same time as the far-reaching changes described above were occurring in Europe, a new social order was emerging in Britain. The Industrial Revolution was changing life in a way previously inconceivable. In the late eighteenth and early nineteenth century rapid development of industry due to increasing mechanisation generated industrial towns and cities, a huge movement of population away from the countryside and new mechanised agricultural practices. Gradually a reaction to the worst aspects of the Industrial Revolution emerged.

Developments which might have been considered advantageous at the height of the Industrial Revolution began to arouse passionate opposition amongst an influential minority of intellectual and upper-class Victorians. The imperative to 'improve' the environment by demolishing buildings, draining marshes and clearing land was increasingly interpreted as vandalism. This changing view was founded upon the reaction of intellectuals to many of the tenets of economic liberalism (Lowe & Goyder, 1983, p.19). Aesthetic sensibilities were offended by the demolition of old buildings and monuments which had stood for hundreds of years, and by changes to the countryside due to new and different agricultural methods. Coupled with a concern for the countryside was a humanitarian concern for the squalid living conditions which existed in the industrial towns and cities and the yearning for open space and nature which these conditions generated.

Pepper (1984, p.18) states that the moral and aesthetic revulsion against the city led to legislation to improve the urban environment, as well as to the garden city movement and to the concept of alternative communities. King (1991, pp.74-81) sees three main responses to the excesses of the industrial revolution in Britain: the City Beautiful Movement, the rise of New Towns and the development of the Arts and Crafts Movement.
notably associated with William Morris. In all these, the past represented the pre-industrial, non-capitalist world (see Appendix 1: The City Beautiful, Newtowns and the Arts and Crafts Movement).

In 1877, William Morris, influenced by the interest of Pugin and Ruskin in medieval architecture, founded the Society for the Protection of Ancient Buildings (SPAB). Its main concern was to prevent the so-called restoration of old buildings by over-zealous architects who would modify the buildings, sometimes quite dramatically, in the process of restoration. Originally founded mainly to protect medieval buildings, the society soon turned its attention to those of other periods. This society has been influential in historic conservation since its inception and is still active in Britain today. William Morris, speaking at the annual meeting of SPAB in 1889, said:

It has been most truly said ... that these old buildings do not belong to us only; that they have belonged to our forefathers and they will belong to our descendants unless we play them false. They are not in any sense our property, to do as we like with. We are only trustees for those who come after us.

(Annual Report, SPAB, 1889, quoted in Boulting, 1976, p.16)

One preservation issue that was raised by William Morris which is still current is that of authenticity in restoration (see Sub-section 3.3.2).

The Ancient Monuments Protection Act, enacted in Britain in 1882 (Boulting, 1976, p.17), saw the introduction of a schedule or list of buildings, the forerunner of many registers and listings worldwide. This act provided for the guardianship, acquisition and maintenance at public expense, of any monument on the list. The schedule listed sixty-eight monuments in the British Isles, all but a few of which were of prehistoric origin, being predominantly earthworks, burial grounds and stone circles. Medieval and ecclesiastical buildings were not adequately covered by this act, but were included in the later Ancient Monuments Protection Act 1900 (Boulting, 1976, p.17).
2.3.4 The emergence of organisations to protect heritage

Lowe and Goyder (1983, pp.15, 21), Allen (1976, p.199) and McCormick (1989, pp. viii, 15) claim that the first environmental group was the British Commons, Open Spaces and Footpaths Preservation Society, dating from 1865 (see Section 2.4), and that its formation was a reaction to alienation of land and loss of access to the countryside as farming became increasingly mechanised and as people increasingly congregated in cities. This organisation was the forerunner of the British National Trust and other environmental organisations and its ideals were to be carried forward in various forms by succeeding organisations.

To enable the public to have an increased role in heritage preservation and appreciation, community organisations, and public representation on these organisations, was necessary. Custodians of the community’s heritage began to be known as trustees. A trustee is defined as:

One to whom property is entrusted to be administered for the benefit of another; often loosely, one of a number of persons appointed to manage the affairs of an institution; also a member of the controlling body of a trust.... One who is held responsible for the preservation and administration of anything.


The issue of preservation of Britain’s common lands which arose in the mid-1860s demonstrated the need for a body which could acquire and hold land for the benefit of the nation to protect the nation’s natural and cultural heritage. While many forces were operating to influence this idea, it was first outlined in some detail in 1884 by Robert Hunter in an address given to the National Association for the Promotion of Social Science. He had carefully examined the legal position with respect to preservation of the countryside, and was convinced of the need for a statutory body, as distinct from a voluntary organisation, with power to acquire land and hold it for the benefit of the nation.

The central idea is that of a land company formed ...with a view to the protection of the public interests in the open spaces of the country... existing primarily for the purpose, not of putting money into the pockets of its shareholders, but of advancing objects they have at heart.

(Hunter, quoted in Fedden,1974, p.17)
These proposals found ready support, in particular from Canon Hardwicke Rawnsley and Octavia Hill. Canon Rawnsley had been introduced to Octavia Hill by Ruskin when working as a priest among the poor in Seven Dials. He was a champion of the English countryside, particularly the Lakes District. Octavia Hill was a formidable and energetic spinster, well known and respected in British society. She was a pioneer in housing reform, working amidst apathy and sometimes hostility, for the preservation of open space in depressed urban areas. Hill wrote of the difficulty of finding a short, expressive name for the proposed organisation for heritage preservation. She said it was:

...better, I believe, to bring forward its benevolent than its commercial character. People don't like unsuccessful business, but do like Charity where a little money goes a long way because of good commercial management.

(Fedden, 1974, p.18)

At the head of this letter Robert Hunter pencilled the words 'National Trust'. Hunter, Rawnsley and Hill were the driving forces which initiated the National Trust movement. In 1893 the objectives of the National Trust and a provisional Council were announced, and in 1894 the first meeting was held at Grosvenor House, the home of the Duke of Westminster, whose support Octavia Hill had enlisted. The organisation was registered under the Companies Acts on January 12th, 1895 as 'The National Trust for Places of Historic Interest and Natural Beauty'. The first property acquired was a landscape - Dinas Oleu, a four and a half acre property on the cliff-top above Cardigan Bay (Fedden 1974, pp.19-20, 24). The Trust, in its inaugural meeting in 1894, saw its role as being a 'Trust for Places of Historic Interest or Natural Beauty', incorporating the idea that areas could be set aside for their scenic value as well as for their historic value (Fedden, 1974, p.19). In the early years of the British National Trust, tracts of land important for visual and landscape values and for nature conservancy were set aside in the Lakes District and in Cornwall (Fedden, 1974, p.25).

The formation of the British National Trust was a logical sequel to the formation of the Commons, Open Spaces, and Footpaths Preservation Society and the Society for the Protection of Ancient Buildings. The Trust took on landscape conservation issues as well as conservation of the built
environment, and in doing this was an early and influential player in the modern conservation movement. It had a broad portfolio of interests and a large lobby group with which to fight for them. The Trust enjoyed some early success in acquiring historic properties and significant landscapes with both cultural and natural values. The Trust's goals and style of organisation gave force to volunteer and honorary participation and became a model for organisations in many different countries.

Increasingly, as its property portfolio developed, the Trust was forced to spend more and more resources on land agency and management. McCormick (1989, p.6) sees it as ironic that the British National Trust, because of its success in acquiring properties, had to spend more resources on administration and less on promoting and coordinating conservation effort. This opened the way for the creation of other groups who specialised in various aspects of conservation and preservation. Among these organisations were the Society for the Promotion of Nature Reserves, established in 1913 to stimulate the National Trust to protect worthy sites, and later the Council for the Preservation (later Protection) of Rural England (C.P.R.E.), formed in 1929 to coordinate the voluntary movement, promote legislation and give advice to landowners.

The National Trust movement spread around the world. In 1947 legislation was passed in the United States to incorporate the National Trust for Historic Preservation, although the Roosevelt administration had already passed a Historic Sites Act in 1935. In 1945 the first of a series of National Trusts was founded in Australia, in New South Wales. This was followed by the Victorian National Trust, set up in 1956. An Australian Council of National Trusts, the federated Trust organisation, was established in 1965, giving the Trust movement greater strength and cohesion (Davison, 1991, p.17). In Australia, the goals of the National Trust are, broadly speaking, to hold property in trust, to preserve historical records of places and things, and to educate the community as to their value (National Trust of Australia (Victoria), 1956, pp.3-6). For most of the 1950s and 1960s the Trust was almost the only voice of preservation in Australia. Later a broader coalition of diverse groups, including the union movement, took up heritage issues (Davison, 1991, pp.14-27).

Although there had been some interest in historic preservation prior to
In the nineteenth century, the general acceptance of preservation of the built environment was predominantly a nineteenth and twentieth century phenomenon (Lowenthal, 1986a, p.42). Over the second half of the nineteenth century throughout the Western World an appreciation of the monuments and buildings of the past was growing. Since the time of the French Revolution there had been a redefinition of symbols for the new age. In this the symbols of the past featured prominently, as revolution underscored the need for continuity. In the re-examination of the past it was somehow redefined. This redefinition of the past permitted some confirmation and definition of self, whether at a national or group level. Lowenthal (1986a, p.42) notes that with the rise of national selfconsciousness after the French Revolution there was a broadening of the meaning of heritage to embrace physical monuments and collective folkways. This widening perception of what constituted heritage was an important part of the democratisation of heritage and a precondition to its greater accessibility. This meant that heritage was becoming increasingly accessible to the public at large, and the public were seen increasingly to be stakeholders in heritage, particularly of public monuments and of the countryside. This changing perception was also expressed in the museums movement (see Sub-section 2.2.5 and Appendix 1).

Along with the increasing public interest in heritage was a demand for 'truth' in heritage, the need for authenticity. This was reflected in attitudes to restoration, where there were calls for restoration of old buildings to be as faithful to the original as possible, and for prevention of fanciful embellishment by conservation architects of the day. Government legislation was introduced to underpin historic preservation and as a result, schedules and registers were prepared.

Within the built environment, there was a shift from preservation of ancient monuments and great buildings to a broader approach of preservation of a range of buildings and structures. From about the turn of the century conservation of the built environment can be considered to have been a complex and sophisticated activity which was increasingly played out on an international stage. Coupled with this trend to complexity and an international approach was a widening perception of what constituted heritage in the environment. Included in this were
grand and humble historic buildings, remnants of ancient civilisations and open spaces whose threatened removal from the public domain highlighted their value to the community. The role of the National Trust in Britain is interesting, as from the outset the Trust blurred the distinction between built and natural heritage, anticipating the coming together of these two strands of heritage and permitting a single organisation to deal with issues as diverse as wilderness and ancient monuments.
2.4 Development of the concept of heritage in the natural environment

Preservation came to landscape as an extension of art restoration, archaeology, building conservation and, later, urban conservation. Increasingly landscape issues were becoming matters of concern as preservation of unique and beautiful natural areas was gaining momentum.

Interest in natural landscapes had its roots in the natural sciences, and gradually expanded to include certain aspects of what is now known as the environmental movement. This section explores the historical development of attitudes to nature, their influence in shaping the streams of the environmental movement considered to be most relevant to landscape heritage and the gradual emergence of natural environments as landscape heritage.

The environmental movement had no clear beginnings but was woven from a number of different strands which gradually evolved into what is today recognised as a movement with, broadly speaking, common goals and directions. The various strands developed at different times but were often linked by common ideals or individuals. Ideas flowed from one organisation to another, so that various techniques were successively transferred from one group to another.

2.4.1 Early attitudes to nature

Before the start of the seventeenth century naturalists and scientific observers of the environment were few and far between and worked largely in isolation. In the seventeenth century, with the rise of the Enlightenment, events began to occur which heralded a more formalised and coordinated approach to nature. Three strands which mirrored the changing attitudes to nature were the rise of botany, the evolution of zoology and its association with botany to form the foundations of ecology, and the emergence of scientific geology. These strands are discussed below.
The rise of botany

As far back as the time of Charlemagne (742-814 A.D.) plant collections containing food plants and herbs were known to exist. At this time, the study of botany, such as it was, was related to the medicinal use of plants (Lewis & Aitken, 1991, p.9). Apothecaries carried the study of plants forward. Field excursions were organised (Society of Apothecaries, City of London, first recorded 'herbarizing' - 1620) so apprentices could gain practical experience in the identification of herbs and 'simples'. Allen (1976, pp.7-9) states that, without a doubt, these excursions formed the basis of the great field tradition which flowed though the development of natural history and environmental science, and which still underpins the biological sciences today.

At the same time that these forays into the countryside were providing a practical training in botany, the Royal Society of London, founded in 1660, was approaching science, including natural history, botany and zoology, from a theoretical perspective (Galbally, 1992, p.10). It lent prestige to the study of botany and zoology, secured the publication of much-needed books, fostered an outburst of scientific effort and provided a network for intellectual communication. The Temple Coffee House Botanic Club, reputed to be the earliest natural history society in Britain and probably in the world, arose from a core of botanists attached to the Royal Society in 1689 (Allen, 1976, p.10). Several members of the club also attended the 'herbarizings' of the Society of Apothecaries, thus forming links with the more practical aspects of botany.

Gradually botany groups sprang up, and in time initiated great collecting sweeps across Britain, gradually building up a body of knowledge relating to plants and to the natural environment in general. The study of plants was facilitated by acceptance of Linnaeus's new binomial method of plant classification which he expounded in his visit to Britain in 1736 (Allen, 1976, p.31).

The fortunes of botany waxed and waned over the following years, the decline of early interest being particularly evident in several of the major universities, including Oxford and Cambridge. Apathy towards natural history was reflected by The Royal Society at this time, as its focus shifted away from the natural sciences towards mathematics and physics under
the chairmanship of Newton which ran from 1703 until his death in 1727 (Sherwood, no date given, p.86). Following his death science in Britain stagnated, but was revived by a combination of zoology and a popular interest in nature.

From zoology to ecology
Nature became a fashionable topic of conversation in drawing rooms, and coffee table books on nature were produced, and collections were developed (Allen, 1976, p.39, 49). Collecting gradually became more organised, with professional collectors travelling widely for a cut of the profits. Later this aquisitive trend was to be reversed and an attitude of preservation and conservation, rather than collection and acquisition, was to emerge.

During the Enlightenment, a taste for nature was developing. Entomology, shell collecting (conchology), ichthyology (fish and aquaria), and ornithology all became fashionable pursuits in the middle years of the 18th century. Interest in ornithology was focussed on the collection of eggs and skins, activities which gradually started to take their toll on the environment. The binomial system for animal classification similar to Linnaeus's *Species Plantarum* assisted in formalising the new and diverse range of zoological data generated as a result of widespread collecting.

Gilbert White's *The Natural History of Selbourne* (1788) heralded a new approach to zoology. It presaged an ecological approach to the study of nature and was a departure from the collector's mentality and also from the purely practical ends of the apothecary. It also displayed careful observation in an age when most stopped only to collect. It marked a distinct change in attitude to the environment, and embodied concern for its continuance. White's attitude was ahead of its time, and it was to surface again later, to be accompanied by action to preserve the natural environment (Allen, 1976, p.50). Allen rates this book as seminal, and as being as influential as Darwin's *Origin of Species*.

The public was gradually starting to appreciate art in nature and nature in art. Wealthy gentlemen, returning from the Grand Tour, began to display
a preference for art depicting nature rather than that recording people or events. The painters Claude, Poussin and Salvator Rosa showed scenes of nature in which humans, if present at all, were subordinate to nature. From this arose the concept that nature was most pleasing when arranged in a way that was amenable to being painted in this fashion, the Picturesque. In the second half of the eighteenth century, gardens and whole areas of the English countryside, already under pressure to be less formal, succumbed to this fashion. Capability Brown was the master of this style, and, under his direction, landscapes were reconstructed to provide more pleasing views and vistas (Jellicoe, G. & S., 1987, p.245; Stroud, 1975).

The development of the Picturesque was an essential preliminary to that far wider movement - the Romantic movement of the late 18th and early 19th centuries. This involved a change in attitude to the world around and brought nature to the fore (Allen 1976, p.53). Many of those who were influential in the Romantic movement, such as Grey, Goethe and Rousseau, were also practising naturalists. Instead of the careful observation and recording practised by Gilbert White, the accepted approach to nature of the Romantics was to record one's reactions, preferably in rather lively terms and with the potential for some exaggeration. The Sublime, which superseded the Picturesque, changed what was considered important in the appreciation of nature to wilder and more extreme aspects than the Picturesque; rocky crags, rugged peaks, the age-old realm, dark and mysterious, became the focus. With this new emphasis, natural history started to turn its attention to geology.

Geology as part of the natural order
From collecting shells, it was a small step to collecting fossils - often the same types of objects petrified and preserved. From fossils it was another small step to rocks and minerals. It was not until the middle of the eighteenth century that fossils were universally recognised as having originally been living material, and their organic nature and antiquity was accepted. Prior to this it was believed that the date of creation could not exceed 5000 B.C. (Daniel, 1976, p.27). In this chronology there was no room for prehistory, let alone the geological timescale, and geology and
archaeology had to be explained in terms of Creationist and Diluvialist (Noah and the Great Flood) beliefs.

Acceptance of the geological theories of Hooke (1668), Hutton (1785) and Sir Charles Lyell (1797-1875), coupled with developments in Danish archaeology, led to the gradual erosion of the old foundations of theology and geology, and allowed for new approaches to geological and archaeological timescales and processes and exciting new ideas on nature (Thornbury, 1964, pp.6-7; Allen, 1976, p.20; Daniel, 1976, p.28).

The nineteenth century saw the rising tide of industrialism accompanied by a new ethical code and an energy which speeded progress. The moral and the useful became increasingly entwined, and pursuits like geology could be justified as a means of expressing reverence for the Lord. Activities such as climbing mountains and collecting flowers were justified on the basis of the moral content of nature and as glorification of the works of the Lord. Nature still continued to be acknowledged as freely as before but this was now justified on the basis of spiritual uplift rather than sensuous delight.

2.4.2 Changing attitudes to nature in the Victorian era
Queen Victoria reigned from 1837 to 1901, a period of sixty-four years. During this time the following people moved in and out of office:

...eleven Lord Chancellors, ten Prime Ministers, five Archbishops of Canterbury and six of York. In the United States....seventeen Presidents; in Canada ten Viceroyos; in France one King, one Emperor, and six Presidents; on the throne of Prussia five Kings, and in Russia three Emperors.

(Coulter and Cooper, 1901, p. 256)

During her reign, dramatic changes were to take place in almost every aspect of life; social and political boundaries and national fortunes were to change dramatically. Victoria’s reign saw great shifts in attitudes to nature and the natural environment, and by the end of it the foundations of our modern attitudes to conservation of the natural environment had been put in place.

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The Victorian era and the progress of natural history
During the Victorian era the rising middle classes took over natural history and treated it with awed respect. Allen sees a transformation from the Romanticism of previous ages into a rather more sentimental and superficial approach to nature pursued by 'minds dulled by industrial routines or by the no less stunting effects of a too literal fundamentalism.' (Allen, 1976, p.74). This interest in nature displayed by the middle classes had one very beneficial effect: it kept the minds of the middle classes attuned to nature at a time when their power was rapidly increasing, and hence kept nature to the fore. Without this generalised perception of nature, the aesthetic potential of the countryside, which was to generate the amenity movement and much of what is now considered to be early environmental action, may not have been recognised.

In British science from the 1830s on there arose a thirst for facts. This coincided with a new professionalism in science, and may well have been a reaction to the preceding attitude that all things were the work of the Lord. Theories had to be proved with evidence, and the evidence was in the form of data. These new attitudes favoured the advance of science through universities and scientific institutions, and scientific networks and dynasties prospered, among them the 'Cambridge Network', the Hooker family attached to the Royal Botanic Gardens at Kew, and the great Quaker families such as the Cadburys (Allen, 1976, pp.89-90).

In 1858 Darwin made public his theory of organic evolution. This was the scientific happening of the century, causing shock waves in various sectors of the scientific and religious communities for decades (Allen, 1976, p.176). Darwin provided a unifying theory that was both intellectually respectable and emotionally convincing. Inevitably it was the gaps that Darwin revealed that became the focus of the next generation of scientific endeavour.

Meanwhile in Europe the German academic system, in which a hierarchy of subordinate staff assisted the professor, gave rise to a team approach to science. British universities gradually adopted this system, originally inspired by the military, and thereby brought to science teams with a greater capacity to solve problems. One outcome of this approach to science was the tendency to compartmentalise science and see it as 'the
sciences', rather than the single entity, 'science'. This fractionation was accompanied by fractionation in values, that is, seeing a range of individual values, where prior to the Enlightenment there had been simply 'value' (King, 1991, pp.42-68).

At the popular level, and in contrast to the learned societies, were the field naturalist clubs which were formed in many industrial towns and cities. The oldest of these was the Ashmolean Natural History Society of Oxfordshire, dating from 1828. These clubs were one response to the progressive alienation from nature caused by migration to the cities. They had many members from the working classes, generally operated on a shoestring budget and roamed over the countryside rather than being tied to rooms. They increasingly admitted women and ran special programs for children (Allen, 1976, p.169).

Victorian exploration and colonialism aided the advancement of the natural sciences. Botanical specimens, archaeological finds, shells, live animals, tribal artifacts and many other collectibles were sent home to Britain from all over the world.

Again, at the popular level, there was a revival of interest in insects and birds, but in the live state, as compared to the previous interest in stuffed skins and game. Concern for their preservation was a response to the slaughter of birds for feathers for fashionable garments (the rarer and more exotic the better), and to the increasing availability and accuracy of firearms for hunting. Prior to the mid 1800s firearms had been inaccurate and dangerous to use, but in 1851 the first efficient breech-loading shotgun with self-contained cartridges was introduced (Allen, 1976, p142).

The increasing use of firearms for hunting and the demands of the fashion industry finally led to the early efforts at wildlife conservation. Early campaigns of this era were the forerunners of many to protect wildlife, and were eventually to develop into a much more broadly-based and international conservation movement (Allen, 1976, pp.142, 248).

Although the dedicated naturalist had been able to get about the countryside relatively unimpeded for years either by horse or coach, the 1840s saw the advent of railways, making areas which had previously
seemed too remote accessible to the general public. In the space of a few years, over most of Britain, the railways destroyed forever the idea of a pristine and undisturbed wilderness. With the aid of rail, and later bicycles and the car, the coast became a favourite collecting place, heralding an upsurge of interest in what can only be called coastal ecology. As well as the standard collections of shells, fossils and seaweeds, off-shore collecting using nets and dredges was undertaken (Allen, 1976, p.132).

The development of the microscope permitted investigation of a world previously unknown, and from 1840, when microphotography became available, it was possible to record a new level of detail in nature. Developments in photography, for instance the introduction of lantern slides in 1852, also assisted in the appreciation of nature and in communicating nature to a wider community. Along with improvements in photography went a desire to photograph wildlife instead of shooting it, the resultant images being equally good, if not better, for the recounting of hunter's tales.

The Victorian era and preservation of the countryside - the amenity movement

The amenity movement arose in Britain in response to urbanisation and the squalor of life in the industrial towns. This movement sought to preserve the countryside and all the values which were associated with it, among them the respect for nature and wild things, and the beauty of rural England. McCormick (1989, p.5) views the amenity movement as the major thrust of early British environmentalism.

The amenity movement derived its strength from the fact that it sprang from a number of separate motivating forces operating in Britain in the middle decades of the nineteenth century (see Appendix 1: Amenity movement). The first of these forces was a straightforward recreational need, that nature was necessary for health and wellbeing. This was reinforced by the unhealthy conditions developing in industrialised cities. The second force was an urge for preservation of the countryside. Since the infamous General Inclosure Act of 1845, encroachment on the land had been accelerating with industrialisation and the consequent expansion
of towns. Out of this came the twin drives to prevent rare species becoming extinct, later to become a drive for preservation of habitat, and the drive to safeguard ancient monuments and buildings of historic importance. Allen (1976, p.196) sees the drive for preservation as the foundation of the much more broadly-based conservation movement which was to flow on from it. The third force operating was the need for sanctuary, the age-old need to set aside areas considered to be inviolable for all time. This developed into the national parks movement and was the basis for state and community reserves. The fourth force, associated with the previous one, was the semi-mystical need for wilderness (see Sub-section 3.3.3: Psychological value).

Incorporated in the amenity movement was the blurring of boundaries between natural and cultural environments, as the countryside was frequently a combination of both. This blurring was reflected in the early work of the British National Trust (Fedden, 1974, p.19), and presaged the merging of these two strands in the assessment and management of landscape heritage in the 20th century.

Explorers, settlers and new horizons
The expansion of the British Empire was accompanied by changing attitudes to nature and landscape. New and often spectacular landscapes were being discovered. Lands recently settled were opened up as people pressed inland in the quest for new grazing and farming country. America, Canada, Africa and Australia all offered potential for the great ranches and stations which formed the backbone of new colonial wealth. The western advancement of settlement across America during the nineteenth century pitted settlers, miners and timbergetters against the wilderness. The settlers' ideas of wilderness conflicted with the Romantic notion of wilderness and accorded more with the biblical concept of wilderness as barren wasteland. Most settlers saw wilderness as a threat and as an obstacle to the provision of food and shelter, safety and comfort (McCormick, 1989, p.10) (see Appendix 1: Pioneering landscapes).

Britain, her colonies, and America shared a similar interest in natural history, fostered by the influence of the Romantic movement. A recurring theme in Romanticism was a fascination with biology and the study of the
natural world. The growing popularity of natural history alerted people to the scale of environmental change occurring as vast new lands were settled and modified by clearing and by European farming techniques. These changes were very noticeable in America, parts of Africa, and Australia, whereas the impact of agriculture had been felt in the landscapes of western Europe for centuries. Along with the Romantic Movement and the accompanying appreciation of nature came a growing recognition of the great natural beauty of areas such as the Rocky Mountains and the Far West of America. Landscapes such as Yosemite Valley and Yellowstone were recognised as being spectacular, important to the nation and worthy of preservation in perpetuity.

The national parks movement and its influence on landscape preservation
The national parks movement gradually evolved from the nineteenth century onwards, and continues in a modified form today. It arose partly from the Victorian interest in natural history, partly as an outcome of the Romantic movement, and partly because of the emerging sense of national identity associated with recognition of spectacular landscapes in recently-settled countries.

The idea that democratic governments should preserve regions of scenic beauty for all citizens has been traced by Laura Wood Roper at least back to Jefferson in 1815. In that year Jefferson, refusing to sell land around the Natural Bridge in Virginia, wrote 'I view it in some degree as a public trust and would on no consideration permit the bridge to be injured, defaced or masked from the public view.' (Jefferson, 1815, quoted in Roper, 1973, p.285). See Appendix 1: Development of the national parks movement.

Runde suggests that American national parks originated as part of the quest for national identity; that unlike the Old World, the New World lacked an established past, particularly in art, architecture and literature, and, in the Romantic tradition, looked to the landscape for compensation. As westward expansion occurred, majestic landscapes, including the Rocky Mountains and the Pacific slope, were opened up. The contrast between the settled East and the frontier West, and the distance between the two,
magnified their appeal. Runte says that 'here at last - in the blending of
the eastern mind and the western experience - was the enduring spark for
the American inspiration of national parks' (Runte, 1987, pp.7-9).

It is a little strong to suggest that national parks were an 'American
invention' (Nash, 1970, pp.726-35), for their development drew on a long
history of parks and reserves, but it is true that the American model was
adopted worldwide. Yosemite and Yellowstone provided models that
were adopted by other countries, although interpreted differently in
different circumstances.

National parks were tied to the idea of protecting the forest. George
Perkins Marsh, in his seminal book, Man and Nature, published in 1864,
argued that destruction of natural resources could make the planet unfit
for human habitation and ultimately could even threaten the existence of
humankind. These ideas reflected an early attitude to conservation that
would not be fully taken up for another century (McCormick, 1989, p.11).

The first national parks were generally forests and high country, partly
because of the threat posed by loggers and timbergetters, and partly because
of the majestic nature of much of the mountain scenery. Later, as other
types of areas such as deserts and alpine wilderness came to be appreciated,
these too were set aside as national parks. Shoard (1982, pp.55-73) notes
that, in Britain, no parks were initially created in the lowlands, and the
choice of upland country was influenced by the trends in North America.
Shoard mentions key figures in the conservation movement and indicates
how their perceptions favoured the selection of upland areas. Thus
Vaughan Cornish, a prominent environmentalist and 'a typical child of
the Romantic movement' favoured mountains and sea-lapped headlands,
while John Dower, author of a British government report on national
parks and raised in Northumberland and the Yorkshire Dales, favoured
high moorland. Reservation of national parks in Australia reflected a
growing appreciation of a natural environment strange to European eyes,
and a willingness to cut the cultural ties to the landscapes of Europe.

There were several levels of meaning attached to the formation of
national parks worldwide, from the simple recreational concept and
pleasure in natural beauty, to the healing powers of nature and the development of national identity and collective pride in the 'monuments' of a nation. The use of the word 'monument' to describe particular natural environments, such as Organ Pipes National Monument, recognises that these environments have meanings attached that are deeper than may be at first apparent (see Sub-section 3.3.3). Bardwell (1974, p.297) sees national parks as being the geographical expression of moral, aesthetic, recreational and nationalistic impulses, and maintains that these influences persist in the form and purpose of the particular national park under consideration. Pepper (1984, p.88) notes that escapism, as well as the desire for spiritual regeneration, partly inspired the establishment of national parks and the attendant wilderness movement.

Prior to the reservation of Yellowstone as a national park, parks had primarily been the province of the rich and privileged. The reservation of Yellowstone marked a significant point in the preservation of public land, as it was set aside for all the people, an important shift away from the idea that particular groups or elites had the right of access to certain lands. Bardwell comments on the significance of the shift:

An area of land was set aside as a national park for the first time in 1872 in the United States. As the statutory withdrawal of an area of the public domain from sale or economically productive use for national spiritual, physical and scientific benefit, this event was without precedent anywhere in the world. The United States federal government thereby assumed a new role, previously almost the exclusive preserve of wealthy, landed social elites.

(Bardwell, 1974, p.7)

The U.S. government assumed the role of manager of Yellowstone National Park and, as a result of this, management decisions were then linked to government policies and decisions. This arrangement safeguarded the public's right of access and introduced and maintained a new balance between public good and private rights. The national park concept encapsulates the idea that when land is reserved there is a community expectation that it is withdrawn from the marketplace, and the community is prepared to forego any commercial gain to preserve this land for its less tangible assets, which are to be shared by all.
Nature as a conscious element in designed environments

Along with the movement to preserve wilderness, efforts were being made to bring nature closer to everyday human existence. Urban open spaces such as town squares and commons had existed for centuries. Parks had also existed through history but had been the preserve of the ruling class, with the public having access only at their behest (Newton, 1971, p.267).

The social reforms of the 1830s and 1840s, particularly in Britain, gave rise to moves to set aside land for recreation, and to have the ownership of that land in the hands of the people (Newton, 1971, p.267). Newton states that, prior to the creation of Victoria and Birkenhead Parks in England in the 1840s, there is no recorded instance of outdoor recreational space on land acquired and owned by the people themselves. These two parks were developed in the less fashionable areas of Britain, as opposed to the great parks of London's West End: Hyde Park, Green Park and Kensington Gardens, which were all owned by the Crown, even though they were open to the public. Olmsted, who visited Birkenhead Park in 1852 commented on the democratic nature of the park and the sense of ownership of the local inhabitants.

I was ready to admit that in democratic America there was nothing to be thought of as comparable with this People's Garden... And all this magnificent pleasure-ground is entirely, unreservedly, and for ever the people's own. The poorest British peasant is as free to enjoy it in all its parts as the British queen. More than that, the baker of Birkenhead has the pride of an OWNER in it... Is it not a grand good thing?


In America open spaces had frequently existed in towns and cities, but generally they had been pieces of land left undeveloped, spaces that had been arrived at fortuitously rather than by design. There were some exceptions to this, for instance the Battery and Bowling Green on Manhattan Island, the squares of Savannah and Philadelphia, and L'Enfant's generous provision for open space in Washington. But in the 1840s the idea of acquiring open space and then setting it aside for the development of a sylvan area for recreation was new (Newton, 1971, p.268). This concept was to lead to the development of Central Park, New York. Frederick Law Olmsted's involvement with Central Park has been
well documented by Newton (1971), Fabos et al. (1968), Oldham (1980) and Roper (1973), among others.

In Australia, the setting aside of reserves and botanic gardens for public recreation was a feature of town development from the earliest years of settlement. In Melbourne, founded in 1838, three areas had been reserved for public recreation by 1842, under the guidance of Charles LaTrobe, Superintendent of the Port Phillip District. By 1856 there were ten parks or reserves within 5 miles of central Melbourne, totalling 3123 acres in area (Bardwell, 1974, p.332). Some reserves were based on the concept of the English common and were a reflection of Australia's close ties with England, as people tried to make the frequently inhospitable countryside take on some of the forms and appearances of 'home'. Other reserves were based on the town planning principles relating to open space and community health which were developing in Britain as part of the social reforms of the time.

Botanic Gardens were an important element in the process of settlement of a new colony, as imported crops and plants were trialled for their suitability. As the colonies expanded, the botanic gardens frequently took on the additional role of pleasure gardens, where people would stroll, picnic, see and be seen (Pescott, 1982, p.6).

During the Victorian era, parks and reserves, from being the exception in town development, became part of normal town planning, and were consciously included as elements in designed environments. This move was supported by the increasing focus on nature and by the influence of the Romantic movement.

Preservation of the countryside, the amenity movement and the national parks movement were coupled with the emerging science of forestry to promote conservation of the natural environment. As the resource potential of many of the forested areas was recognised, and the forestry experience of Western Europe was drawn upon, the concepts of conservation and sustainable yield were brought to the management of many of the wild forest areas of the New World. The concept of utilising the forest resource while conserving nature and enjoying recreation came into conflict with the strict preservationist view that some areas should be
kept in a pristine condition (see Section 2.5 and Appendix 1: Preservation versus conservation). Notwithstanding this conflict, ideas of conservation and sustainable development gradually became central to the early environmental movement and have become major themes today.

Four main factors which underpin our modern approaches to heritage emerge from the history. These are the compartmentalisation of 'science' into 'the sciences' and 'value' into 'values', the increasingly blurred boundaries between the natural and cultural environments which presaged their merging into the single concept of 'heritage environments', the shift in interest from individual specimens to their interrelationships with each other and their environments, and a concern for environmental sustainability.

The philosophical and aesthetic ideals of the Enlightenment and the Romantic movement provided the background for these new attitudes. The Enlightenment brought a scientific approach to nature and incorporated ideas of biological stability, while the Romantic movement romanticised nature, particularly wilderness.
2.5 Twentieth century approaches to landscape as heritage

So far, the two strands of heritage emerging from the built environment and the natural environment, and their relationship to the pervading social attitudes of the day, have been traced to about the beginning of the 20th century. This section sets out to examine the coming together of these strands in the early years of the 20th century, the development of a more international, structured and policy-orientated approach to heritage, and the resultant influence of this on the concept of landscape heritage, particularly for the Australian situation.

2.5.1 Changing attitudes to heritage

Preservation versus conservation

Twentieth century attitudes to heritage were built on the foundations identified in Sections 2.3 and 2.4. The resultant attitudes solved some problems but left others unresolved. One of the fundamental problems to emerge from nineteenth century attitudes to nature, and perhaps the most important unresolved issue, was that of conservation versus preservation. The debate of whether to conserve or preserve highlighted the important question of whether to utilise the natural resource in a sustainable manner or to exclude it from development.

The preservationist viewpoint, championed by John Muir and the Sierra Club, was philosophically close to British protectionism and sought to preserve wilderness from all but recreational and educational use. Preservationists took a mystical and almost religious view of wilderness, regarding it as sanctuary, to be set aside for all time, inviolate and constant in the face of human progress. In contrast, the conservation approach, supported by Gifford Pinchot and others, primarily in the U.S., was founded on the predominantly German tradition of rational forest science and was directed towards the sustainable utilisation of resources (see Appendix 1: Preservation versus conservation).

In the Second World Conservation Strategy Project, 'preservation' is defined as 'keeping something in its present state' (IUCN, UNEP, WWF, 1991. p.211). This is a rather vague definition and that given in the
Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter) is preferred. It defines preservation as follows: 'Preservation means maintaining the fabric of a place in its existing state and retarding deterioration' (Australia ICOMOS, 1988a, p.1). Although the Burra Charter definition was developed for use in cultural environments, it applies also to the natural environment as 'fabric' may be viewed as the natural or cultural material of the place. The Burra Charter which is named after the town of Burra in South Australia where the charter was drafted, is discussed further in Section 2.5.3 and is included as Appendix 6. It was developed in response to the need for an Australian charter dealing with all types of 'places' of cultural significance. Here the word 'place' has a particular meaning:

Place means site, area, building or other work, group of buildings or other works together with associated contents and surroundings. [This definition is expanded by the note] Place includes structures, ruins, archaeological sites and landscapes modified by human activity.

(Australia ICOMOS, 1988a, p.1)

The Burra Charter was intended to guide the conservation of places of cultural significance, but has also been drawn into use for natural areas, becoming the charter used for places of heritage significance in both the built and natural environments.

In Australia, preservation implies the highest level of protection, with the least interference. In the built environment, 'preservation is limited to the protection, maintenance and, where necessary, the stabilisation of the existing fabric but without the distortion of its cultural significance' (Australia ICOMOS, 1988a, p.3). In the natural environment preservation is closely allied to wilderness protection and implies minimal interference, with land uses usually restricted to low impact recreation and education. Preservation is a more limited notion than conservation and has overtones of protectionism (Dawson, 1990, pp.166-8).

The broad use of the term 'conservation' is defined in the World Conservation Strategy, 1980, as:
The management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.

(World Conservation Strategy as quoted in Victoria, Parliament, 1987, p.105)

This definition has been modified in the Second World Conservation Strategy Project as follows:

Conservation. The management of human use of organisms or ecosystems to ensure such use is sustainable. Besides sustainable use, conservation includes protection, maintenance, rehabilitation, restoration and enhancement of populations and ecosystems.


The Burra Charter defines conservation as follows:

Conservation means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance and may according to circumstance include preservation, restoration, reconstruction and adaptation and will be commonly a combination of more than one of these.

(Australia ICOMOS, 1988a, p.1)

The Victorian Government's conservation strategy, Protecting the Environment: A Conservation Strategy for Victoria (1987, p.105), combines the above views of conservation, taking on board the First and Second World Conservation Strategy Project's views on sustainable development and including Burra Charter ideas. It speaks of conservation as including preservation, maintenance, sustainable utilisation, restoration, and enhancement of the natural environment. It also encompasses a concern for the needs of other species as well as the welfare of humans (Victoria, Parliament, 1987, p.105). This definition makes specific reference to the view being increasingly held that nature is more than a resource for human consumption and begins to address the philosophy of nature having value in its own right. The Burra Charter concept of conservation, meaning looking after a place so as to retain its significance, is a useful generalisation of the various approaches to conservation.
There are, broadly speaking, three subsets of conservation: nature conservation, historic conservation, both of which we are concerned with here, and conservation of resources, that is the wise use of energy, minerals and similar resources, including forest resources. Resource and nature conservation overlap.

Conservation therefore implies the sustainable use of natural resources such as forests, rivers and land, and recognises the need to protect the environment while allowing normal development activities to continue (Dawson, 1990, pp.166-8). In the Australian landscape context, it has been approached from two directions, from nature conservancy and from conservation of the built environment. Definitions, tools and techniques from both areas have been brought to landscape conservation, those from the built environment being only gradually and rather uncomfortably adapted for use in the natural environment.

Although the preservation-conservation debate is historically based it leaves us with definitional problems today, as terminology may be vague, is probably still evolving, and may differ from one institution to another, and from one country to another. There is a difference in usage of both 'preservation' and 'conservation' between Australia and the U.S. which must be clarified to fully understand the work that follows. The definition of preservation adopted by Australian heritage organisations and as described above, contrasts with that generally adopted in the U.S, where 'preservation' is generally used to describe the process of looking after a place to retain its historic or cultural value. In Australia the broad process of looking after a place to retain its significance is termed conservation, as described above, and can encompass both historic conservation and nature conservation. In the U.S. the term 'conservation' generally refers to nature conservation (meanings may be referred to in the Glossary).

The merging of attitudes to nature and the built environment
The preservation-conservation debate occurred in both natural and cultural arenas and caused the differing views of heritage to move towards each other, so that the debate, while at times hostile, generated some common vocabulary and common understanding about the importance of
looking after places which were considered to have value. There was an increasing recognition that the natural environment could not always be separated from the cultural environment, and that the concept of the natural environment was to some degree a cultural construct. Cultural elements could exist within natural environments and vice versa.

As confidence in the ability to evaluate the natural environment grew, and as the gap between those working with natural heritage and those working with cultural heritage narrowed, these two aspects of heritage began to be addressed as a whole. This did not mean that one organisation or profession could necessarily deal with the whole range of issues, rather that there was a willingness to see them as different ends of a continuum (see Appendix 1: Merging of attitudes - Australia).

2.5.2 Development of Heritage Charters
As the various streams of what was to become the environmental movement were evolving from about the turn of the century onwards, and as more general and international approaches to conservation of both the built and the natural environment were occurring, it became evident that there was a need for policy at the international level and a common vocabulary. These needs gave rise to the early heritage charters, which were refined and developed over a number of years. The first of these charters was the Athens Charter, produced in 1933, which was ultimately adopted by the League of Nations, the forerunner of the United Nations (see Appendix 1: Athens Charter). The meeting which generated the Athens Charter also led to the formation of CIAM, the Congres Internationaux d'Architecture Moderne, which maintained an international network of architects during World War II, and which incorporated heritage conservation into town planning, and later conveyed ideas of modern architecture and planning to the world (Banham, 1963, p.70).

CIAM had an essentially internationalist focus - it was concerned with 'global' civilisation and related heritage, rather than 'local' culture and heritage. This contrasted with the views of Ricoeur (1961), Frampton (1990) and others, who held that local culture and critical regionalism were more important. Ricoeur encapsulates the dilemma:
But in order to take part in modern civilization, it is necessary at the same time to take part in scientific, technical, and political rationality, something which very often requires the pure and simple abandon [sic] of a whole cultural past. ... There is the paradox: how to become modern and to return to sources; how to revive an old, dormant civilization and take part in universal civilization.

Ricoeur (1961, pp.276-7)

Frampton poses 'critical regionalism', an architectural style whose elements are derived indirectly from the peculiarities of a particular place, as a possible solution to this dilemma (Frampton, 1990, pp.20-1). The Postmodernists were also preoccupied with the ideas of difference and the nature of architecture being 'local to place'. This is in direct contrast to the internationalist approach of CIAM. The internationalist approach was built into the post-war reconstruction of Europe and was reflected in the directions UNESCO took regarding heritage - that there was a collective heritage and a collective responsibility to preserve it. UNESCO was therefore at the CIAM pole of the CIAM/critical regionalism debate. Some elements of UNESCO'S stance were transferred to the early Australian Heritage Commission, where they met the 'local to place' ideas arising from the grass-roots heritage organisations, and where a useful working compromise was reached for the Australian situation (see Appendix 1: UNESCO).

The idea that nations had a responsibility to protect their heritage was expanded at the United Nations Conference for the Human Environment, held in Stockholm in 1972, and eventually led to the World Heritage Convention and the World Heritage List (see Appendix 1: World Heritage Convention).

At the international level and within the UNESCO system, heritage in the environment was divided into natural and cultural categories from the outset (Australia, Parliament 1982, p.212; Serventy, 1986, p.ii). This division was derived from their early separation and was to flow through into many heritage organisations worldwide, while other organisations, including the Australian Heritage Commission, tried to integrate the two. The Report of the National Estate (Australia, Parliament, 1974, pp.371-8) reviews administrative arrangements in other countries and discusses the
reasons for dealing with cultural and natural heritage places in one organisation. 'Many of the skills are involved in both areas... There is no absolutely finite dividing line between the cultural and natural environment. There is therefore bound to be some overlapping of roles.' In addition the practicalities of negotiation and funding were more readily handled by one organisation.

The second major heritage charter was the *Venice Charter* of 1964, which was adopted by the newly formed ICOMOS (International Council on Monuments and Sites) in 1965 (see Appendix 1: Venice Charter). The failure of attempts to modify the *Venice Charter* at the ICOMOS conference in Moscow in 1978 led to the development of the *Burra Charter* in Australia (see Appendix 1: Moscow conference). The *Burra Charter* was drafted by a group of heritage professionals in Australia and was designed for Australian conditions. Notionally it was an expansion and clarification of the *Venice Charter*, but in reality it was designed to stand alone. This charter was first published in 1979 and is known as the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)* (*Australia ICOMOS*, 1988a), or more commonly, the *Burra Charter* (see Appendix 6). The guidelines which are attached to the *Burra Charter* were not added until later and were developed progressively. The charter has undergone some minor revisions, the most recent of these in 1988.

A charter known as the *Florence Charter* was devised by the ICOMOS-IFLA (International Federation of Landscape Architects) International Committee for Historic Gardens in 1981, and was designed as an addendum to the *Venice Charter*. Its preparation embodied a recognition that it was specifically designed to deal with gardens and was not intended to apply to the broader landscape or the natural environment. It has had little impact in Australia, and all the heritage organisations in Australia are now geared to the *Burra Charter*.

### 2.5.3 An Australian policy framework for heritage

The Committee of Inquiry into the National Estate

Before discussing the *Burra Charter*, it is useful to briefly examine the background to heritage conservation in Australia.
Prior to the 1970s efforts at heritage conservation in Australia had been relatively fragmented and dispersed, with little coordination across organisations or states (see Appendix 1: Australian heritage prior to the 1970s). The climate for both historic conservation and nature conservation had gradually been developing, but improved rapidly from 1972 on, when the longstanding Liberal Government was replaced by a new Labor Government which had fresh ideas regarding a number of issues, among them cultural and natural heritage. Prior to 1972 there had been no federal mechanism for identifying or protecting 'special features' or heritage on government land, and therefore there had been no basis for policy or funding relating to heritage (Australia, Parliament, 1974, pp.224-6). From 1972 to 1975 important environmental legislation was enacted and initiatives were taken by the Australian Government.

A rapid rise in public interest, and protests over conservation questions and urban problems, led the Australian Government to set up the Committee of Inquiry into the National Estate in May 1973 (Webb & Wright-McKinney, 1976, p.273). (see Appendix 1: Committee of Inquiry into the National Estate). The report of the Committee of Inquiry recommended setting up an Act of Parliament and a statutory organisation to advise and manage the National Estate.

The Interim Committee on the National Estate
The original Committee of Inquiry into the National Estate (1973-74) was succeeded by an Interim Committee on the National Estate (1974-75). The Interim Committee was the means by which a transition was made from the ideas of the Inquiry to the fully fledged Commission. The Interim Committee was independent, had a majority of non-government appointees, and had representatives of Commonwealth departments with a stake in heritage places.

Monies available to the Interim Committee were large compared with anything available before or since. This allowed the initial groundwork to be undertaken in a way that later would have been financially prohibitive:
We had nearly ten million dollars to distribute every year. That was fantastic because it was possible to use that money in a very exciting way. It was also a little daunting because we had to try and work out a good way of distributing it...We tried very hard to not just respond to what people put to us, but to try and determine what range of activities it would be useful to develop.

(Yencken, D., 1990, pers. comm.)

The establishment of the Australian Heritage Commission

The Interim Committee was succeeded by the Australian Heritage Commission, created by the Australian Heritage Commission Act 1975 (Australia, Parliament, 1982; Webb & Wright-McKinney, 1976, p.273). At the first meeting of the Australian Heritage Commission in July 1976, the Commission agreed to recommend that Australia seek representation on the World Heritage Committee, that it apply for membership to ICOMOS, and that a Register of the National Estate be set up (Australian Heritage Commission, 27 July, 1976, pp. 6-9).

By the time the first commissioners were appointed to the Australian Heritage Commission in 1976 the government had changed, the economy was depressed and funds had become more limited than in the early Whitlam era. While still not at previous levels, the National Estate Grants program continues today. In addition to providing grants, the Australian Heritage Commission plays a fundamental role in heritage networking throughout Australia.

The National Estate

The term 'National Estate' is widely used in Australia to describe the collective property with all its diverse manifestations which Australians have decided is worthy of conservation (Davison, 1991, p.3). It was originally coined by the eccentric Welsh architect, Clough Williams-Ellis, in the late 1940s, when he spoke about the economic case for an orderly, far-sighted and managed national estate. It was picked up by a speechwriter of John F. Kennedy, who wished to project the concept of a 'new frontier'. Kennedy said:

We must expand the concept of conservation to meet the imperious problems of the new age. We must develop new instruments of foresight and protection and nurture in order to
recover the relationship between man and nature and make sure that the national estate we pass on to our multiplying descendants is green and flourishing.

(John Fitzgerald Kennedy, 1963, quoted in Australia, Parliament, 1974, p.5)

In 1972 Prime Minister Gough Whitlam's speechwriters 'scoured Kennedy's speeches for ideas with which to present the kind of image of the world that Whitlam wanted to present' (Yencken, D., 1990, pers. comm.). The concept of National Estate was first adopted as an objective of Australian Government policy in 1972 (Australia, Parliament, 1974, p.20).

The National Estate concept was intended to be broad. The Committee of Inquiry described it as 'a powerful crystallisation of an emergent but hitherto almost unfocussed idea. ...The National Estate is a limited and valuable possession ... ' (Australia, Parliament, 1974, p. 20).

The Australian Heritage Commission Act 1975 defines the National Estate as follows:

For the purposes of this Act, the national estate consists of those places, being components of the natural environment of Australia or the cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community.

(Australian Heritage Commission Act 1975, Part 1, 4(1))

The Australian Heritage Commission says of the National Estate:

It thus consists of all those places which through public process have been identified as worth keeping and handing on to future generations. Such places include wildlife habitats, natural ecosystems, landscapes of great beauty, grand buildings and structures, humble dwellings, work places, ruins, sites of historic events and Aboriginal places such as dreaming tracks, rock art sites, ceremonial and archaeological sites.

(Australian Heritage Commission, 1987a, p.1)

Note the reference to 'places' as defined by Australia ICOMOS, (1988a, p.1, see Glossary). More simply National Estate can be defined as the 'things that you want to keep' (Australia, Parliament, 1974, p.20).
The list of the places recognised as part of the National Estate in Australia is known as the Register of the National Estate and is prepared by the Australian Heritage Commission (Australian Heritage Commission Act 1975, Part IV, 22(1)). To the 30th of June, 1987, just on 8500 places across Australia had been identified by the Australian Heritage Commission as part of the national estate (Australian Heritage Commission, 1987, p.1). As at July, 1993 the number of places on the Register is approximately 10,000.

The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)
The Australian chapter of ICOMOS, the International Council on Monuments and Sites, was established with the support of the Australian Heritage Commission in 1976 (Bickford, 1991, p.38). Australia ICOMOS had a strong conservation philosophy, and this, plus disillusionment with the Venice Charter, initiated the development of the Burra Charter.

In 1979 the Australian Heritage Commission supported Australia ICOMOS in its development of the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter) (the Burra Charter and Guidelines are appended as Appendix 6). This is a relatively brief charter, couched in plain English, which has remained essentially unchanged since 1979 except for minor revisions in 1981 and 1988. It is accompanied by three guidelines as follows: Guidelines to the Burra Charter: Procedures for Undertaking Studies and Reports, first adopted in 1988 (1988b), Guidelines to the Burra Charter: Cultural Significance, first adopted in 1984 and revised in 1988 (1988c), and Guidelines to the Burra Charter: Conservation Policy, first adopted in 1985 and revised in 1988 (1988d).

The Burra Charter was built on the Venice Charter, with much of the rhetoric removed, with close attention to definition of terms, and with some revisions based on the discussions of the Moscow conference. It was a change from the previous charters in that it was straightforward and simple. It applied to 'places' of cultural significance.

The term 'place' is very important and is used when dealing with heritage
in Australia in a very specific way. It is defined carefully in the _Burra Charter_ and describes the diverse range of sites which it is possible to list on the Register of the National Estate (see Glossary and p.39).

Other heritage terms are also carefully defined in the charter. These include the concept of cultural significance which incorporates broad criteria for evaluating the heritage of a place. 'Cultural significance means aesthetic, historic, scientific or social value for past, present or future generations' (Australia ICOMOS, 1988a, p.1, see Glossary and Chapter 3).

Although the _Burra Charter_ was intended to be for the conservation of places of cultural significance, it has been drawn into use in the natural environment, and has become the charter used for places of heritage significance in both the built and natural environments. The Australian Heritage Commission, all government heritage organisations and most voluntary heritage organisations in Australia use it as the basis of their work, as do almost all state and voluntary heritage organisations. It should be noted that, although this charter was much broader than previous charters and was designed to deal with all places of cultural significance, it was still primarily developed by those working in either the built environment or archaeology.

Detailed notes on the principles which underlie the _Burra Charter_ are based on discussions with Dr. Miles Lewis, Department of Architecture and Building at The University of Melbourne, who attended the Moscow conference and was party to the original discussions and revisions to the charter (see Appendix 6: _Burra Charter_ ). These conservation principles stemmed originally from art and museum restoration, then were applied to archaeology, architecture, town planning and lastly to landscape conservation.

The first principle allows for missing or damaged parts to be replaced by plain fabric, similar in overall shape but distinguishable from the original. This provides an impression of the whole, thereby maintaining the design intent and original form, but the additions are clearly distinguishable. In landscape this principle is harder to apply, as landscapes do not always have a design intent and they change with time due to natural processes.
However the principle that infill should be recognised and recorded as such is still useful.

The second major principle, anastylosis, incorporates the idea that it is legitimate to put together the components of a place which have been separated in some way. Later the term anastylosis took on a broader meaning and came to include both the first and second principles, as the ideas were related. Therefore it is considered legitimate conservation practice to put extant original pieces together and to replace the missing pieces with identifiable and neutral substitutes. Recreation of structures is only carried out when other alternatives are not practicable or possible, and new parts or structures should be clearly defined as such.

These principles need a more liberal interpretation for the landscape than for the built environment, as plant materials, by their very nature, have a finite lifespan. When considering landscapes there needs to be some flexibility to replant with similar plant material, frequently using the same species as the original, or even the same genetic stock. The principle may therefore still be applied.

More explicitly, the *Burra Charter* contains the following principles as interpreted by Bickford:

1. That the cultural significance of a place is embodied in its fabric, its contents and its setting, and the associated documents;
2. That the cultural significance of a place is best retained by first identifying its significance and its significant fabric, then by considering all the issues associated with its use and its future, and from those investigations developing a policy for its conservation; and
3. That the keeping of records will facilitate the understanding of places of cultural significance, and their interpretation.

(Bickford, 1991, p.41)

The above principles mean that a place is best conserved when intervention in the fabric is minimised, when all aspects of significance and periods of a place are respected without undue emphasis on one period at the expense of another, and when the evidence relating to a place is not distorted.
The guidelines attached to the *Burra Charter* explain aspects of the charter and spell out the process of establishing cultural significance. They separate the establishment of cultural significance of a place from decisions regarding its future use and management (Australia ICOMOS, 1988c, p.1). 'The separation of these two processes means that views about the importance of a place are not clouded by the knowledge of what might be its future uses, or of how much funding is available to conserve it' (Bickford, 1991, p.39).

Use of the *Burra Charter* by the Federal Department of Housing and Construction in 1980 marked government acceptance. Today the *Burra Charter* is recognised by federal, state and local heritage organisations, both statutory and voluntary, and it provides a sound philosophical basis and common approach upon which a diverse range of heritage problems may be addressed. The *Burra Charter* now underpins conservation of the built and the natural environment in Australia and any funding from either the Australian Heritage Commission or the National Trust requires acceptance of its principles. The widespread acceptance of the charter and its guidelines has put the assessment and conservation of places of heritage significance in Australia on a sound foundation.
2.6 Conclusions

While solidly built on foundations from the past, the concept of heritage is relatively recent, and is largely a nineteenth and twentieth century phenomenon. During Victorian times, and because of changes brought about by the Industrial Revolution, heritage became of wider concern, more democratic and more egalitarian than previously. Places considered worthy of preservation were now judged by ordinary people in terms of their values, rather than by kings and popes. This is taken into consideration when these values are discussed in Chapter 4.

Enlightenment philosophies of the seventeenth and eighteenth centuries saw the separation of 'science' into 'the sciences', and 'value' into 'values', thereby opening the way for consideration of a number of values in the landscape. Social, scientific and aesthetic ideas of the eighteenth and nineteenth centuries provided the basis for our modern concept of heritage, and led ultimately to the values encapsulated in the Burra Charter: aesthetic, historic, scientific and social value.

As we see from the discussion on the Enlightenment, the Picturesque and the Romantic movement, there are other values incorporated in heritage value beside those of the Burra Charter, notably psychological value. One expression of psychological value is the need for wilderness and closeness to nature, which emerged when the Romantic movement changed the biblical view of wilderness as wild place, to wilderness as sanctuary. Incorporated in the shift is the idea that some wilderness areas should be set aside for all time, leading to the national parks movement, and later to the large wilderness reserves of today.

The two streams of heritage, from the built environment and the natural environment have merged. This convergence extends to landscape heritage. The evolution of landscape heritage from these two major streams has influenced the way landscape heritage is viewed at every level. As the strands merged, they were addressed in a more unified fashion than previously, and came to be regarded as a continuum, with the built environment and the natural environment at the two poles. All landscapes that we might consider for their heritage value, fall somewhere
on this continuum. This assists our understanding of landscape heritage value, in that all components of value might appear in each landscape, irrespective of where it appears on the continuum. Nevertheless it may be useful to categorise landscapes into types to facilitate discussion.

In the merging of the two strands of heritage, there was a growing acceptance that natural heritage is a cultural construct, and that attitudes to nature were culturally determined. There was also an increasing recognition that the natural environment could not always be separated from the cultural environment. This meant that the concept of cultural significance could be generalised as simply significance, as it became evident that natural significance was a cultural construct.

By the beginning of the twentieth century, the foundations of our modern attitudes to heritage had been put in place. The concept of World Heritage was firmly established and a collective consciousness of heritage, and hence landscape heritage, had developed. Heritage was an international activity in which the various strands were interwoven in a complex way. The increasing internationalisation of heritage generated the need for organisations, heritage charters, and above all, heritage theory. Nations and international bodies are listing, classifying, planning and managing heritage places, and therefore the need for common ground in our judgements has become essential, hence the search for criteria.
Plate 3: Cultural landscape near Red Hill, Victoria, illustrating a landscape resulting from pastoral and agricultural activities carried on for over one hundred years.

Photo: Mark Schapper
Chapter 3: LANDSCAPE HERITAGE VALUE

3.1 Introduction

So far, the evolution of landscape heritage has been traced to the present and some important conclusions have emerged. It has been shown that landscape heritage has developed from two major streams, that many different types of landscape can be regarded as heritage, and that heritage value is now judged and appreciated by the public at large, rather than by an elite.

Now, current theory on landscape heritage must be examined to determine the factors which may contribute to landscape heritage value. As these factors form the foundations upon which criteria for assessment can be based, it is important to identify and understand them. Before proceeding with this it is necessary to define the concept of landscape heritage more specifically than has been done in Chapters 1 and 2 (see Section 3.2), so as to provide a sound basis for understanding its various aspects. Following this, landscape heritage types, and the concept of landscape heritage value are explored (Sections 3.3 and 3.4 respectively).
3.2 The meaning of landscape heritage

Before discussing the meaning of landscape heritage, the terms 'heritage' and 'landscape' require some attention.

3.2.1 The meaning of 'heritage'

The term 'heritage' encompasses the concept that there are ideas, objects and places, which have value to a range of individuals and groups (see Appendix 2: Evolution of the term 'heritage'). It includes the idea of the flow of events over time at a place, and the continuity of day-to-day living that may be expressed by the character and physical nature of things or places. *The Oxford English Dictionary* (1989) defines 'heritage' as 'that which has been or may be inherited; any property and especially land which devolves by right of inheritance', implying heirs and a succession.

The *Australian Heritage Commission Act 1975*, does not define heritage, but concentrates instead on the term 'National Estate' (see Glossary and Section 2.5 for 'National Estate' and 'place'). David Yencken, founding Chairman of the Commission, explains that they steered away from writing down a definition of heritage, as this could prove limiting, and they wished to retain as broad a perspective as possible (Yencken, D., 1990, pers. comm., 30th August). While the Act does not include a definition of 'heritage', the Commission describes heritage as 'those places which Australians have identified as worth keeping' (Australian Heritage Commission, 1990a, p.3).

The Province of Ontario, Canada, sees heritage from the standpoints of moveable heritage, immoveable heritage, and intangible heritage. The Brief to the *Canadian Cultural Policy Review* describes heritage as follows:

> Our heritage is with us in a multitude of forms, in our natural surroundings and in the human order. Some of it is still intangible in our minds and hearts, unrecorded: our customs and traditions, our habits and our rituals. But more and more of it is deposited somewhere as a tangible object... These legacies, living or dead, must be valued, judiciously preserved in good and usable order, to be interpreted and reinterpreted even as we add to them daily. If these are not, we will become - at the least - helpless
amnesiacs. They are the principal deposits of whatever we know, the sources of our judgements, of our intellectual and spiritual vitality and of our ability to adapt and renew.


Heritage is related to people and their values and is more than an uninformed or unknowing response. It relies on some awareness of the activities or events that have occurred over time and have given the object or place its present characteristics and value. An understanding of the meanings and values that society attaches to its heritage forms part of the culture in which we live, enriches the lives of the present generation and provides some continuity between past and future generations via the existing physical fabric.

The Encyclopedia of Urban Planning reinforces the link between heritage and value by defining heritage in terms of value. 'The value of areas of particular historic interest in cities and towns is that they are part of the cultural heritage...' (Whittick, 1974, p.496). Landscape heritage value is explored further in Section 3.3.

For whom does a place have heritage value?
The concept of heritage is related to people and the values they hold. Whether something is heritage or not depends on the object or place being considered, the person or group considering it, and the context within which it is being considered. The designation of heritage relies on people's interpretation of the world, which in turn, relies on value judgments. As Lowenthal says:

...the present always shapes the past...We can no more foresee our grandchildren's heritage needs than our grandparents could have predicted our own manias for historic preservation, for authentic reenactment, or for rediscovering roots. We cannot stand aside from the heritage we present: later we will be seen as an integral part of it.

(Lowenthal, 1986a, p.45)

As heritage is related to people and their values, in designating heritage a clear view of those for whom the objects or places have heritage value must be established. This provides a link between the people valuing
heritage and the object or place being valued. In effect it means that there is a 'user' or 'consumer'. This may be an individual; for example, personal memorabilia is usually the province of the individual or immediate family group. It may be a small group, such as a cultural minority, or a large group, such as a state or nation.

Significance, cultural significance and level of significance
The concept of 'whose heritage' leads to the concept of significance and level of significance, that is, to whom is an object or place significant, how significant or important is it, and for what reason is it significant?

'Significance' is a fundamental concept in heritage conservation and is concerned with why a place or a thing is worth keeping. The term 'significance' has a precise definition in heritage conservation circles, and significance to the community in the heritage sense is frequently referred to as 'cultural significance'. This term is one of the key definitions operating within heritage conservation in Australia, and is defined by the Burra Charter as:

Cultural significance means aesthetic, historic, scientific or social value for past, present or future generations.

(Australia ICOMOS, 1988a, p.1)

Cultural significance is linked with aspects of heritage value via this definition. Cultural significance is expanded in the guidelines to the Burra Charter:

Cultural significance is a concept which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past or enrich the present, and which will be of value to future generations. Although there are a variety of adjectives used in definitions of cultural significance in Australia, the adjectives 'aesthetic', 'historic', 'scientific' and 'social' given alphabetically in the Burra Charter, can encompass all other values.

(Australia ICOMOS, 1988c, p.1)

James Kerr, in his important book 'The Conservation Plan: A guide to the preparation of conservation plans for places of European cultural
significance' (1985, p.3), describes the concept of cultural significance. 'Cultural significance is a simple concept. Its purpose is to help in identifying and assessing the attributes which make a place of value to us and to our society.' As 'natural significance' is considered to be a cultural construct (see Section 2.6), 'cultural significance' may be referred to as 'heritage significance' or simply 'significance', when dealing with landscape heritage.

In historic preservation terminology, the process of looking after the cultural significance of a place is termed 'conservation'. In fact, this is historic conservation. Use of the word 'conservation' in environmental terminology refers to the wise use of resources, including nature (for a detailed discussion of the meaning of 'conservation' see Sub-section 2.5.1 and Glossary).

There are other types of significance which may be applied to places, such as economic significance, but heritage is concerned with natural and cultural significance, generalised as 'heritage significance' or simply 'significance'. It is in the particular use that the attributes clarify that significance.

Taylor (1988, p.ix) reinforces the idea that significance is related to a local, regional or national constituency. In establishing to whom a place is significant and how widely accepted the significance is, some idea of heritage value is established.

Once the question 'To whom does the place have significance?' is answered, the level of significance can be considered. Certain heritage objects may be of limited significance or may be considered of local interest only; others may be generally accepted as being of regional, national or global importance. While something may be of limited significance at the state or national level, it may be highly significant to a particular minority group within the community. Similarly something may be of no significance to the community but highly significant to the individual.

Conservation of places of heritage significance is usually undertaken by those who consider them to be important, whether these be individuals or
groups. Individual or family heritage is generally considered to be the responsibility of the family group, while the collective heritage of community groups and nations becomes the province of community organisations such as the National Trust and state government organisations.

Statements of significance
Concise statements which summarise the significance of a place have been adopted by Australia ICOMOS, the National Trust, the Australian Heritage Commission and other heritage organisations in Australia. These statements are known as 'statements of significance', 'reasons for significance', 'citations' or 'listings'. Variations of these statements exist in many heritage organisations around the world, and provide a succinct summary statement and a distillation of the reasons why the place is considered to be of heritage value. As such, statements of significance are a very important source of information regarding the attributes of places with heritage value, and the criteria by which heritage value is judged. An attribute is a property of something. 'Attribute' is further defined and differentiated from similar terms in Sub-section 4.6.1.

Statements of significance are prepared by professionals in the heritage field, and are screened by the heritage organisation in question before being approved. They therefore represent a consensus view held by the organisation regarding the heritage value of a place and have official approval of that heritage organisation. Heritage organisations generally have a constituency, such as members, who have delegated the decision regarding heritage value to the organisation, or they are government organisations, theoretically put in place by the electorate, who again delegate authority to the organisation. Both types of organisation are accountable to, and represent, the public in some way. When the system is functioning properly, the greater community has a say in what is designated as heritage and for what reasons.

Statements of significance are used at the international, national, state and local level, and are found in a wide range of organisations dealing with different types of heritage. They are therefore a common, comparable and concise source of information, encapsulating the main reasons that certain
places are considered to be of heritage value.

3.2.2 The meaning of 'landscape'
Landscape can be an important expression of heritage. The following Sub-section seeks to define and clarify the concept of landscape as a prelude to examining the concept of landscape as heritage.

Meinig comments on landscape:

Any landscape is so dense with evidence, and so complex and cryptic that we can never be assured that we have read it all or read it aright. The landscape lies all around us, ever accessible, and inexhaustible. Anyone can look, but we all need help to see that it is at once a panorama, a composition, a palimpsest, a microcosm; that in every prospect there can be more and more that meets the eye.

(Meinig, 1979, p.6)

The term 'landscape' has many meanings, encompasses a complex set of concepts, and has been derived from several sources. The following discussion explores some of those meanings, defines the meaning adopted here, and sets the scene for examining and explaining the concept of landscape heritage.

The term 'landscape' has evolved from several directions and in several languages (see Appendix 2: Evolution of the concept of landscape). Today the word has no single meaning; rather it represents a number of complex and diverse concepts, depending on its context and the discipline in which it is used. Its meaning ranges from physiographic land units to the seen view. The U.S. Forest Service defines landscape as:

The sum total of the characteristics that distinguish a certain area on the earth's surface from other areas. These characteristics are a result, not only of natural forces but of human occupancy and use of the land.


This expands the concept of landscape from the purely visual towards an ecological interpretation, although visual values still play a significant part in the overall concept. This shift in emphasis from the purely visual to a more ecological view, overlain by cultural values, is echoed by Jones and
Jones (1977), who define landscape as 'landform and land cover forming a distant visual pattern. Land cover comprises water, vegetation, and man-made development, including cities.'

In the broadest sense, landscape can be seen as the background to our lives; the setting for human existence. It is much more than the seen view, more the substrate on which we live; the very surface of the earth. Landscape may be viewed as a continuum, and the U.S. National Park Service manages landscapes along a continuum from 'natural' to 'cultural' (Melnick, 1983a, p.88). One end of the landscape continuum is concerned with physical, biological or man-made features set in a natural land surface unit. These features can be analysed and assessed by their component parts, for example the underlying geology, geomorphology, soil type and vegetative cover, and the ecological processes operating on the land. The other end of the landscape continuum focusses on cultural, aesthetic and visual features. These can also be assessed, but their relationship to other factors is much harder to define. Landscape also incorporates social values, for instance a consideration of heritage and community values.

Winty Calder, in her book *Beyond the View: Our changing landscapes* (1981, pp.6-13), describes eight different concepts of landscape. A notional location of these concepts on a landscape continuum has been developed by the present writer in Figure 3.1 to give a more detailed perspective on possible interpretations of the term landscape. The concept of landscape adopted by various groups or individuals will fit somewhere between the poles of the landscape continuum, and is influenced by their philosophy, values and past experience.
Figure 3.1: Meanings of landscape and their position on a notional landscape continuum
The figure shows the major concepts and meanings of the term 'landscape', and their notional position on a landscape continuum, with concepts embodying landform and ecological meaning at one pole, and visual concepts of landscape at the other. The concepts outlined by Calder (1981, pp.6-13) are incorporated into this scheme.

<table>
<thead>
<tr>
<th>'NATURAL'</th>
<th>'CULTURAL'</th>
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<tbody>
<tr>
<td>LAND-BASED/ECOLOGICAL</td>
<td>VISUAL/SCENERY CONCEPT</td>
</tr>
<tr>
<td>LANDFORM CONCEPT</td>
<td>LAND-USE CONCEPT</td>
</tr>
<tr>
<td>• based on biophysical factors</td>
<td>• Land-use patterns</td>
</tr>
<tr>
<td>e.g. mountain ranges, plains</td>
<td>• Incorporates social factors</td>
</tr>
<tr>
<td>• physical geography</td>
<td>• Used for modified land,</td>
</tr>
<tr>
<td>terrain classification</td>
<td>e.g. agricultural land</td>
</tr>
<tr>
<td>REGIONAL CONCEPT</td>
<td>HERITAGE CONCEPT</td>
</tr>
<tr>
<td>• Large-scale zones</td>
<td>• Includes cultural/social factors</td>
</tr>
<tr>
<td>e.g. world climatic zones</td>
<td>• Based on a combination of natural</td>
</tr>
<tr>
<td></td>
<td>and cultural history</td>
</tr>
<tr>
<td>ECOLOGICAL CONCEPT</td>
<td>PARKS &amp; GARDENS CONCEPT</td>
</tr>
<tr>
<td>• Based on ecosystem types</td>
<td>• Based on horticulture</td>
</tr>
<tr>
<td>• Includes vegetation, water etc,</td>
<td>and the art of garden design</td>
</tr>
<tr>
<td>• May have some human influence</td>
<td></td>
</tr>
</tbody>
</table>
Jackson interprets landscape as something to live within, a unity of people and environment:

We have ceased to think of it [landscape] as remote from our daily lives, and indeed we now believe that to be part of a landscape, to derive our identity from it, is an essential precondition of our being-in-the-world, in the most solemn meaning of the phrase. It is this greatly expanded significance of landscape that makes a new definition so necessary now.

Meinig, in his introduction to The Interpretation of Ordinary Landscapes (1979, pp.1-7) has an interesting approach to explaining the meaning of landscape. Because it is an elusive concept with diverse meanings, he defines what it is not, rather than what it is. By this means he differentiates it from related concepts. Meinig draws the distinction between landscape and the following concepts: nature, scenery, environment, place, region, area and geography (see Appendix 2: What landscape is not).

As the concept of landscape is a broad one, and as landscape is a reflection of culture and of individual and social attitudes, several additional perspectives need to be examined to add understanding to the general concept of landscape. The most significant of these perspectives are landscape as 'ordinary landscape', landscape as 'vernacular landscape' and landscape as 'cultural landscape'. 'Ordinary landscapes' may be equated with everyday landscapes; vernacular landscapes are landscapes associated with local culture and tradition; and cultural landscapes are landscapes modified by human use (see Appendix 2: Ordinary landscapes, vernacular landscapes and cultural landscapes). Meinig (1979, p.3) explains the link between landscape and culture: 'Environment sustains us as creatures; landscape displays us as cultures.

Melnick sees continuity as being an important attribute of cultural landscapes. 'Cultural landscapes represent a continuum of land-use that spans many generations. They have evolved from, or exhibit, remnants of earlier known human settlement patterns or land-use practices for that area' (Melnick, 1981, p.56).
The Australian Heritage Commission says:

...the term 'cultural landscape' has been applied to those parts of the land surface which have been significantly modified by human activity to distinguish them from natural or wilderness landscapes which have little or no evidence of human intervention.

(Blair & Mahanty, 1987, p.6, also see Australian Heritage Commission, 1987b, p.2)

The Australian Heritage Commission has difficulty with Aboriginal landscapes under this definition, even though the connection between indigenous Aboriginal communities and the landscape is very strong. In traditional Aboriginal culture, features of the landscape had names and legends attached to them, giving them cultural significance. The Australian Heritage Commission tends to view these landscapes as natural or wilderness landscapes, even though they may contain highly sophisticated examples of rock art, and even though the vegetation has been so modified by fire over forty thousand years of fire-stick farming that the evolution of the whole floristic association has been affected.

Melnick describes and encapsulates the concept of cultural landscapes:

They are areas of farming, mining, ranching and fishing activity which have been settled, used, altered, and changed for many years, and through many generations. Often, but not always, the processes of landscape control have been passed from parent to child and then to grandchild. These processes, be they fencebuilding, seed planting, cattle grazing or boat building, have been consistently altered and changed over time. What is most important to these landscapes, however, is the continuity of use, both in terms of human input and type of use. From another perspective, we must recognize that these landscapes represent the real, physical, tangible legacy of one generation passed down to another generation. Therefore they are significant reminders of the past. They are reflections of the common, everyday history of the country.

(Melnick, 1983a, p.88)

Taylor (1988, p.v) describes an Australian perspective on the term 'cultural landscapes' - 'rural and urban landscapes that people have settled and altered through time.' He draws the distinction between urban and rural, and goes on to point out that the term 'cultural landscape' is commonly
used in the literature when 'rural cultural landscape' is the focus of attention.

'Cultural landscapes' may be used in the Australian context to describe landscapes influenced by particular cultural groups, including Chinese goldminers, German and Scottish farming settlers, and other identifiable cultural groups. The term is gradually broadening to cope with indigenous culture.

The concept of cultural landscapes incorporates the idea that landscape is a dynamic entity, and includes, to varying degrees, consideration of ecological and cultural systems. This dynamic attitude to cultural landscapes as heritage can best be expressed as a feeling for the natural process and seasonal changes, coupled with the cyclic farming activities and land management practices, which, when carried out over many years, form the rural landscapes we know. Rural here is taken to mean pastoral and agricultural, cropping and grazing. Hence the term 'cultural landscape' carries many of the complexities embodied in the term 'landscape', but has a generally accepted meaning as non-urban landscape clearly influenced by human activity.

In the present work the term 'landscape' is taken to include natural and cultural factors and the visual resource.

3.2.3 The meaning of landscape heritage
Landscape as heritage
So far, the concepts of heritage and landscape have been explored. Now the way that these two concepts have come together to generate the concept of landscape heritage can be examined.

That landscape can be regarded as heritage is evidenced by the way a range of landscapes have been preserved by governments, organisations, minority groups and individuals. The work of organisations such as the Australian Heritage Commission, the National Trust in all its forms, and National Parks services in various countries, demonstrates that there is a generally accepted concept within many communities and countries that landscape can be regarded as heritage, and that the collective property that
we wish to keep and hand down to future generations is worthy of serious attention and the commitment of funds and resources. There is an established view that landscape as heritage is worth bothering about.

We have seen in Chapter 2 how the concept of landscape as heritage has come from two different directions. On the one hand it is derived from conservation of the built environment with influences from archaeology and architecture (see Sections 2.2 and 2.3). On the other hand it is derived from attitudes to the natural environment (see Section 2.4). Working definitions of what constitutes landscape heritage have gradually emerged as our thinking regarding these landscapes has progressed.

Definition of landscape heritage

The definition of landscape heritage adopted here is broad and is based on the concept of dynamic natural and cultural systems expressed in the landscape which are worthy of preservation for present and future generations. Landscape heritage describes landscapes which demonstrate a range of natural factors overlain in varying degrees by historical and cultural factors that are considered to be of sufficient significance to retain for present and future generations. Historical and cultural factors may modify and possibly irreversibly change the landscape. In its simplest form, landscape heritage describes the landscapes we want to keep for present and future generations. This definition permits both natural and cultural landscapes to be regarded as heritage.

Another way of looking at landscape heritage is by viewing it as the product of land-use through time, where land-use is meant in the broadest sense, that is, not necessarily solely human use of the land, but the way the land was formed, the natural and cultural forces which shaped it, and the resultant character of the land. Thus the present work uses a broad definition of landscape heritage, spanning the geological, prehistorical and historical timescales, rather than the more limited concept of historic landscapes, which in Australia means landscapes developed since European settlement. This definition allows a broad view and permits both natural and cultural landscapes to be regarded as heritage. It is consistent with the position adopted by the Australian Heritage
Commission and the National Trust in Australia, and is generally accepted by those dealing with landscape heritage in Australia.

As landscape has living components which naturally change with time, and cultural components which also change with time, landscape is seen as a dynamic entity, and various levels of change are not only tolerated but are anticipated. This leads to a view of landscape heritage as being much more of a dynamic entity than the heritage of the built environment - heritage expressed in bricks and mortar. The concept of landscape heritage must therefore incorporate an understanding of its dynamic nature, encompassing both ecological and cultural systems.

In order for a landscape to survive, it must be ecologically viable to some extent. Moreover, for a landscape to have functioned long enough to become a heritage landscape, the ecology must be generally fairly closely in tune with natural systems. There are, of course, exceptions to this; for example, where pioneer settlements were established on marginal land and have since been abandoned, leaving the evidence of their failed farming venture, or where mining settlements have been abandoned.

Landscape heritage is the general term used here for the overall subject area, whereas a particular landscape considered to have heritage value may be called a heritage landscape, i.e. the name used for a particular heritage place, rather than the name of the field of interest.

The idea of natural landscapes as heritage and designed landscapes and gardens as heritage is well established. Landscapes less well-recognised as having heritage value are the rural and cultural landscapes where there is a varied and confusing mix of natural and cultural factors.
3.3 Landscape heritage types

3.3.1 The need for landscape heritage types
Discussion in the preceding sub-sections has dealt with heritage and landscape heritage in broad terms. We have seen that landscape heritage ranges from wilderness and natural areas to the urban environment, and that landscape heritage conservation has evolved from these two very different areas of endeavour. Moreover, cultural landscapes as defined previously form the middle ground between built and natural environments.

To cope with the complexity of landscape heritage in a systematic and analytical way, some scheme for dealing with different types of landscape heritage is needed. One of the major problems in landscape heritage work is the scope of the field, frequently covering several disciplines. Some subsets are required in order to reduce the complexity, and so that like may be compared with like when assessing landscape heritage.

The concept of a continuum of heritage, ranging from natural to built landscape, has emerged from several writers. Webb and Wright-McKinney (1976, p.276) have alluded to the idea of a continuum for all types of heritage places, and have suggested that natural and cultural heritage requires a unity of approach on a regional and national scale. This concept implies that a range of types exist at present. With reference to cultural landscapes, Melnick (1981, p.56) refers to a temporal continuum. 'Cultural landscapes represent a continuum of land-use that spans many generations'.

The historical division between natural and cultural environments is reflected in the current criteria adopted by the World Heritage Committee, the committee which lists World Heritage sites, whose criteria are divided into 'cultural' and 'natural' (see Chapter 5).

The Australian Heritage Commission also builds into its operations the division between natural and cultural heritage environments, using three divisions, natural, Aboriginal and historical. It is therefore felt that this
basis for subsetting landscape types is justified, although it is done in the present work with great caution. Lynch's words regarding classification are recalled:

Classification is treacherously simple... what is once assembled is rarely separated later... On the other hand, classification of some kind must be used if a problem is to be manageable... Past classifications can be a guide, but each new problem requires one to think out once more the strategic clusters of activities that are appropriate for programming the new solution.

(Lynch, 1971, pp.29-30)

3.3.2 Types of landscape heritage
This section outlines the range of landscape types that may be regarded by both the community and by heritage organisations as their heritage. These are wilderness areas, natural landscapes, Aboriginal landscapes, pastoral landscapes, non-urban industrial landscapes, parks and gardens, cemeteries and urban landscapes. These types were based on the landscape heritage literature examined for Chapters 2 and 3, and on the author's practical experience in dealing with landscape heritage over many years. At this stage they were considered to be broad categories only, and were open to review if this was warranted by the document analysis and focussed interviews of Chapter 6, and the content and cluster analyses carried out in Chapter 7.

A brief description of each landscape heritage type follows.

Wilderness
Wilderness is large tracts of pristine country, frequently including water bodies, remote from civilisation, where natural processes can continue essentially undisturbed. Early wilderness legislation (U.S. Wilderness Act 1964) defines wilderness as 'areas where the earth and its community are untrammeled by man, where man himself is a visitor who does not remain' (see Plate 4).

The Australian Heritage Commission describes wilderness as having two
essential attributes: remoteness and naturalness (Australian Heritage Commission media release, 1988). It will be noted that remoteness is an absence of something, i.e. people or the evidence of people, rather than the presence of something. Robertson (1985, p.5) says:

There is general agreement amongst conservation groups, and a growing number of government bodies, that wilderness is characterised by:
- remoteness from significant human development
- remoteness from mechanised access
- aesthetic naturalness, i.e., it looks substantially untouched and unmodified
- biological naturalness, i.e., the area's natural species and processes function largely undisturbed.

Also implied is that the tract of land is large enough to have an intact core area, the integrity of which is ensured by a buffer zone surrounding it. Robertson includes in her reasons for preservation of wilderness: maintenance of the gene pool as a basis of future diversity of plants and animals; preservation of species which may have important applications for man; protection of water resources; and maintenance of wilderness as a benchmark against which environmental change can be measured (Robertson, 1985, p.5).

Wilderness can be seen as a concept which has a cultural base; but there may be no absolute standards for determining wilderness, and values attributed to wilderness may not be universal or even very tangible.

Wilderness may be considerably affected by certain types of human activity, particularly that of indigenous populations, yet still be classified as wilderness. Kakadu in northern Australia is an example where the area has been greatly modified by the local population and which contains rich evidence of the local culture, but which is still perceived by the population in general to be 'wilderness'. It would not fit the criteria of remoteness from civilisation if indigenous people were to be considered, thus highlighting difficulties with the Australian Heritage Commission's definition of wilderness. Wilderness is represented by different types of landscape in different countries and in different geographical areas (see Plate 4).
Plate 4: Collage illustrating an alpine wilderness area at Dinner Plain near Mount Hotham, Victoria. Naturalness and remoteness characterise this area.

Photos: Author
For some, wilderness conjures up a vision of a barren, stony place, for others it has mountain and forest images. Wilderness can be tropical jungles, icy plains, forested mountains, open grassland, coral reefs or waterless deserts. Shoard says of wilderness:

In Britain it is heather and grass moorland that is considered by leading conservationists to fulfil most completely the role of wilderness environment - a place in which people, usually singly or in small groups, can roam at will and feel completely cut off from twentieth-century urban life.

Shoard (1981, p. 105)

In Australia, two areas which embody the concept of wilderness are the Western Tasmania Wilderness National Parks and the Wet Tropics of Queensland World Heritage Area. These areas, as well as having high natural values, have cultural value, and include important Aboriginal sites. Wilderness is dealt with in more detail in Sub-section 4.3.2.

Natural landscapes
Natural landscapes are areas of natural bush, forest, coastal vegetation and other natural communities. These types of landscape are referred to as 'natural environments' by the Australian Heritage Commission.

Natural landscapes are set aside because of their ecological and biophysical richness and diversity, including the presence of unusual or interesting geological or landform features, rare or threatened species or communities, unusual occurrences of plants or animals and the ability to experience nature. This experience can include the feeling of being remote from the mechanised world and close to the natural order (see Plate 5). In these areas biophysical factors and influences predominate. The history of how these landscapes have been preserved in the past is described in Sections 2.4 and 2.5.

Natural areas, such as managed forests, may support some commercial activities but still provide the community with a nature experience and rich recreational opportunities.
Plate 5: Natural landscapes: bush areas in remote inland country in the Pilbarra region of Western Australia.

Photos: Mark Schapper
Still other natural landscapes appear pristine but have been managed by the indigenous people for thousands of years; in effect, for so long that the landscape has been permanently modified and now seems entirely natural to our city-based communities.

Natural landscapes are similar to wilderness landscapes, but differ in that they may be less remote or less pristine, they may have more recreational or industrial components, such as forestry, and they are usually more accessible. Wilderness areas are often contained within natural areas, with the natural areas providing a buffer zone. It is common to find good infrastructure, facilities and accommodation in a natural area. This contrasts with wilderness areas where there is a conscious effort to preserve the wilderness experience by limiting facilities and access.

Natural landscapes are represented in a range of geographical zones in Australia, and include national parks, rainforests, dry sclerophyll forests which may be used for timber production, coastal zones and wetland areas (see Plate 5).

Aboriginal landscapes
Aboriginal landscapes are those which clearly demonstrate evidence of indigenous culture. Kakadu in northern Australia is a prime example of an Aboriginal landscape, and is of world heritage significance. There are approximately seven thousand examples of rock art in Kakadu National Park (National Park ranger, 1990, pers. comm. 16 May), and the art, including rock carvings and paintings, ranges in age from relatively recent to thousands of years old (Pearson, C., University of Canberra, 1990, pers. comm. 16 May). Of these seven thousand-or-so examples of Aboriginal art, about three thousand have been documented or photographed and the remaining four thousand have yet to be recorded in detail.

Today there is still an indigenous Aboriginal community living in the area. It has migrated from the area known as Ubir, to live across the South Alligator River in Arnhem Land, moving in 1979 because of tourist pressure (see Plate 6).
Plate 6: Aboriginal landscapes: Kakadu National Park, Northern Territory, showing the rocky scarps and ledges under which much of the rock art is found.

Photos: Mark Schapper
There is still much evidence of their past and present culture in the form of art galleries, rock carvings and land management practices. Aboriginal methods of managing the land are now carried on by the park rangers, in consultation with, and with the assistance of, the local people.

The Aboriginal people used fire-stick farming and digging-stick farming extensively as land management tools. Repeated firing, accompanied by climatic change, has led to a complete change in vegetation type, from a fire-sensitive rainforest vegetation to a fire-resistant sclerophyllous vegetation - the Eucalypts so characteristic of Australia. This change in vegetation and increase in fire frequency with the coming of the Aboriginal people from Asia about forty thousand years ago has been well documented by White (1986) (see Appendix 2: Aboriginal land management). Many Aboriginal landscapes are classified as wilderness landscapes, even though they are highly modified landscapes and contain much evidence of cultural activity. This highlights the difficulty with some definitions of wilderness.

Rural landscapes
Rural landscapes are the pastoral, agricultural and other landscapes which demonstrate rural land uses and activities. They may vary in scale, and may encompass large tracts of country such as a valley and its settlements and small tracts such as individual properties, 'stations' or farms. They also include rural industrial or non-urban industrial landscapes such as those of timbermilling and mining. Rural landscapes may also be referred to as 'cultural landscapes', although this term is a more general term than 'rural landscapes' (see Glossary and above). Different types of rural landscapes are detailed further below.

Rural landscapes are a complex mix of natural and cultural attributes, where European cultural features have been superimposed on the existing landform and existing ecological conditions to a greater or lesser degree.

Rural landscapes differ from Aboriginal landscapes in that they demonstrate evidence of non-indigenous culture, even though both types
represent landscapes in which natural and cultural factors operate. Rural landscapes may, for instance, demonstrate the land-use patterns of European settlement and farming, such as agriculture, market gardening, mining and other rural practices.

Pastoral and agricultural landscapes
Pastoral landscapes are those rural landscapes which are predominantly used for grazing stock; hence they are usually grassland or lightly wooded areas. The original vegetation may have undergone varying degrees of modification or removal, and frequently pasture 'improvement' by fertilizing and seeding has been carried out. Landscape modification is a function of the amount of clearing, chemical and seed application and grazing intensity, combined with other factors such as climate and runoff.

Agricultural landscapes are those used for cropping, and are usually more modified than pastoral landscapes. Cropping can result in great landscape modification. Clearing and ploughing the land can disturb the soil structure and make it extremely difficult, if not impossible, to ever re-establish indigenous vegetation.

It is not the intention here to necessarily separate pastoral and agricultural landscapes in a classificatory sense, rather to understand how they have different manifestations in the landscape. These two types of rural landscape may merge together, and may even be found on the one property or farm, where some paddocks are used for stock and others for crops.

Pastoral and agricultural landscapes are generally very poorly understood, as they contain a number of natural and cultural attributes, ranging from architectural features to remnant bushland, which need to be assessed to establish heritage value.

Both pastoral and agricultural properties often have well developed gardens and farm complexes, including homesteads and farm buildings (see Plate 7).
Plate 7: Pastoral landscapes: Historic farms on the Mornington Peninsula and in the Western District of Victoria, and at Braidwood, New South Wales.

Photos: Author
Some homesteads are large complexes with surrounding outbuildings and structures such as woolsheds, shearing sheds, holding pens and stock yards. Some are like small towns, with their own blacksmiths, dairies, meathouses and the like.

Non-urban industrial landscapes
Non-urban industrial landscapes are those which reflect the activities of rural and non-urban industries other than agriculture, for instance timbergetting and mining. In these landscapes industrial history tends to dominate and they may have little aesthetic value. They may be landscapes associated with timberfelling, milling or manufacture, mining towns or sites, water mills or flour mills, quarries for road metal or brick clay, or evidence of transport and communications, such as railway lines, timber tram lines, bridges and the like (see Plate 8).

Parks and gardens
Parks and gardens may cover a wide range of scales, from small and humble to large and grand. They may occur in the country or the city. In Australia fine gardens in mountain landscape settings were developed as summer retreats from urban areas. These leafy retreats are known as the hill station gardens, and are reminiscent of those established by the colonials in the Indian foothills to escape the heat of the plains in summer.

Parks
Parks of heritage value may take many forms. They may be historic places, they may be places of horticultural, aesthetic or social interest or they may be of scientific importance, such as botanic gardens.
Plate 8: Non-urban industrial landscapes: The top two plates show an abandoned goldmine at Croydon, in north Queensland, the lower plates show a World War II fortification near Darwin, and a Eucalyptus distillery near Bendigo, Victoria.

Photos: Jan and Mark Schapper
Gardens

Gardens may range from cottage gardens, significant for their great age or horticulture, through larger gardens, perhaps attached to villas, demonstrating a range of design styles, social status and geography, to huge and grand mansion gardens.

Cottage gardens were established predominantly for food, particularly during early settlement in Australia. The cottage garden is small in size, as it is associated with relatively modest buildings. The rear garden typically features vegetables, herbs, and other edible plants, while the front garden may feature flowers to enhance the appearance of the house. The layout of these gardens is characteristically simple and often geometric.

Many villa gardens were built in Australia during the land boom of the 1880s, when private landowners had great wealth. The size of the land owned by individuals increased along with the size of the house. The layout of the garden usually consisted of narrow side paths linking an ornamental front garden with a large area at the back. The rear section usually contained a detached kitchen, laundry and other outbuildings. The garden was often symmetrical and complementary to the style of the house. Another typical feature of these gardens was the introduction of cast iron fences. Such gardens are typical of Melbourne.

Many mansions were built in Australia in both city and country areas during the 1870s and 1880s as industrial and rural wealth increased, and as a result of the Australian gold rushes.

Mansions are usually associated with large blocks of land, preferably with a river frontage. The associated gardens were large and grand and contained coach houses and servants' quarters. The layout was typically a mixture of English Landscape School and gardenesque style. The garden may have had an axial focus, and typically featured sweeping driveways with an extensive network of paths. The large area allowed large trees, particularly conifers, to feature, along with abundant shrubs, flower beds and palms. The gardens also frequently contained structures such as croquet lawns, fountains, ponds and lakes, and later, tennis courts (see Plate 9).
Plate 9: Parks and gardens. Plate illustrating mansion, villa and cottage gardens.

Photos: Author
Cemeteries
Cemeteries were originally attached to churches as graveyards. Later they were multidenominational, were separated from churches, and had their own separate area of ground which was landscaped in the manner of a public park. Many cemeteries have historic, aesthetic and horticultural importance and are an important repository of historic information (see Plate 10).

Plate 10: Cemeteries: Walhalla Cemetery, Victoria.
Urban landscapes

Urban landscapes may be highly urbanised environments lined with buildings of historical or architectural importance. They may be plazas or streetscapes. Streetscapes of heritage value may be tree-lined avenues of horticultural or aesthetic significance, predominantly featuring trees and grassy road verges, or they may be highly urbanised areas. The latter are known as urban conservation areas or zones (see Plate 11).

Urban industrial areas

Urban industrial areas of heritage significance generally are set aside for their industrial history. They may have little aesthetic appeal but may be of historic and social significance. Although these areas are considered as landscape in the broadest sense, they have not been considered in detail in here, as they considered to be more closely related to architecture than landscape, and are thus outside the scope of the present work.
3.4 Landscape heritage value

So far, the history of landscape heritage has been traced and an understanding of the meaning of landscape heritage has been developed. An idea of the different types of landscape to which the concept might apply has also been explored. Now the reasons why a landscape may be considered to have heritage value need attention so that we understand the basis of decisions regarding heritage value. However, before this can be done, some understanding of the concept of value with respect to landscape heritage, and the link between landscape heritage value and significance, must be developed. Also the question of who judges landscape heritage value must be addressed. This will provide a theoretical basis for examining different facets of landscape heritage value which are called here components of landscape heritage value (see Section 4.3) and measures of landscape heritage value (see Section 4.4).

This section examines the concept of value with respect to landscape as heritage, the relationship between value and significance, and the question of who judges landscape heritage value.

3.4.1 The concept of value with respect to landscape heritage

The Shorter Oxford Dictionary defines value as the relative status of an idea, object or place and 'the estimate in which it is held, according to its real or supposed worth'.

Value is a term which has a number of different meanings and which can be defined in several broad ways. These relate to use, exchange or emphasis. In the first of these, something can be considered of value if it is useful or desirable, for instance the value of fresh water in the desert. The second use refers to value as purchasing power, either in economic terms or in some other type of exchange. This implies economic value as either monetary value or value for barter. The third use is the one most relevant here, and applies to value as determining one's principles or standards, one's judgement as to what is important, the relative importance of something (Australian Concise Oxford Dictionary, 1987).
The Heinemann Australian Dictionary refers to values as 'any ideals, goals or standards upon which... beliefs are based.' Rolston (1986, pp. 74-90) says that values are mental and ideal, not actual or material. They are not physical objects, but rather human constructs that reflect people's response to the world.

In the present work the word 'value' is used in preference to 'values' except where 'values' is used as a plural for 'value'.

People value different things and places for different reasons. It is the intention in this section to explore some of the reasons for ascribing value to different landscapes, thereby giving them significance. As Rolston (1986, p.74) has pointed out, values are mental constructs reflecting an ideal. They are subjective rather than objective, and are intangible rather than tangible and material. Their somewhat elusive nature does not mean they are unimportant. They exert a profound influence on the way people view the world, including landscapes, and direct the way we behave and live.

How do we view value with respect to landscapes and how does this assist us to understand the reasons for setting aside landscapes as heritage? What is landscape heritage value and what are the expressions of it, both tangible and intangible?

The landscapes that we, as individuals or as societies, regard as having worth are the places we describe as our landscape heritage. What aspects of these places give them value to the individual or to the group? What factors contribute to their value? On what criteria are they judged?

The value of a place may be known to an individual, without there being any tangible expression of this to the outside world; only an understanding by the individual as to what he or she considers important. On the other hand, there may be some expression of the value of a place. This expression may take the form of public appreciation of a place, of setting it aside on some kind of list or register, of action to preserve or conserve the place, or of attaching economic value to a place.

As well as the relatively comprehensible and tangible economic value, heritage value may be expressed in less comprehensible and tangible terms such as aesthetic value, historic value, scientific value, social value,
recreational value or intrinsic value (Australia ICOMOS, 1988a, p.1; Rolston, 1986, pp.74-90). These aspects of the overall concept of landscape heritage value will be explored later in this section. Before doing this, the link between significance and value, and the issue of who judges landscape heritage value, need to be briefly examined.

3.4.2 Landscape heritage value and its relationship to significance

As outlined in Section 3.2.1, the concept of significance is a fundamental concept in heritage conservation and is concerned with why something is worthy of conservation. The concept of value is linked to the concept of significance by the common idea of 'worth'. Once a place is deemed to have value, based on some particular aspect or factor, it is considered to be significant or to have natural or cultural significance. The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter) defines cultural significance thus 'Cultural significance means aesthetic, historic, scientific or social value [my emphasis] for past present or future generations.' (Australia ICOMOS, 1988a, p.1).

Natural significance is not defined, and the a recent trend is to speak of 'significance', rather than 'cultural significance' or 'natural significance'. 'Significance' embodies both natural and cultural significance, and deals with the problem of natural significance being a cultural construct (see Sub-section 2.5.1. under 'The merging of attitudes to nature and the built environment', and Sub-section 2.5.3. under 'The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)'. Also, see Sub-section 3.2.1 under 'Significance, cultural significance and level of significance').

The Guidelines to the Burra Charter: Cultural Significance go on to expand the concept of cultural significance and its relationship to value:

Cultural significance is a concept which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past or enrich the present, and which will be of value to future generations.
Although there are a variety of adjectives used in definitions of cultural significance in Australia, the adjectives 'aesthetic', 'historic', 'scientific' and 'social', given alphabetically in the Burra Charter, can encompass all other values.

(Australia ICOMOS, 1988c, p. 1)

Kerr (1985, p.3) enunciates the concept in a simpler manner. Of the concept of cultural significance he says, 'Its purpose is to help in identifying and assessing the attributes which make a place of value to us and our society.' Again the link to value is stated.

Thus the link between significance and value is well recognised within the Australian heritage framework. Values leading to significance are explored further in the following Sub-sections 3.3.2 and 3.3.3 of this chapter.

3.4.3 Who judges landscape heritage value?

Who decides a landscape is of heritage value, and for whom? The link between people, place and heritage significance is discussed in Section 3.2.1. Someone must make a judgement about heritage significance. This judgement must be made either by those for whom the place has significance, or on their behalf.

Frequently decisions as to what has heritage value are made by experts who purport to represent the community. Experts generally take the responsibility of representing the community seriously, and do as diligent and systematic a job of the selection of places of heritage value as is possible. How well experts represent the community is something which is increasingly receiving attention (Snelling, 1992).

How do we determine the groups which should be represented in our selection of heritage? Usually this is done by going out into the relevant community and surveying that community in some way. The working class and/or those that are less able to express themselves to bureaucracies tend to miss out. Migrant groups may be reticent to express their need for places to be considered as their heritage. Various groups may have differing views of the heritage value of the same place. Groups which are
no longer a major force in a certain region or have been diluted and assimilated, for instance the Swiss community near Geelong or the Welsh tin miners at Welsh Village, Victoria (now a ghost town), may only be represented if their history is recognised by the broader community. This contrasts with the German community in the Barossa Valley, which has flourished and retained its own history, including the winemaking history, and this has been acknowledged by the broader community as an important part of the history of Australia.

It is important to develop a process to review the possible groups and determine whether they are adequately represented. It is also important, when defining what is landscape heritage, to understand for whom the place in question represents heritage, thus establishing the link between the people valuing heritage and the places being valued.
3.5 Conclusions

Landscape heritage covers a range of landscapes including natural landscapes and cultural landscapes, all of which are considered worthy of retention for present and future generations. This range of landscapes can usefully be subdivided into landscape types. Typing landscapes systematises the variety and permits like to be compared with like during assessment. Certain values, hence certain criteria, will be more prominent in some types than in others, leading to the possibility of typical criteria profiles for different landscape types. This will be tested in Chapter 7.

For a landscape to be set aside as heritage, it must hold meaning, thereby having value. Someone must judge this value, thus heritage is related to people and their values. A clear understanding of the groups for whom the place in question holds value is needed before heritage value can be defined.

In the past, heritage has been designated largely by professionals. As heritage is closely related to the community and to the values they hold, there is an increasing move to include the community in decision-making regarding heritage. Heritage is a cultural matter and so varies with different cultural groups. What is of heritage value to one group, may not be to another.

The concept of significance is a cultural construct and includes 'cultural significance' and 'natural significance', and the terms 'cultural significance' and 'significance' can be used to describe the same phenomenon.

It can be seen from the work in Chapters 2 and 3 that there are various aspects to landscape heritage value, notably those identified in the Burra Charter (see Section 2.5), and economic or exchange value (see Section 3.4). These will be explored further in the following chapter.
Pastoral landscape near Woodstock, Victoria, demonstrating the overlay of cultural features on the natural landscape. Note the creekline and distant wooded hills, with improved pastures in the foreground. Photo: Mark Schapper
Chapter 4: ASSESSING LANDSCAPE HERITAGE VALUE

4.1 Introduction

In the previous section, value and what it means in the landscape heritage context was examined, and the links between the people valuing and the place being valued were established. So far, values have been discussed in general terms, but in order to assess whether a place has landscape heritage value, we need to know what the different facets of value are. This section seeks to understand the different facets of landscape heritage value and how they can be used as criteria for assessment.

Current theory on landscape heritage is examined to determine the factors which may contribute to landscape heritage value. As these factors form the foundations upon which criteria for assessment can be based, it is important to identify and understand them (see Sections 4.3, 4.4, 4.5 and 4.6). Once these have been clarified, the use of criteria as tools for their assessment can be discussed (see Section 4.7). Before addressing facets of landscape heritage value, holistic versus analytical approaches to assessing landscape heritage value are examined (Section 4.2 below).
4.2 Holistic versus analytical approaches to assessing landscape heritage value

There are two ways in which people, both experts and the community-at-large, can assess landscape heritage value. The first of these is by a holistic approach; the second is by analysing the individual components of landscape heritage and then synthesising the findings into a composite landscape heritage assessment.

A holistic approach to landscape heritage assessment is one in which a judgement is made in a single comprehensive step, without consciously analysing component parts or aspects of the place being assessed. This type of assessment was characteristically undertaken in the early days of landscape assessment, and many places of great merit were set aside in this manner. It took little justification to classify as heritage landscapes of such beauty and natural diversity as Wilson's Promontory or The Grampians in Victoria. Such value was considered obvious, and justification was considered unnecessary.

When values are less clear-cut, or where they depend on less tangible or less obvious evidence, aspects of landscape heritage must be made explicit in order to understand and then justify landscape heritage value. The need to understand the different facets of landscape heritage is becoming increasingly evident, as litigation on heritage issues increases and comes before courts and planning tribunals, and as both professionals and the community are being asked to be more rigorous and accountable in assessing heritage value.

The reductionist approach does not automatically solve the problem of assessment and it should be approached with some caution. Aldo Leopold encapsulates some of these difficulties in the article *Song of the Gavilan*. He is describing his spiritual response to the river, and contrasting it with the type of analysis which might be applied using an analytical approach:

> There are men charged with the duty of examining the construction of the plants, animals, and soils which are the instruments of the great orchestra. These men are called professors. Each selects one instrument and spends his life taking it apart and
describing its strings and sounding boards. This process of dismemberment is called research. The place for dismemberment is called a university.

A professor may pluck the strings of his own instrument, but never that of another, and if he listens for music he must never admit it to his fellows or to his students. For all are restrained by an ironbound taboo which decrees that the construction of instruments is the domain of science, while the detection of harmony is the domain of poets.

(Leopold, 1987, p.153)

For the purpose of this research the holistic approach has been set aside, even though it is useful in some cases, as it provides too little detail for the assessment and justification of heritage value. The analytical approach has been focussed upon, so that the components of landscape heritage value can be teased out and understood. There is still the problem of combining the components to provide a useful and reliable assessment method, but this cannot be attempted before each is understood. Synthesis is as important as analysis, but cannot be achieved until the analysis is in place.
4.3 Components of heritage value, measures of heritage value and economic value

To turn now to analysing landscape heritage value. On examining the many facets of landscape heritage value, it becomes evident that these fall into three major categories, which here have been called 'components of heritage value', 'measures of heritage value', and 'economic value' (see Sections 4.4, 4.5 and 4.6 respectively).

Components of heritage value are the constituent parts of value and their presence allows heritage value to be established. They include aesthetic value, historic value, scientific value and social value. It is the presence or absence of these subsets of value which determines landscape heritage value. For instance a place has historic value or it does not. The question 'To whom does it have this value?' helps establish its value. One rarely asks 'How much aesthetic value?' or 'how much historic value?' Rather one asks 'What are the manifestations of aesthetic or historic value?'

Measures of heritage value tell us about how much heritage value a place may have. They tell us about the condition or wholeness of a place, how authentic it is, and how unique, rare or representative it is. They tell us how much of these characteristics are present. Measures of value relate more to setting conservation and management priorities than they do to establishing heritage significance. True criteria or 'components of value' enable us to list a place for its heritage value and justify that decision. Measures of value help us to set priorities on places for conservation, interpretation and management. One does not list a place for its condition, but an appreciation of condition is useful for setting conservation, management and interpretation priorities.

There is much confusion in the literature and amongst heritage organisations about the difference between measures of heritage value and components of heritage value. There is no evidence that elsewhere these have been grouped into the categories as described above, or that they had been teased out except as individual characteristics. Economic value refers to the value of heritage places in the marketplace, that is, exchange value.
4.4 Components of landscape heritage value

4.4.1 Identifying components of landscape heritage value

There are a number of values which have been focussed upon in the literature which describe components of landscape heritage value. As landscape heritage is a broad field, these values encompass many areas, including values attached to natural systems and nature, values associated with social and cultural systems, and values associated with history and psychology.

Rolston (1986, pp 73-90) discusses values at the natural end of the spectrum, in particular values with regard to nature. He speaks of life support value, the capacity of the earth to support life as expressed in a healthy environment, 'life value' as reverence for life, recreational value as capacity to provide leisure, scientific value as the capacity to discover knowledge and for intellectual stimulation. He talks of aesthetic value as providing stimulus and vision, diversity and unity, and of stability and spontaneity being of value in the 'formal aesthetic' sense.

At the cultural end of the spectrum, Australia ICOMOS (1988a, p.1) takes the view that, while there are a great variety of different types of value that could contribute to cultural significance, they can be encompassed by the values 'aesthetic', 'historic', 'scientific' or 'social'. Although the Burra Charter was developed for the conservation of places of cultural significance, many of the values outlined also apply to places of natural significance. As discussed in Sub-section 3.4.2, natural significance may be regarded as a cultural construct, and the term 'significance' is preferred.

Meinig (1976, pp.47-54; 1979, pp.33-47) discusses the value of landscape as nature, landscape as habitat, landscape as artifact, landscape as system, landscape as problem, landscape as wealth, landscape as ideology, landscape as history, landscape as place, landscape as aesthetic (see Sub-section 3.2.2: 'The meaning of landscape', and Appendix 2: 'What landscape is not'). These approaches are slightly different ways of expressing ideas about values like those expressed by Rolston and Australia ICOMOS. In addition to reinforcing the Burra Charter values, Meinig indicates several aspects of psychological value, for instance.
landscape as ideology and landscape as place, and also lists economic value: landscape as wealth.

Birmingham et al. (1983, p.9) examine different ways of viewing the landscape which give rise to different ways of valuing it. They speak of the 'things in the landscape' approach which gives rise to valuing technology, science and social history as expressed by objects and places. They also describe the 'Landscape of Occupance' approach, which emphasises natural history overlain by cultural history, and incorporates change and continuity in the landscape. This approach may merge into the 'Man-the-Toolmaker' approach, which is concerned with human activity, and adaptation through time and the way this is reflected in spatial layout and arrangements of things in their settings.

Feilden (1982, p.6) nominates historic, aesthetic, social, architectural, and scientific value as components of heritage value. He also discusses what he calls 'emotional values' and 'use values'. 'Emotional values' consist of wonder, identity, continuity, symbolism and spiritual value. 'Use values' consist of functional, economic, social and political values. These are comparable with certain definitions of value outlined in Sub-section 3.4.1.

Sell, Taylor and Zube describe certain characteristics of landscape which imply certain values:

Landscapes surround...landscapes are multimodal...landscapes provide peripheral as well as central information...landscapes provide more information than can be used...landscape perception always involves action...landscapes call forth actions...landscapes always have ambiance.

(Sell, Taylor and Zube, 1984, pp.71-80)

Chapter 2 highlighted the importance of nature and the links between the Enlightenment, the Romantic Movement, the later National Parks Movement and the evolution of our attitudes to nature. These early attitudes still shape many of the values held today. Chapter 2 also explored the evolution of attitudes to built heritage and how evolution of these attitudes also affects our current heritage values.
The linking of cultural and natural heritage is not new, and there is usually more than one reason for setting aside a place, that is, it may represent a number of values. There may be cross-cultural differences in value, and there may be conflicting values held by different groups in the community.

From the different approaches to landscape heritage value outlined above some commonalities emerge. Psychological and social value, aesthetic value, historic value and scientific value in their various forms are regarded as components of the overall value, termed landscape heritage value. Recreational value could be regarded as a type of social value or treated separately. Economic and educational value have also been mentioned. Various components of what could be regarded as psychological value also emerge. Components of landscape heritage value will be examined in the following Sub-sections. under the headings 'psychological value', 'aesthetic value', 'scientific value', 'social value', 'historic value'. Economic value is dealt with in a separate section (Section 4.6), as it is a different type of value.

4.4.2 Psychological value
Psychological value includes the values relating to nature mentioned by Rolston (1986, pp.73-90) and Meinig (1976, pp.47-54), and the 'emotional values' of Feilden (1982, p.6) such as symbolic and spiritual values.

Psychology is '... one of the disciplines directed towards an understanding of humankind; it is the study of humans and human activity, and encompasses both behaviour and mental activity' (Summers et al., 1989, pp.3-4). Psychological value with respect to heritage includes understanding human needs in relation to the environment, however intangible these may be. People may need to feel that certain environments have meaning and symbolic value, that there is a need for closeness to nature and wilderness, and that childhood experience may create valued environments. These different aspects of psychological value with respect to landscape heritage are discussed below.

Psychological value is related to aesthetic value and social value (discussed in Sub-sections 4.4.3 and 4.4.5). However psychological value refers to
more introspective and individual aspects of valuing the environment, while social value represents values which are more outward looking and reflect aspirations of certain groups.

**Environmental meaning**

Landscapes may be valued because they have meaning. Much has been written on environmental meaning, for instance Rapoport's *The Meaning of the Built Environment: A Non-verbal Communication Approach* (1982) and Csikszentmihalyi and Rochberg-Halton's *The Meaning of Things: Domestic symbols and the self* (1987). Marston (1983, p.11) also talks of the quest for meaning in the environment.

Meaning may be related to symbolic value, to evidence of affiliation with certain ideals, and to memory and identity. It is not intended here to go into the detail of environmental meaning, rather to identify this idea as one of the reasons that a landscape may be considered to have heritage value.

Meaning of place may be manifest or latent. Manifest refers to the overt meaning, while latent refers to hidden or inferred meaning.

Related to the concept of a place having meaning is the concept of sense of place. Seddon (1972) discusses sense of place as evidenced by a particular landscape, that of the Swan River coastal plain in Western Australia. Sense of place is an elusive value related to the character of a place and the feelings it generates in people who know it. Dovey (1985a, pp.93-109) discusses the concepts of place, sense of place and spirit of place, and how these may generate meaning. Green et al. (1985, pp.55-74) attempt to understand a rural community's sense of place using several techniques, including participant photography. Jacobs (1990, p.176) speaks of the deep human need to belong to the landscape and the feelings attaching to that landscape.

Landscape meaning is also related to memory and identity. Lowenthal says, 'All awareness of the past is founded on memory. Through recollection we recover consciousness of former events, distinguish
yesterday from today, and confirm that we have experienced a past' (Lowenthal, 1986b, p.193). Memories can never be fully shared and are thus uniquely personal. Memory converts public events into 'idiosyncratic personal experiences' and thus private memories feel like private property (Lowenthal, 1986b, pp.194-195). Nostalgia is a certain type of memory which tends be a rather wistful and sentimental version of memory, often giving a rosy glow to the past and possibly alienating people from the present (Lowenthal, 1986b, pp.4-14).

Memory is linked to identity. 'Remembering the past is crucial for our sense of identity, to know what we were confirms that we are' (Lowenthal, 1986b, p.197). Identity may be personal, communal or national. Bardwell (1974, p.297) sees national parks as a manifestation of national identity. In A sense of place? A conversation in three cultures (Australian Heritage Commission, 1990b, p.53) the links between place, urban design and identity were recognised.

Memory is linked to the way in which we experience the environment. Kaplan (1985, pp.161-176) discusses ways of understanding how the environment is experienced. In particular, childhood experience may be an important determinant of whether a place is considered to have heritage value or not. Nettleton (1987, p.244) says 'We tend, as adults, to forget how important is the influence of the organic environment upon the growth and development of children'. Cooper Marcus (1978, pp.35-43) believes that the attraction to nature and the outdoors as adults is set in early childhood, when being outside means freedom from parental control. Jeavons (1987, p. 69) concludes that children need access to diverse landscapes for their play, and hence for their development. These places have the potential to later become valued as personal or collective heritage. Moore says that even a derelict landscape can contain a rich language of meaning:

...the pervasive Victorian buildings and industrial bric-a-brac... If just a few of these artifacts were left in place - protected and softened by long grass - kids could absorb a feeling for their historical roots and grow up with an intuitive feeling for their birthplace.

(Moore, 1986, p.228)
Symbolism

Landscapes are valued for their symbolism. Places as well as things have the power to be potent symbols. Symbolism may be personal or it may be common to a group, taking on a social role.

There is a large body of knowledge on symbolism, both in psychology and in literature. It is not the intention here to go into this in any detail, but to note symbolism as a potential reason for regarding a landscape as having heritage value (see Plate 12).

Jung discusses the role of symbols:

Because there are innumerable things beyond the range of human understanding, we constantly use symbolic terms to represent concepts that we cannot define or fully comprehend.

(Jung, 1964, p.21)

Symbols in the landscape may have meaning at a personal, group or national level. Kramer (1976, pp.145-156) speaks of the symbolic landscape expressed in poetry, prose and the writings of early explorers and inhabitants of Australia. Taylor (1992, pp.127-142) echoes these ideas in talking of a 'symbolic Australian landscape'. In this symbolic landscape the 'bush' is romanticised and becomes a national icon. Cosgrove (1984, pp.34-35) discusses symbolic meanings arising from the interaction of social life and particular geographic settings, thus giving landscapes meaning. Appleton (1975, pp.81-112) discusses a framework for dealing with symbolism in the landscape context. He explores the symbolism of prospect and refuge, of light and darkness and of hazard, demonstrating the ways in which landscapes may satisfy psychological needs. Jacobs (1990, p.176) says that for designs to fulfil human needs they must respond symbolically as well as functionally to the client's requirements. Smith points out that there is a dualism between reason and emotion, intellect and feeling, and that both must operate to provide satisfying environments (Smith, P., 1977, p.55).

Symbols may be monuments. Traditionally a monument is an object which has the power to remind us of something important. It may also serve as an example for future generations, a means by which values may
be recalled and upheld. Places such as battlefields may also fulfil the role of monument. Jackson says that towns such as Williamsburg in the U.S. represent a radically new concept of the monument (Jackson, 1980, p.91). Such places may assist in defining national identity and collective pride.

Relph (1986, pp.15-16) discusses 'sacred space' as an expression of symbolism. 'Sacred space is that of archaic religious experience; it is continuously differentiated and replete with symbols, sacred centres and meaningful objects'.

In Australian Aboriginal culture symbolism is an important part of landscape value. Ellis (1990, p.10) emphasises 'the timelessness and coincidence of nature and culture' to the Aborigine. 'Creation', referred to as the 'Dreaming' in Aboriginal culture, gives order to nature and prescribes certain activities and responsibilities, known collectively as the 'Law'. Dreaming is described by Big Bill Neidjie of the Gagudju people (Kakadu is derived from Gagudju):

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This time White-European must come to Aborigine,
listen Aborigine and understand it.
Understand that culture, secret, what dreaming.
Big name ...'dreaming'.
Dreaming e listen. E say...
'Exactly right!
Because that dreaming made for us.           (Neidjie,1989, p.78)
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The Law determines how animals behave, how plants grow, how seasons change and how humans should act. In response to the Law, Aboriginal people are obliged to carry out rituals and tasks, many of which are attached to sacred places, thus integrating what Western culture regards as 'heritage' and daily life. Sacred sites may not necessarily contain any material traces of Aboriginal culture. These sites may 'hold as great or even greater significance for Aborigines than sites containing spectacular rock paintings' (Flood, 1987, p.235). Mulvaney (1989, p.224) describes sacred tracks linking sites.

Suzuki talks about the sacred places of other indigenous people (Suzuki, D., 1992, pers. comm. 19 May; also Knudtson & Suzuki, 1992, pp.121-141).
Above & Right: Nourlangie Rock, Kakadu National Park, Northern Territory, is a landscape of symbolic value to the Aboriginal people. The distant solitary boulder on the rock shelf represents Namanjolg's feather, taken from his head-dress and placed on the rock as a warning against breaking tribal laws.

Left: The Memorial Cross, Mount Macedon, Victoria, has symbolic value at several levels. It has landmark value as it is highly visible and dominates the surrounding countryside. It has symbolic value as a cross and as a war memorial. It also symbolised community renewal and hope when it was re-illuminated after the bushfires of 1983.
The need for wilderness and closeness to nature

The need for wilderness is another aspect of landscape heritage value. Wilderness as a landscape type has been defined in Sub-section 3.2.4. Here it is discussed as an attitude of mind, rather than the physical expression of that attitude. Nash (1967, p.5) speaks of the 'tendency of wilderness to be a state of mind' - that it is a state of mind evoked by a state of nature. He says of the term wilderness: 'The difficulty is that while the word is a noun it acts like an adjective' (Nash, 1967, p.1). This highlights the difficulty of wilderness being a landscape type as well as an attitude of mind. Preece and Lesslie (1987, p.1) define wilderness quality as the extent to which land appears remote from, and undisturbed by, the influence of modern technological society.

In Australia, where there is a growing awareness of indigenous culture and the natural environment, people of European descent are regarding areas of remote and beautiful natural bushland and forest as mystical or even sacred. This is a natural outcome of the ideas of the Enlightenment and the Romantic Movement, followed by the ideals of the National Parks Movement. Nash (1990, p.112) describes similar attitudes in America, where certain national parks are regarded as sacred spaces.

Attitudes to wilderness were not always so benign. John Wycliff who inspired the first translation of the Bible into English in the fourteenth century, used the word 'wilderness' to designate the uninhabited arid lands of the near East. Early settlers carried on the view of wilderness as disordered, uncontrolled and unknown land, fit only for conquest by progress, civilisation and Christianity (Nash, 1982, p.xi-xvi). Nash views wilderness as a basic ingredient of American civilisation and says that the biblical view of wilderness as cursed land was so pervasive that it contributed to the absence of respect for the environment for more than two thousand years (Nash, 1990, p.91). The Judeo-Christian view of wilderness contrasts with the American Indian view, which was of wilderness as hospitable and friendly.

The Western cultural shift to wilderness as sanctuary and sacred place stemmed from the Romantic Movement of the late 1700s and early 1800s, and incorporated idealised and romantic attitudes to wilderness.
Thus mixed feelings are evoked by wilderness. It has taken on spiritual connotations but also evokes feelings of fear and challenge.

A wilderness is a place where one can get lost or 'bewildered'. By developing trails, guidebooks and the like, the wilderness value of an area is seen to be diminished, as the likelihood of being 'bewildered' decreases. Opie (1983, p.13) claims that our interpretation of natural areas and the value we place upon them is as much a state of mind as a set of physical dimensions. This reflects Nash's approach and supports the view that wilderness is both a landscape type and a human need. This matter is further investigated in the content analysis in Chapter 7.

Brooks (1982, quoted in Martin, 1982, p.145), and Hendee et al. (1990, pp.215-216) consider that wilderness visitors view low intensities of use as important dimensions of the wilderness experience. A 'wilderness experience' may also be had in land less remote and less pristine than that strictly defined as wilderness. In these terms a wilderness experience describes a feeling for landscape and nature.

Some individuals experience a sense of comfort and well-being in the knowledge that there are still natural areas that remain largely unaffected by human influence, even if they never experience these areas, or experience them only indirectly through the media. A concept is evolving of wilderness, whether one visits it or not, as a sanctuary for the mind. Often intangible reasons for wilderness preservation are supported by much more rational criteria, such as the presence of unusual or unique geological formations or rare and endangered species (see 'scientific value', Sub-section 4.4.4). In society's desire to preserve wilderness areas, there is a sense that the earth's surface has been so changed by technology and the industrial society that it is important to save some places which have been little affected by this change.

Nash (1990, p.149) explores the rights of nature with respect to wilderness. He says 'humans should understand wilderness areas not as settings for outdoor recreation but as gestures of planetary modesty, expressions of respect and reverence for the intrinsic values of nature'.

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Linked to the need for wilderness is the need for closeness to nature. This view relates more to wilderness as sanctuary, rather than to wilderness as challenge. Proximity to nature is seen as a balm for the soul and as a healing experience. This may be expressed in healthy outdoor activity and recreation, or it may be more closely related to psychological well-being. National parks have been viewed from both these perspectives. Pepper (1984, p. 88) notes that escapism, as well as the desire for spiritual regeneration, partly inspired the establishment of national parks and the attendant wilderness movement.

Psychological value as an aspect of heritage value may be difficult to define. However, from the above discussion it is clear that there are some aspects of how we interact with our environment and the feelings and responses that these generate which are important, which cause us to ascribe heritage value to a place, and which could usefully be further investigated (see Chapters 6 and 7).

4.4.3 Aesthetic value

The *Burra Charter* defines aesthetic value thus:

>Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use.

(Australia ICOMOS, 1988c, p. 1)

Grinde and Kopf (1986, p.310) describe aesthetic quality as 'the aesthetic significance given to a landscape determined by cultural values and the landscape's intrinsic physical properties'. They describe the aesthetic resource as 'those natural and cultural features of the environment which elicit one or more sensory reactions and evaluations by the observer, particularly in regard to their pleasurable effects'. These definitions emphasise that aesthetic value is more than, but includes, visual quality, and that appearance, scale, spatial definition and character, colour, unity, variety, texture, smells and sounds all contribute to aesthetic value (see Plate 13).

Our current attitudes to aesthetic value are partly derived from the
Victorian attitudes to landscape and nature (see Sections 2.4 and 2.5), and partly from traditional formal design training, which incorporates criteria such as form, line, colour and texture.

In the Victorian era attitudes to the aesthetics of landscape, nature and wilderness were linked to the ideals of the Romantic movement. Interest in landscape as scenery was heightened by the interest in landscape painting. By the second half of the eighteenth century, interest in the classical sunburnt landscapes of Italy, with the countrysides dotted by the ruins of antiquity, had been challenged by the Picturesque Movement, exemplified by painters such as Claude Lorraine and Poussin.

Not only was the composition and the role of the scenery being re-examined; the cult of the romantic landscapes added a specific content - wilderness, whether of mountain or forest, always mysterious and often exotic in their location and human activities depicted.

(Heathcote, 1976, p.41)

These Romantic attitudes to aesthetics are reflected in the Burra Charter definition given above, but it seems they have been rather self-consciously incorporated, as there is little explanation as to how they should be used.

The English gentry travelled widely in Europe in search of the scenery which the landscape painters had depicted (see Section 2.4). From the 'awe inspiring ruins of Rome to the sublime majesty of the Alps, the tourists - some 45,000 "English gentry" in 1785 - travelled in search of the scenery which the landscape painters had first brought to public notice.' (Heathcote 1976, p.41).

In addition to searching for the ideal landscape abroad, there were attempts to create it at home. The previous design ideals, exemplified by the formal gardens of England and Europe, were replaced by the recreated and contrived naturalness of the landscaped parks of England. In these parks, the entire view, covering possibly several hundred hectares, was carefully engineered to present pleasing and irregular landscape patterns.
Left and below: Landscapes traditionally regarded as having aesthetic value. In this case is aesthetic value the same as visual value or scenic beauty? Where does aesthetic value stop and psychological value (the need to be close to nature) start?

Plate 13: Landscapes demonstrating aesthetic value.
Photos: Author
The landscape movement, epitomised by the work of Capability Brown, became widespread, and changed the appearance of large tracts of land in Britain (Heathcote, 1976, p. 41).

Many Europeans who came to Australia brought with them cultural attitudes from the Old World. Some, like George French Angas (1847, quoted in Heathcote 1976, p.41) were artists who brought the Picturesque conventions of Europe with them and came 'activated by an ardent admiration of the grandeur and loveliness of Nature in her wildest aspect.'

The open grassy woodlands of the coastal plains of Australia reminded many of the English landscape parks. Here the scenery gave the impression of a 'managed' or 'improved' landscape. Elizabeth Macarthur, seeing the landscape through English eyes, and linking civilisation and wilderness as prescribed by the cultural ideals of the day, wrote in 1795:

- The greater part of the country is like an English park, and the trees give it the appearance of a wilderness or shrubbery, commonly attached to the habitations of people of fortune, filled with a variety of native plants, placed in a wild, irregular manner.

(Macarthur, quoted in Seddon, 1976, p10)

Not all agreed with Elizabeth Macarthur. Charles Darwin (1836, quoted in Heathcote, 1976, p.42) commented on his eighteen-day visit to Australia in 1836: 'The scenery is singular from its uniformity. Everywhere open forest land; the trees have all the same character of growth and their foliage is of one tint.'

The early preservation movement continued the link between aesthetics and heritage established by the dilettanti in their sojourns in Europe. The British National Trust was set up as 'The National Trust for Places of Historic Interest and Natural Beauty' thus linking aesthetic and historic value under the heritage banner (Fedden, 1974, p. 20, 24).

The literature on aesthetics and landscape is vast, and covers a number of fields and disciplines, including art, poetry, writing, geography and
landscape architecture. Within landscape architecture there has been a
great deal of work done on aesthetics and the assessment of visual values.
In landscape quality assessment alone there are many different types of
assessment approaches. These have been systematised by, among others,
Daniel and Boster (1976), Daniel and Vining (1983), and Zube, Sell and
Taylor (1982).

While landscape aesthetics will not be dealt with in detail here, there are
two key points which need to be made. Firstly, while many landscapes
include an aesthetic component in their heritage value, places with no
appreciable aesthetic value may still have heritage value, for instance
certain archaeological digs which may have heritage value based solely on
historic value. Secondly, there appears to be a slightly different usage of
the term 'aesthetic value' in Australia to that in the U.S. In Australia
there is a common belief that aesthetic value is more than the seen view,
or as recently expressed in an Australian Heritage Commission Workshop
on aesthetic value - 'more than meets the eye' (Australian Heritage

Prior to the mid 1970s there was no clearly stated view in Australia
regarding the assessment of aesthetic values of landscape. Lennon and
Forge (1975, p.85) noted in 1975 that categories of features such as
permanent, temporary or transitory, were used, and that contrasts, sound,
smell, feel and emotional involvement were all factors which affected the
aesthetic value of landscape (see Plate 14).

Australia, and in particular Victoria, from the late 1970s on, benefitted
greatly from the work done in the U.S., as there was a series of U.S. experts
advising the Forests Commission of Victoria from that time. This led to
the development of landscape character types for the state of Victoria, and
frames of reference and methods for scenic quality assessment (Leonard
and Hammond, 1984). This work set out a common vocabulary and a set
of criteria for visual assessment, mostly for natural and forest landscapes
in different types of country around Victoria.

In 1979 a report on the assessment of visual and aesthetic landscape
qualities was prepared for the Australian Heritage Commission (Fabos and
McGregor, 1979, p.20). This report highlighted some of the difficulties of
assessing the aesthetic value of landscapes, and noted that many aesthetic assessment studies did not improve on subjective judgement.

The Australian Heritage Commission is still grappling with the issue of assessing aesthetic value. It has not applied the same effort to this issue as it has to historic or social value, although it has recently published a discussion paper (O'Brien and Ramsay, 1992), and conducted a workshop on aesthetic value (27 October, 1993). The Commission has spent much effort on complex systems of assessment when it needs to pay much more attention to understanding the nature of aesthetic value. How can it be assessed if it is not understood?

Meinig (1979, p.46) discusses landscape as aesthetic:

> There are many levels and varieties to this view [of landscape as aesthetic], but all have in common a subordination of any interest in the identity and function of specific features to a preoccupation with their artistic qualities.

Rolston (1986, p.81) supports this view, 'In discovering such aesthetic value, it is critical to separate it from both utility and life support...'

Bourassa (1991, p.22) describes three levels of aesthetic experience - sensory, formal and symbolic. Corrie (1984, p.3), in reviewing scenic quality assessment, says, 'all researchers engaged in assessing scenic quality are in agreement that visual attractiveness is a very personal thing...and...aesthetic quality is much more than the sum of the physical components'. Tuan (1979, p.97) speaks of the way in which designed landscapes and architecture stimulate the mind. 'A poem or an essay is not itself an important element in our surroundings... Architecture [and designed landscapes], unlike literature, can affect our senses directly. It influences us by simple being there, bypassing the necessity to stimulate the active cooperation of the mind.

According to Grinde and Kopf (1986, p.314), while many factors contribute to a landscape's visual quality, several concepts prevail: those of vividness, intactness and unity. They do not elaborate on these concepts.
Landscapes may have aesthetic value by being striking or evocative, rather than beautiful. The striking forms of the windmills, below and right, or the weathered nature of the old barn, above, have their own kind of aesthetic value. Photos: Above and right, Windmill Farm, Kynton, Victoria, Below, Narepumelap, Western District, Victoria.

Photos: Author
In all views of aesthetic value there is a dominance of artistic qualities over function. Aesthetic value encompasses the ideas of beauty and delight, formal aesthetic qualities such as form, line, colour and texture, the atmosphere generated by smells and sounds, other elusive sensory and evocative attributes, and some elements of landscape character. In this, aesthetic value is more than the seen view - more than meets the eye, and it is a response to landscapes which elicit pleasurable sensory reactions in the observer.

While there is much theory, there seems to be some difficulty in translating this into practical assessment for use in evaluating landscape as heritage, and there is little to guide those assessing aesthetic value as part of landscape heritage value. Nonetheless, aesthetic value is viewed as an important component of landscape heritage value which could be usefully investigated further (see Chapters 6 and 7).

4.4.4 Scientific value
Science is described in *The Australian Concise Oxford Dictionary* as 'systematic and formulated knowledge'. Scientific value refers to value associated with the scientific aspects of heritage.

Australia ICOMOS defines scientific value thus:

> The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.
> Australia ICOMOS (1988c, p.2)

This definition is not very useful, as it does not really come to terms with scientific value in general, or scientific values in the natural landscape in particular. This is because the definition was drawn up by historians and archaeologists, and was intended to apply to places of cultural significance. As discussed previously, use of the *Burra Charter* has been extended to include the natural environment, and the concept of significance rather than the artificial separation of cultural and natural significance is increasingly being adopted.
Scientific value now frequently refers to natural values such as geological, biological or ecological values.

Scientific value arose out of the environmentalism which developed in the nineteenth and early twentieth century (see Sections 2.4 and 2.5) and gains its strength from geology, botany, zoology, ecology and related areas of expertise. It is more relevant to natural landscape heritage than cultural landscape heritage and is based on the criteria such as ecological diversity. This is in contrast to the 'diversity' mentioned under aesthetic value, which means visual diversity.

The scientific attitude to landscape was shaped by the Enlightenment and arose in Europe in the late eighteenth century, when there was a rapidly expanding interest in the natural sciences, aided by theologians, scientists and explorers (see Section 2.4).

Australia was in an interesting position with respect to new scientific discoveries in the eighteenth and nineteenth centuries. At the time of Cook's voyage to the Pacific in 1769, the Southern Pacific area was seen as one of the last great natural laboratories of the world. Accompanying Cook was the noted botanist, Joseph Banks, whose observations of the flora and fauna, and the potential of the country for colonisation, were to influence Britain's choice of Australia as a penal colony. Many of the specimens collected on expeditions found their way into major collections, both public and private, including Kew Gardens in London and the Jardin des Plantes in Paris (Lewis & Aitken, 1991, p.10).

Narratives of scientific expeditions to the New World were widely published, either independently, in Government gazettes, or in journals such as Peterman's Mitteilungen, (literally, 'giving information') a highly regarded journal for reporting the discoveries made in 'new lands' edited by the German geographer, Peterman (Heathcote, 1976, p.39-40).

Scientific interest in the natural systems of the great southern continent stemming from exploration was carried over into the era of settlement. Settlement of a new colony required, above all else, a source of food. There was a great need to understand the viability and performance of
traditional food crops in the new environment. Banks, who had observed the lack of water and apparent barrenness of Australian soils, particularly in the area of Sydney Cove, was concerned with the supply and care of plant stock for the colony. He attended to the provisioning of the First Fleet and advised on their care and maintenance for the long and hazardous journey (Bligh, 1980, p. 5). Spooner (1976, p. 83) asserts that many of the tender plants brought from England must have died in the first few weeks of the eight month voyage.

One of the early facets of scientific value evident in the Australian landscape was that of acclimatization - the value of a species in a new environment. Acclimatisation of plants was the initial role of botanic gardens in Australia. The Royal Botanic Gardens, Sydney, were established in 1816, primarily to carry out acclimatisation trials and distribute plant stock to the young colony. Botanic gardens developed along scientific lines and were linked with the establishment of scientific and systematic plant collections assembled in herbaria. Living collections were also assembled where plants were set out in systematic groups related to genera and plant families. It is not hard to see how the inhabitants of a young colony, considering that there was little in the way of pleasant gardens and surroundings, would flock to the botanic gardens for walks and picnics, more so when the gardens were on the banks of a river or cove.

The Royal Botanic Gardens, Melbourne, established in 1845, were initially also for acclimatisation and scientific pursuits, but were quickly taken up as pleasure gardens, as the urgent need for acclimatisation trials diminished. Thus, from the early days of establishment the role of botanic gardens in Australia was twofold, aesthetic and scientific. This twin role is maintained today, has never been clearly differentiated, and demonstrates the difficulty of separating out different types of value.

The linking of aesthetic value and scientific value is also evident in the national parks movement. Reasons for reservation, in addition to safeguarding natural systems, were frequently related to natural beauty and recreational pursuits (Bardwell, 1974, p. 4; see also Section 2.5 and Plate 15).
A number of values are also linked in the appreciation of wilderness. The anthropocentric approach to wilderness implies that it acquires value through utility or for spiritual renewal or aesthetic inspiration. An alternative approach is that wilderness as a spatial entity and as a habitat for species has value in its own right. This approach implies that wilderness should be preserved for its own sake and as a benchmark against which environmental change can be measured. Nash (1990), Passmore (1974) and Sheldrake (1990) explore the idea of the value of nature and its roots in western culture.

The concept of wilderness as gene pool links the two categories. Protection of the natural gene pool is seen as the basis of future diversity of plants and animals, as well as preserving species which may have important applications, for instance in medicine or agriculture.

Attitudes first evident in the empiricism of the Victorian era are still with us today in a modified form. In the environmental movement, quantitative and measurable attributes are viewed as more defensible and legitimate than qualitative and less tangible attributes. Rolston comments on this tendency:

Like music and the fine arts, natural science is an intrinsically worthwhile activity, but scientists find this difficult to say and, sometimes with much ingenuity, sell their study short by retreating to some utilitarian subterfuge...and, filtering out all applied values, one reaches a residual scientific value in nature.

(Rolston, 1986, p.79)

Charlesworth (1989, pp.98-121) discusses what he calls the 'myth of objectivity'. Chalmers (1982. p.xv) says of science, 'In modern times, science is highly esteemed. Apparently it is a widely held belief that there is something special about science and its methods.' Sir James Jeans, in 1944 speaks of science and nature

[It] is not meant in any way to suggest that an objective nature does not exist, but merely that it is at present beyond our purview. We can only see nature blurred by the clouds of dust we ourselves make; we can still only see the rainbow, but a sun of some sort must exist to produce the light by which we see it.

(Jeans, 1944, p.4)
Notwithstanding the perspectives outlined above, scientific value as an aspect of heritage value is widely accepted. It, in turn, has subsets which assist in clarifying why a place is considered to be significant. Today scientific value may include geological, hydrological, biological or ecological value. It may refer to attributes such as the presence of rare or endangered species (see Schapper and Safstrom, 1992), or it may be related to the value of habitat or biodiversity (Bridgewater et al. 1992; Endangered Species Advisory Committee, 1992; Hough, 1989). It may also refer to horticulture, which is described in the Shorter Oxford Dictionary, third edition, as the 'art and science of gardening'. It may also refer to 'pure science' - the value for research. In some instances scientific value can be viewed as a kind of social value, as it represents the views of certain groups in society, and may be culturally determined, as it is based to some extent on the mores of the day. Scientific value as it relates to landscape heritage will be further investigated in Chapters 6 and 7.

Plate 15: A landscape demonstrating scientific value. Mount Buffalo, Victoria is of geological significance, as it is an important example of formations of intrusive rocks which include granite and granodiorite. It also represents aesthetic and wilderness values. Photo: Mark Schapper.
4.4.5 Social value
Social value is related to psychological value but refers to more overt social and cultural values held by groups or even by nations. Social value is difficult to define, partly because the word 'social' has such a broad connotation, and partly because minority groups and societies at large are hard to define in themselves, and do not fit neatly into classifications.

Australia ICOMOS defines social value thus:

Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.
Australia ICOMOS (1988c, p. 2)

The criteria given by the Australian Heritage Commission and appended to the Australian Heritage Commission Act in 1988 defined social value of a place as 'its strong or special associations with a particular community or cultural group for social, cultural or spiritual reasons' (Criterion G). This was expanded into Criterion G2 - 'importance as places highly valued by a community for reasons of religious, spiritual, cultural, educational, or social associations'. Staff at the Heritage Commission acknowledge difficulty in interpreting and using these criteria. The Commission has recently issued a discussion paper to clarify this difficult concept (Johnston, 1992) and held a workshop 'Peoples places: Identifying and assessing social value for communities' (20 October, 1993). Johnston's paper provides an expanded view of social value which the community is now in the process of discussing and evaluating. Johnston says in the discussion paper:

Our surroundings are more than their physical form and their history. Places can be the embodiments of our ideas and ideals. We attach meanings to places - meanings known to individuals and meanings shared by communities... the essence of social value is about the special meanings attached to places by groups of people (rather than individuals).
Johnston (1992, p.iii)

Johnston (1992, p.7) says that the central idea of social value is attachment to place. Social value is a value held in the present rather than one related to past history, but it helps tie us to the past. She describes places which:
• provide a spiritual or traditional connection between past and present;
• tie the past affectionately to the present;
• help give a disempowered group back its history;
• provide an essential reference point in a community's sense of itself (or historical grounding);
• loom large in the daily comings and goings of life;
• provide an essential community function that over time develops into a deeper attachment that is more than utility value (e.g. Victoria Market);
• have shaped some aspect of community behaviour or attitudes;
• are distinctive - the one clocktower in a town, or an architectural folly - features that lift a place above the crowd, making it likely that special meanings have been attached to that place;
• are accessible to the public and offer the possibility of repeated use to build up associations and value to the community of users; and
• places where people gather and act as a community, for example, places of public ritual, public meeting or congregation, and informal gathering places.

(Johnston, 1992, p.7)

The connection between people and place is recognised by the Mexican Committee of ICOMOS in its Oaxaca Declaration, by the Sri Lanka ICOMOS Charter for the conservation of historic villages and rural areas, and by New Zealand's Aotearoa Charter. The Sri Lankan charter suggests that it is important to involve people who have migrated from an area in subsequent decisions about conserving the area's values. In Australia, Aboriginal people who have been displaced from their country, can re-establish important links with their past by becoming involved in decisions about their traditional places, and thereby clarify and reaffirm their cultural and social identity. New Zealand's Aotearoa Charter is based on the Australian Burra Charter, but with a significant difference in that Maoris believe that a place imbued with the wairua (the spirit) should be allowed to decay. This is an interesting step in charter development, as it highlights the awareness that symbolism and sacredness of place are important reasons for heritage value, and that they are associated with the place rather than the fabric. The Aotearoa Charter, Article 1, (New Zealand ICOMOS, 1990) refers to cultural significance as meaning places 'possessing historic, architectural, aesthetic, scientific, spiritual or social value', but does not define these aspects of significance further (Johnston, 1992, p.6). Note the addition of 'spiritual' to the Burra
Russell (1993, p.13) draws attention to the social value of old terrace houses in Sydney. Union-led 'Green Bans' of the 1970s were applied to these to prevent their demolition. Workers fought to save these terraces for their social value to the contemporary community, rather than for their historic value.

Social value is not necessarily uniform or universal. A place may be valued by most of the community or it may be of value only to a minority group. Groups may be related by culture, race, belief, interest or other factors. Not all groups have been well represented in heritage preservation in the past. Fly and Fly (1987, p.34) note that in the U.S. some histories do not adequately represent ethnic groups such as the Native American, Hispanic or Black. Across cultures different views may be held as to what constitutes landscape heritage. Zube and Pitt (1981, p.85) demonstrate that significant differences in the perception of landscape heritage do exist between cultures. There may be conflicts of value with respect to an individual place: for instance, the Swan Brewery site in Perth, where the Aboriginal community regards the site as sacred and believes the old brewery should be removed, and others value the remains of the brewery as important remains of early European settlement.

Even within identifiable groups there is a variation in value (Kluckhohn and Strodtbeck, 1961, p.1). Some equate social value to popular opinion, which opens the way to assessing social value by 'voting' or public rating. This process may assist in choosing between alternatives, but it cannot deal with the complexities of understanding the attachment of people to place (Johnston, 1992, p.16).

Social value may be related to the politics of place (Sandercock, 1985, p.1). Places with social value may be places that have to be fought for. Social value is closely related to cultural value. The document *A relevant Cultural Policy for Victoria* (Yencken, 1986) expressed the idea that cultural needs and expressions of minority groups may give rise to places having social value. This idea was expanded when a cultural policy was adopted for Victoria. It recognises, celebrates and supports the diversity of Victoria's cultural life, and aims to 'conserve the State's cultural heritage.
in its physical, intellectual and social manifestations' (Victoria, Parliament, 1991, p.2; see Plate 16).

Social value is closely linked to other values. Our sense of cultural identity is linked to our history. In exploring landscape history we are adding to and elucidating issues of cultural identity. In this sense, landscapes can be considered to be biographical, in that they explain our history and assist in preserving our cultural identity.

Social value may be linked to recreational value, and, by extension, to tourism value. It may also be linked to the ability to provide an educational experience, that is, to teach people about a place or a way of life. Interpretation may be a useful tool in providing an educational experience in heritage environments, although care must be taken to faithfully represent the heritage place. As Melnick says 'there is a fine line very often between deception and interpretation. The purpose of interpretation is to increase the "visitor's awareness" about what is going on' (Melnick, 1990, p.55).

Social value may be more ephemeral than other values such as historic or scientific value. This is partly due to social value being more about feelings for a place than facts about a place, and is partly about social value being a value held in the present. Circumstances may quickly change with a change in the community, and the social value of a place may change or be lost. However, all values change with time, and the transitory nature of values is not confined to social value. Changing values mean regular reassessment of the significance of identified places, something that is considered a luxury when so many places remain unrecorded and unassessed (Johnston, 1992, pp.16-17). Social value will be further investigated in Chapters 6 and 7.
Plate 16: Landscapes demonstrating aspects of social value.
Photos: Mark Schapper

Rathdowne Street, Carlton, Victoria has social significance to several community groups, including the migrant Greek and Italian communities, and parts of the university student community. Its vibrant ethnic precinct, with cafes, coffee shops, bookshops and the like, reflects its value as a gathering and communal place.
4.4.6 Historic value

The Burra Charter (Australia ICOMOS, 1988c, p.1) defines historic value thus:

Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section [i.e the other values previously dealt with].

A place may have historic value because it has influenced or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

(Australia ICOMOS, 1988c, p.1)

At this point a distinction between 'historic' and 'historical' should be made. 'Historical' is defined by the Australian Concise Oxford Dictionary as follows:

Belonging to history, not to prehistory or legend; ...based on history or an analysis of development in course of time; in connection with history, from the historian's point of view; belonging to the past, not of the present; dealing with historical events.

'Historic' is clearly differentiated from 'historical' by its definition in the same dictionary - 'Historic: Famous in history'. Thus historic places are those considered to be notable for their history as differentiated from all places which have a history.

Lowenthal (1981, p.10) says that at the heart of historic preservation lies the view that the tangible past is attractive or desirable. He relates this to the Renaissance perception of a classical antiquity sharply distinguishable from, and superior to the recent past, coupled with dawning awareness of the faster rate of change and a loss of faith in progress.

Davidson describes several aspects of historic value for buildings. Some of
these also apply to landscapes. They are 'the building as an antique', that is historic is equated with 'old'. Davison says that if a building is old, decayed and in danger of demolition, it may become 'historic' and be seen as worthy of preservation. He says that 'just as serious illness reminds us of our mortality, so decrepitude and threatened demolition may heighten our sense of a building's historic significance' (Davison, 1991, p.67). Davison also discusses the building as shrine, that is, association with important events or people, and the building as document, that is, as a piece of vital evidence about the person or society that created it (Davison, 1991, pp.65-76).

Most heritage buildings are preserved primarily on historical or architectural grounds. They may be preserved because they are old, because they represent a particular period or style of architecture, or because they are associated with important historic events or people. Defining historic value in the landscape is not as straightforward as it is for buildings, although many similar concepts may apply. For instance most of Davison's reasons for judging a building to be historic can also be applied to landscapes. In other respects it is not reasonable to extrapolate from buildings to landscapes. Landscapes differ from buildings in that they are continually evolving and that change over time is part of their nature. In the case of landscapes, continuity with time may be as important as a particular period of development (see below). This may be less so for buildings.

Shoard (1981, pp.83-108) points out the difficulties of protecting landscapes compared with buildings. He includes the large range in scale of landscapes, the lack of visual distinctiveness, the inability to put clear boundaries on landscapes, and their fuzzy edges and transition zones, all making them harder to protect than buildings. The difficulty in dating landscapes in the way we are accustomed to dating buildings, and the living components of landscapes, add to these difficulties. Baker (1983, p.12) refers to the difficulty of establishing dates for landscape development, particularly when human use of the land stretches back into prehistory.

A sense of continuity and the tangible evidence of the evolution of a landscape with time are important concepts in establishing landscape
heritage value. Lynch (1972) encapsulated this concept in his concept of the sense of the stream of time. Melnick says that there are four major questions to be answered when evaluating the cultural and historic data attached to cultural landscapes. These are:

1. How does this landscape represent a continuum of land use spanning many years and/or generations?

2. How is this landscape representative of the manner in which land has been used, manipulated, or managed over the span of time, in an area (or region) larger than the specific landscape being evaluated?

3. What are the specific long-term documents regarding the organization of the landscape...?

4. What is the level or degree of change from early settlement of landuse patterns? (Melnick, 1981, pp.57-58)

Cultural landscapes in particular may demonstrate continuity of use over time. They reflect settlement history, its patterns, techniques, and underlying cultural values and beliefs (see Plate 17). These are evidenced in features of the landscape, in buildings and artifacts, tools, farm layout and the like. There is a great variety of 'evidence' embedded in cultural landscapes. This may take many forms and need various disciplines to unravel. This information may reflect the different cultural background of the settlers, the environment they had to deal with, and their own innovative approaches to solving problems, often using limited supplies and resources. The importance of history in appreciating landscape and its evolution has been ably demonstrated by Hoskins in *The Making of the English Landscape* (1985).

Lowenthal (1981, p.11) makes the point that physical evidence from the past provides a sense of continuity and assists us in defining our identity. Melnick, in speaking of the range of cultural landscapes, says 'all of them, however, have a common denominator: they are linkages to our heritage, they are physical bonds with those who have come before us. "Past as prologue" has become a common phrase within the historic preservation community'. (Melnick, 1983b, p.XI).
Plate 17: Landscape demonstrating historic value. Cultural landscapes in particular may demonstrate continuity of use over time, settlement patterns, land management techniques and underlying cultural values. Photos: Mark and Jan Schapper

Above: The Briars', historic pastoral landscape, Mount Martha, Victoria.
Right: Derelect farmyard, Kynton, Victoria.
Below: Ruin of a settlers' cottage in the remote Pilbara region, Western Australia
Another important factor when dealing with historic value as part of landscape heritage is timescale. In the landscape timescale can be measured in geological terms, in prehistorical or archaeological terms, or in historical terms. Establishing which of these is relevant to assessing the heritage value of the landscape in question assists in assessing that landscape.

If the context is natural landscape heritage, possibly with some dominant landform feature, the timescale may well be geological time, during which the landform, vegetation and fauna developed. An understanding of geological and landform processes, and the evolution of vegetation types enriches our understanding of the landscape heritage of an area. Similarly hydrology and soils influence settlement patterns, and ultimately land-use patterns of an area. Usually landscapes in which the geological timescale is considered are dealt with under scientific value.

If the context is Aboriginal landscape heritage and the professional dealing with it is an archaeologist, the timescale could be measured in thousands of years - anything from 80,000 years ago to the present. During this time various land management techniques developed. The impact of the Aboriginal people on the landscape was predominantly caused by hunting, plant gathering, the use of fire and digging-stick farming. These techniques were so successful and were carried out for so long that they changed the flora of Australia (White, 1986; see Appendix 2: The effects of fire and digging-stick farming).

It would be quite legitimate to regard landscapes managed in this way by indigenous people as farmed landscapes and as cultural landscapes, particularly as many of them contain other evidence of indigenous culture such as rock carvings and rock art. The Landscape Assessment Manual of Practice prepared by the National Trust in N.S.W. separates historic value into Aboriginal historical value and European historical value in an attempt to address the diverse aspects of historic value (National Trust of Australia (N.S.W.), 1989, p.10).

Understanding the prehistorical and archaeological timescale puts recent history into perspective and provides a rich approach to understanding
the historic value of a place. It is possible that the framework set up for understanding heritage value and landscape heritage value in particular has not paid enough attention to archaeological value. One is never quite sure whether it should be associated with historic value as a further extension into the past, or whether it is a component of scientific value.

If the landscape in question is a European settlement landscape in Australia it is likely that the timescale is from 200 years ago to the present, and may be referred to as post-contact. During this time dramatic changes were made to the landscape as settlers moved across the continent clearing indigenous vegetation, damming rivers, ploughing the land and decimating both the fauna and the indigenous human population. The timescale of European cultural landscapes is less remote and more easily grasped than that discussed in the two previous timescales, as much of the evidence of the past is still readily accessible.

Fitch explores another aspect of timescale:

The landscape architect who is seriously interested in the management of historic landscapes...will have to face the fact that, unlike his architectural peers, he will be working with living tissue. This confronts him with changes in his medium at two different time scales: changes in size, scale and form of individual plants; and changes in the very species and varieties in use at any given historical period.

(Fitch, 1978, p.285)

The authors of the *Burra Charter* saw historic value as the most important heritage value, possibly encompassing all other values. It is most unlikely that this is so, but this can be tested in Chapters 6 and 7, where historic value is further investigated.

Historic value can be summarised as including associations with notable people, events, eras, technologies, designers and scientific endeavour. It includes consideration of continuity with time as well as specific dates, and involves consideration of timescale. Jeans encapsulates this in the concept of landscape as a story told over time about a place. He says 'an understanding of history can lead us to read the landscape as a story (Jeans, 1984, p.15).
4.5 Measures of landscape heritage value

To turn now to the second major group of characteristics on which landscape heritage is judged. These have been called here measures of landscape heritage value. Measures of value include integrity, state of preservation, condition, authenticity, representativeness, rarity and uniqueness. These are discussed below.

4.5.1 Integrity, state of preservation, condition

The terms 'integrity', 'state of preservation' and 'condition' all refer to how complete the heritage place is considered to be. Integrity is described in the The Australian Concise Oxford Dictionary as 'wholeness; soundness', while state of preservation and condition refer to the degree to which the place retains its original characteristics, the material state of the fabric of a place. This may also be referred to as 'intactness'. All these terms describe the completeness of a place.

Some places may be of such significance that they may retain their significance even though there is little or no remaining fabric as evidence of its heritage nature. Places such as Cook's landing sites in Australia may fall into this category. The maintenance of heritage value at other places requires that some physical fabric remains as evidence. The Guidelines to the Burra Charter: Conservation Policy say that the condition of the fabric should be surveyed sufficiently to establish how its physical state will affect options for treatment of that fabric (Australia ICOMOS, 1988d, p.2). This supports the view that measures of value are more about management of heritage rather than establishing heritage value.

When a site has a high degree of integrity it may be judged to be worth more than the sum of its parts, as occurrence of a number of different heritage attributes together may confer great richness to a place in heritage terms.
4.5.2 Authenticity

Authenticity describes the need for things and places to be what they claim to be, the need for places to be 'real'. This concept might be most sharply illustrated by using the example of theme parks. Theme parks such as the pioneer village of Sovereign Hill in Ballarat, Victoria, do not pretend to be authentic historic villages. Rather they seek to convey history via constructed and concentrated environments where history education can occur. These types of environments contrast with true historic precincts in that historic precincts are the remains of the past. Both types of environment have their place, but they must not be confused, otherwise the public loses confidence in its understanding of what remains from the past and what is a present-day phenomenon.

Authenticity is linked to environmental meaning. Dovey (1985b) discusses the search for authenticity in the environment and the contrasting rise of 'fake' or 'inauthentic' places, buildings and things. He interprets the phenomenon of fakery as:

The replication of environmental meaning through the manipulation of appearances - a situation which frequently breeds doubt and deception in person-environment interaction.
(Dovey, 1985b, p.33).

Dovey sees authenticity as part of a connectedness in the relationship between people and their world, and as part of the reliable and trustworthy connection between the present and the past (Dovey, 1985b, p.46). It is part of trusting the continuity with the past and thereby assisting us with identity.

Relph (1986, pp.63-67, 78) discusses authentic places and authentic placemaking. He sees authenticity of place as the expression of a culture through an unselfconscious design tradition. Swartz deals with authenticity in the historic environment, and the effects of tourist demands on authenticity. After carrying out an extensive study, she concludes that the concept of authenticity in the historic environment is one of great significance for those valuing the environment (Swartz, 1987, p.131).
4.5.3 Representativeness

There are two perspectives on landscape heritage and heritage in general which are at opposite ends of the continuum. The first of these is the representativeness of a place, the ability of a place to be a good example of something, whether a style, designer or ecological habitat. The second is uniqueness.

Representativeness requires that there is some concept of a type. This may be a type of landscape, or, in the built environment, a housing or building type. In developing some idea of type, there is a tendency to move into typologies, which may become constraining if they become very detailed.

Representativeness may be related to the ordinary or the vernacular. In this context, landscape heritage represents the common or exemplary, and similarities rather than differences are focussed upon.

4.5.4 Uniqueness and rarity

Contrasting with the concept of representativeness is that of uniqueness. Uniqueness can have no typologies, as it is the differences which are highlighted, rather than the similarities or the exemplary nature of a place. Uniqueness implies that there is only one of its kind, or that it is unequalled. Closely allied to the concept of uniqueness is that of rarity, that there are very few of a kind, or that it is very uncommon. Less strong expressions of the same idea are 'uncommon' or 'unusual'.

The measures of value described above can apply to all types of landscape heritage. Thus landscapes across the heritage spectrum can be considered to have more or less integrity, to be authentic, to be representative of various things or to be unique or rare.
4.6 Economic value

So far we have dealt with components of value and measures of value. The third major category of value is economic value. Components of value are the constituents of value, and permit the presence or absence of heritage value to be established, measures of value tell us how much heritage value a place has. Economic value is exchange value and tells us how heritage value, once established, is rated in the marketplace. Economic value differs from the other two types of value in that it is applied to heritage after heritage value is established, and is not related to assessing heritage value, but rather to managing it.

The Australian Concise Oxford Dictionary describes 'economic' as maintaining the profit, relating to financial viability. The economic value of heritage places relates to their value in a market economy as revenue producers in some way.

Economic value is an important value when managing properties of heritage value. It is of much less importance (many would say none) when assessing a place for its heritage value. Therefore it is seen as an important management tool but not an important assessment tool, and consideration of economic value is not seen as part of the process of establishing significance. However once significance of a place is established, economic value might be very important in ensuring its conservation.

The Burra Charter lists amongst its conservation principles: The conservation policy appropriate to a place must first be determined by an understanding of its cultural significance. The conservation policy will determine which uses are compatible' (Australia ICOMOS, 1988a, p.2, Articles 6 and 7). So policy is determined before use, and use is related to economic value. This further supports the view that economic value is not part of the assessment process, but it is considered here to clarify its role in the conservation debate.

Economic value is linked to the concept of landscape as a resource. Meinig calls this 'landscape as wealth' (Meinig, 1979, p.41). The idea of landscape
as resource is extremely old, but it took on a new dimension when new lands were found. For instance, in Australia Captain Cook forecast that what was wanted to transform the landscape was 'the hand of industry' (quoted in Heathcote, 1976, p.43). His sentiments were echoed by the explorer, Mitchell, who saw the apparent deficiencies of the continent as a challenge to the skills and ingenuity of the Old Country. Explorers from the 1830s onwards were specifically instructed to look for new agricultural and grazing lands, and, for many immigrants, the landscape of Australia had but one aspect: its potential for economic exploitation. (Heathcote, 1976, p.42).

Success in settlement was measured by material gain and by the degree of taming and civilisation that was brought to the new landscape. Material values were linked with other values and were not seen as exploitation but as the right and proper use of a God-given resource. By 1870 the dominating theme in Australia was materialism. This was encouraged by the heady optimism and increasing wealth of the country, generated by the gold rushes, which started in the 1850s, and pastoral and agricultural development. This necessitated much clearing of the indigenous vegetation. Initial optimism as to the productivity of some areas was often quickly dispelled, as drought and hard times set in. By this stage, however, the landscape was permanently changed. In the midst of prosperity, there were fears that it could not be sustained. The finite nature of some of the resources, particularly timber, had been observed.

Today the economic value of landscape is related to its agricultural and industrial productivity, its tourism and recreation potential, and its potential for education. These attributes are more closely aligned to the management of landscape heritage than to its assessment, but may be considered to approach certain definitions of social value, and in this sense provide a link between assessment and management. In some circles it is considered a political necessity to justify the setting aside of heritage landscapes by reference to their economic value, for instance as a tourist destination. The role of economic value in landscape heritage assessment is further investigated in Chapters 6 and 7.
4.7 Criteria as tools for assessing landscape heritage value

We have examined components and measures of landscape heritage value, and economic value. For the purposes of assessment we have discarded economic value, although we wish to test that assumption in Chapters 6 and 7. We can now concentrate on how components and measures of landscape heritage value can be utilised for assessment purposes. This section explores the relationship between components and measures of value, and criteria.

That a place is considered to have landscape heritage value implies several things: firstly, that someone has judged it to be of heritage value; secondly, that their judgement is based on some standard, whether implicit or explicit, and thirdly, that it has been judged to be of heritage value to someone, either individually, or to a minority or majority group. When standards are made explicit they are referred to as criteria. A criterion is a standard by which something is judged.

Judgements are made on some basis, and criteria are a systematic and reliable way of establishing that basis. Criteria may be explicit or implicit, stated or unstated, but they are commonly used by people to make value judgements. This is the reason why the quest for criteria is so important. As decisions may be relatively subjective, and even acknowledged to be so, the more specific and clear we can be about criteria, the clearer the basis for our judgements. Decisions do not necessarily become objective; rather the basis on which judgements are made becomes evident. When this is so, people are in a position to make an informed decision as to whether or not they support that judgement regarding value.

Before attempting to establish criteria for assessing landscape heritage it is necessary to clarify the meaning of the term criterion, to investigate its nature and differentiate it from the related concepts of attribute and factor.

4.7.1 Attribute, criterion and factor

According to The Australian Concise Oxford Dictionary an attribute is 'a quality ascribed to a person or thing'. In the landscape sense attributes are
defined as 'the ecological, cultural and aesthetic properties of natural and cultural resources that sustain and enrich human life' (Grinde and Kopf, 1986, p. 310). An attribute can therefore be a property of a heritage environment.

A criterion is 'a standard by which anything is judged or estimated, a characteristic attaching to a thing by which it can be judged or estimated' (The Australian Concise Oxford Dictionary). A criterion is therefore a characteristic attaching to a thing by which it can be judged or estimated. It is related to judging or assessing value, including heritage value. Thus criteria may be used to assist in defining the reasons for setting aside landscapes of heritage value. An attribute may form the basis of a criterion, but is not by itself necessarily attached to establishing value.

A factor is regarded as 'one of the circumstances, facts, or influences which produce a result' (The Australian Concise Oxford Dictionary). A factor may not be as concrete as an attribute; for instance, the presence of a wetland may be an attribute of a landscape with natural heritage value, but the factor being considered may be ecology, while the criterion for assessing its heritage value may be species diversity. The term 'factor' is too diffuse to be used when speaking of standards for judging landscape heritage, although it can correctly be used when speaking of broad influences in landscape heritage. The term 'criterion' is the correct term for referring to standards by which heritage value in general, and landscape heritage value in particular, is judged.

4.7.2 Criteria as a basis for landscape heritage assessment

In the past, decisions as to which landscapes were of heritage value were frequently made in a relatively informal and unsystematic way. This approach became hard to justify as the community became more sophisticated regarding heritage and more demanding requiring its equitable conservation.

As the need to be accountable for decisions regarding the heritage value of a landscape arose, along with the need to assess places in a reliable, valid and repeatable way, a more systematic and analytical approach to heritage assessment became necessary. A systematic approach requires that the
basis for assessment is clearly understood and enunciated, so that all can see the reasons for considering a place to be judged to have heritage value, that is, so that the standards by which heritage value is judged are clear. Hence there is a need for clearly understood criteria by which landscape heritage value can be judged. These are more likely to provide repeatable and reliable assessments than a system relying solely on opinion. Criteria assist in understanding a place, as they facilitate the systematic presentation of information regarding a place, and assist in setting out the values of the place. They permit heritage practitioners to work from a set of principles and values, so that there is a commonly understood basis for assessing places of heritage significance.

Criteria are based on components and measures of landscape heritage value. Components and measures of landscape heritage value become criteria when they are used as the standards by which landscape heritage is judged.

4.7.3 Criteria and landscape type
Some criteria for assessment will apply to most types of landscape heritage, for instance the general criteria used by the Australian Heritage Commission, 'aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community' (Australian Heritage Commission Act 1975, p.26, also see Section 2.5.3 and Section 3.3.2).

Some criteria will relate primarily to one landscape heritage type; for instance, criteria for assessing Aboriginal landscapes are generally highly specialised and draw on a predominantly archaeological background. Criteria for the evaluation of wilderness and natural landscapes have been well developed because of scientific and community interest over many years. Along with scientific and community interest has come a fine appreciation of the beauty of many wilderness and natural areas, leading to an aesthetic component in their valuation. Historic urban areas have also been relatively well documented, mostly from an architectural and historical point of view, and primarily by architects and architectural historians.
4.7.4. The nature of criteria
So far criteria have been discussed in general terms only. Before investigating criteria in detail, some further reflection on their nature is needed. What are criteria? It has been established above that criteria are the standards by which the heritage value of landscape is judged, and components and measures of heritage value become criteria when they are used as standards for judging heritage value. Criteria define the reasons for setting aside a landscape of heritage value, but how are they expressed in practice?

Criteria are concepts expressed in words rather than in numerical form. They are descriptive, and the descriptions vary according to the author, the organisation and the nature of the landscape being considered. There are few standard terms to give the area of study reference points or common ground. The ones that do exist in a clearly defined form are predominantly those related to the Burra Charter, namely aesthetic value, historic value, scientific value and social value. These have been adopted by all the major heritage organisations in Australia (see Section 2.5.3 and Section 3.3.2). These criteria are very general and depend on interpretation. Apart from these broad criteria, further detail on criteria is vague and non-standard. Their use is confused and further complicated by the lack of clarity attached to thresholds (see below). This becomes evident in the analysis of heritage organisations and their criteria, and is dealt with in detail in Chapter 5. There are many ways to describe closely related or identical criteria, even if one were to confine oneself to the English language. Criteria range from the overall and more general, to the very detailed and specific. Criteria are elusive and may not be very clearly spelled out. How can these criteria be better understood and where does information regarding them reside?

4.7.5 Thresholds
At this point the Australian Heritage Commission’s concept of ‘threshold’ should be explained. Thresholds are cut-off points above which the values of a place are considered to be high enough to warrant conservation as part of the National Estate, and below which, while retaining value to the individual or group, the place is considered not
worthy of being retained as part of the National Estate. While this concept may be very useful in theory, it is hard to implement in practice, and relies heavily on expert opinion and judgement. The thresholds of the Australian Heritage Commission need not necessarily be the same as those of other heritage organisations or community groups. Thresholds are moveable cut-off points, and depend on many variables which are hard to tie down, including who judges landscape heritage value.
4.8 Conclusions

This chapter has examined the factors contributing to landscape heritage value as they are expressed in the literature. These form the foundation upon which criteria for assessment of landscape heritage value might be based. It was concluded that landscape heritage value comprises three major subsets: components of heritage value, measures of heritage value and economic value. This needs to be checked in the experimental work undertaken in Chapters 6 and 7, but if confirmed, could be of great significance to the assessment of landscape heritage.

Of the three subsets, economic value is not useful for assessing landscape heritage value, but may be a useful tool for managing it. While this conclusion could be inferred from a critical analysis of the literature, it was considered prudent to test it in the analyses in Chapters 6 and 7.

Components of landscape heritage value are those values which allow landscape heritage value to be established. Components of value identified here include psychological value, aesthetic value, scientific value, social value and historic value. Psychological value is not mentioned in the Burra Charter or in many other sources on criteria, yet there is a large literature in other areas which points to it being an important criterion. Why has it been left out of assessment to date? Its use can be explored in Chapters 6 and 7. Within psychological value, the dual role of wilderness as a landscape type and as a mental attitude is noted. Symbolic value is also recognised as an important value needing further exploration.

Scientific value has been poorly handled by heritage literature and by the charters such as the Burra Charter (see Section 2.5). This is because heritage professionals are rarely scientists. We can expect some confusion on scientific value in practice and will be able to see how this emerges in Chapters 6 and 7. It is likely that practice has solved the problem that theory is stuck on.

The investigation of social value revealed some confusions, as there are difficulties in defining community.
Criticisms aside, the Burra Charter is the best expression of components of value that we have, and it is widely accepted, providing a common base for heritage discussions. We must understand its weaknesses and use the information gained from the analyses undertaken in the present work to strengthen the assessment process. Of themselves, aesthetic, historic, scientific and social value are too general to be useful without expansions and additions. It is likely that the Burra Charter criteria form some, but not all of the criteria needed to adequately assess landscape heritage value.

Components of heritage value are not always clear-cut and can overlap or be related to each other. The question 'to whom does this place have heritage value?' assists in determining heritage value and provides the link between people and place. The relationship between meaning and components needs elucidation (see Chapters 6 and 7).

Measures of heritage value are indicators of how much heritage value a place may have, rather than of why it is significant. They relate more to setting conservation and management priorities than to assessing landscape heritage value and establishing significance. Measures of value found to be important in the literature included integrity, state of preservation, condition, authenticity, representativeness, rarity and uniqueness.

There is no mention in the literature of the distinction that has been drawn here between components of landscape heritage value and measures of landscape heritage value. Heritage organisations, have paid no attention to how criteria might be grouped into larger sets, and there is some confusion as to values, particularly when they are written into criteria.

Criteria are the standards by which heritage value is judged. Components of value and measures of value become criteria when they are used as the standards by which landscape heritage value is judged. How components and measures are used as criteria in practice is determined in the analyses carried out in Chapters 6 and 7.
Chapter 5: EVALUATION OF RESEARCH METHODS FOR INVESTIGATING CRITERIA

Figure 5.1: Diagram to illustrate an analysis/synthesis model of a potential landscape heritage assessment method, illustrating the way assessment of individual criteria may contribute to the overall method (adapted from McAllister, 1990, p.7).
Chapter 5: EVALUATION OF RESEARCH METHODS FOR INVESTIGATING CRITERIA

5.1 Introduction

So far, the many facets of landscape heritage value have been outlined, and the way in which these relate to criteria has been established. The following hypotheses emerge from the theory:

- There are three major subsets of heritage value: components of value, measures of value and economic value.
- Components of heritage value form the principal criteria by which heritage value is judged, while measures of value are secondary criteria applied to components of value to determine the level of heritage value.
- Economic value has no place in landscape heritage assessment.
- Australian heritage organisations do not have a clear understanding of criteria for assessing landscape heritage value.
- In existing approaches to assessment, certain criteria have been omitted or under-represented.
- Use of landscape types assists in the assessment of landscape heritage.
- Each landscape type has a typical criteria profile.

The problem of criteria must be re-examined, and research done to clarify them. They can then form the foundations of revised or new methods for assessment. To identify criteria and associated difficulties and gaps, we must now turn to practice, having dealt with the theory. This chapter seeks to identify appropriate sources of information on criteria in practice, and to select research methods to investigate them. To this end Section 5.2 examines yardsticks against which sources and methods can be assessed, Section 5.3 evaluates potential sources, Section 5.4 explores broad aspects of research methods, and Section 5.5 examines potential research methods in detail. Section 5.6 contains recommendations regarding sources and appropriate research methods for investigating them.
5.2 General yardsticks for research

There are certain general standards by which research undertaken in a wide variety of disciplines can be judged. These may apply to many aspects of the research method, including the data source, data reliability, and the method for processing the data, among other things. They can be used to evaluate both data sources and research methods. Before examining potential data sources these yardsticks need to be put in place.

Daniel and Vining (1983) have identified five conceptual models for visual quality assessment and have evaluated them against the yardsticks of reliability, sensitivity, validity and utility. These yardsticks, while used by Daniel and Vining for evaluating visual assessment techniques, are of wider applicability. They are briefly described here, and are expanded in Appendix 3, under 'General yardsticks for research', in order that both data sources and proposed research methods can be assessed against them.

Reliability refers to the ability to provide measurement stability when the experiment is replicated by any researcher. Reliability must also apply to the data, so that it is possible to replicate the experiment given the data being used.

Sensitivity means that the method used must be fine-grained enough to pick up the variation sought. It also means that the data source must contain information at a useful level of resolution. The measurement method must be sensitive to changes in the properties which are being measured (Daniel & Vining, 1983, p.40).

Validity refers to the method measuring what it purports to measure, and the data source being capable of providing the information being sought (Daniel & Vining 1983, p.40).

Utility refers to the efficiency and usefulness of a method (Daniel & Vining, 1983, p.40). Efficient methods are those which provide precise and reliable measures for relatively low cost, in terms of time, materials, equipment, and personnel. Utility also refers to the manageability of a technique: Is it relatively straightforward to use?
5.3 Potential sources of information on criteria for landscape heritage assessment

What are the potential sources of data, how reliable, sensitive, valid and useful are they? Are some more appropriate than others as sources when measured against these yardsticks? This section examines the potential sources of information on criteria against the yardsticks outlined in Section 5.2 to determine those most appropriate for providing information on criteria for assessing landscape heritage.

Information on landscape heritage in general, and on criteria for its assessment in particular, can be found in many places and forms. Books, monographs and journals in a number of disciplines have addressed aspects of landscape heritage. A wide variety of organisations deal with landscape as heritage. Some organisations, such as the Australian Heritage Commission, attempt to deal with all types of heritage related to 'place', including landscapes. Many of these organisations have developed criteria and policies to guide their work, and to ensure that decisions are consistent from one case to another.

Heritage landscapes themselves are also sources of information. These may be publicly or privately owned, and may even be unrecognised as having heritage value. Heritage landscapes themselves contain information just as valid as that contained in books and policy papers, and are part of the 'text' of landscape heritage. Which are the most reliable, sensitive, valid and useful sources of data?

The sources described above can be systematised into four major categories. The first of these is the theoretical literature relating to landscape heritage, the second is the criteria used by heritage organisations, the third is the statements of significance attached to landscapes considered to have heritage value, and the fourth is on-the-ground landscape heritage practice. These sources are examined below.

The assumption is made that landscape heritage is being investigated within the Western cultural tradition as outlined in Chapter 2, and is expressed in the English language. There is no attempt here to go outside
this tradition. Some of the literature from other countries, particularly that from the U.S. and the U.K., can be accessed, and has been used for the theoretical underpinning of this study. In general, this work focusses on landscape heritage in the Australian context, and, while principles can apply more widely, it seeks to study the Australian situation in detail.

5.3.1 Current opinion as expressed in the literature
Monographs and journal articles on heritage as related to 'places' cover a wide range of disciplines and an enormous number of individual items.

Disciplines which may incorporate material on landscape heritage include archaeology, architecture, botany, ecology, engineering, geology, geography, geomorphology, history, psychology, science, recreation and tourism. These disciplines are represented in books and in journals from anywhere in the Western world. The most relevant areas of this have already been explored in Chapters 2, 3 and 4 as it was necessary to set up the theory relating to landscape heritage. Appendix 3, A3.2: current opinion as expressed in the literature, illustrates the range of material available.

Obviously the field is rich and the scope is enormous. Sampling this information in a systematic and defensible way would be extremely difficult because of the scope. If the scope was narrowed to a more specific and manageable focus, information would be lost. If the scope was kept broad, selection and justification of material would be hard to validate. From the reliability and utility point of view any systematic sampling of this material is difficult. There is also the issue of the most useful sources having already been selected for use in Chapters 2, 3 and 4. Therefore, on these grounds, this category of sources was not considered for further analysis.

5.3.2 Heritage organisations in Australia and their criteria for assessing landscape heritage value
The second major source on criteria is heritage organisations. Many heritage organisations have developed criteria and policies to guide the assessment of heritage places. Criteria may apply to the assessment of all
types of ‘places’, including landscapes, as is the case with the Australian Heritage Commission. On the other hand landscapes may be either the only type of ‘place’ dealt with by the organisation, or they may have their own criteria for selection as heritage. Criteria may even be specific to particular types of landscape such as historic gardens. For instance the National Trust of Australia (Victoria) has developed criteria for the assessment of historic gardens, and the Victorian Conservation Trust has developed criteria for assessing the nature conservation value of bushland. What are these criteria, and how are they expressed, documented and used by the organisations? Staff must interpret criteria to make them useful. How are they interpreted?

Criteria are generally documented in some way, for instance as policies. Within these documents are clear messages as to why landscapes are set aside, and they embody criteria that the organisations have formally adopted as policy. They are a statement of intent - what the organisation hopes to do, or believes it is doing, that is, criteria organisations aim to use, or think they use. The documents may be admirable, but are they carried through into practice and is there a way of examining the practice of landscape heritage assessment to see what criteria are actually used? As this source represents the formally adopted view of heritage organisations and one they try to build into practice, it provides a very valid data source. Data is reliable and could be sampled in a relatively straightforward manner, hence demonstrates sensitivity and utility. It was therefore considered to be a useful source of information on criteria, with the understanding that criteria are those the organisation aim to use or think they use.

5.3.3 Statements of significance
The third major source of information on criteria was statements of significance. Normally heritage organisations prepare statements of significance or their equivalent for every property they classify or register, whether they own the property or not.

Statements of significance are succinct and pithy summary statements encapsulating reasons for this significance. They are prepared by heritage professionals, have the official approval of the heritage organisation
concerned, and allow for varying degrees of public input, depending on the heritage organisation concerned. Statements of significance apply at the international, national, state and local level, deal with a wide range of landscape heritage types, and are represented in many organisations with different heritage agendas. They are the first level of synthesis of information about a place, and as such are a primary source. They illustrate what organisations actually set aside, and the basis on which this is done, rather than what they think they retain, or what the policies direct them to retain.

Statements of significance are prepared by honorary advisors whose expertise spans a wide variety of fields including industrial history, architecture, landscape architecture, natural systems and planning. This means that the scope of landscapes considered to have heritage value is wide, and that a number of people expert in the heritage field have concurred that the place is worthy of conservation. The 'place' may be put on the relevant register and the 'statement of significance' then becomes a key part of the documentation.

Statements of significance are therefore a concise and comparable source of information encapsulating the main reasons that the place in question is considered to have heritage value. They clearly demonstrate the criteria by which this value has been established. Broadly speaking, they have a common set of underlying definitions and principles, as the *Burra Charter* has been adopted by all the major heritage organisations in Australia. As the field of heritage professionals in Australia is relatively small and professional communication is relatively good, statements of significance have a similar format, but reflect the detailed concerns and emphases of the organisation which prepared them. As they are relatively brief, they can be sampled and analysed, and thus have utility.

This source is arguably the most accurate indicator of the criteria that are actually used by organisations to assess the heritage value of the landscape concerned. As such, they are a reliable, valid and sensitive source of information.
5.3.4 Landscape heritage practice

The fourth major source of information on criteria is landscape heritage practice. In practice, criteria used for assessing landscape heritage are evidenced in two main types of sources: conservation studies of individual properties or local government areas, and the heritage landscape itself as 'text' or evidence of the reasons we conserve certain types of places. These two general cases will be dealt with in turn.

Conservation studies or 'heritage studies' may be undertaken with a view to planning and managing individual properties or local government areas to retain their heritage significance. This type of assessment tends to be practical in terms of recommendations and to be related to practical planning and management. Frequently this assessment process is set out in a document called a 'conservation study' or a 'conservation analysis'. These have evolved in a particular format in Australia and are based on principles outlined in the Burra Charter and adopted by the major heritage organisations. These have also been spelled out in publications such as *The Conservation Plan* (Kerr, 1990) and *Local Government Heritage Guidelines* (Department of Planning and Housing, Victoria, 1991).

Conservation studies are intensive and costly, and are usually only warranted for properties or areas already considered to be highly significant, or whose significance is unknown but high significance is suspected. This also implies that there has been an initial screening, and for some reason, such as high visitor usage or some controversy about conservation priorities, a more detailed analysis is required. This implies that the property in question is already high on the heritage agenda.

Government organisations, such as state or local government bodies, or heritage organisations, typically the National Trust, are normally the bodies which commission these studies. They are frequently documents of several volumes and in almost every case contain a 'statement of significance' which encapsulates the fundamental reasons for considering the landscapes in question to have heritage value.

Conservation studies have not been carried out in an even manner across the heritage spectrum. Larger properties and properties with more
tourism potential are often those first studied. Buildings are usually given preference over landscapes. This means the range of landscapes is not adequately represented. Studies have different emphases and agendas, depending on the discipline of the consultant and the period in which they were written. For instance, earlier studies tended to be more architecturally-based, and were, in effect, structures reports. Those completed more recently tend to include landscapes, but mostly as they relate to buildings, towns or regions. An example of the earlier type of study concentrating on architectural issues in an area of high landscape significance is the Kilmore Heritage Study (Planning Collaborative, 1982), while an example of a landscape study in which landscape is the central issue is the Macedon Ranges Cultural and Landscape Heritage Study which is still being completed. Fine gardens tended to draw studies when more utilitarian landscapes were not considered to warrant them.

In addition to conservation studies having an inherent bias, being based on the need for the study not necessarily relating to level of significance, many of them are wordy and diffuse, making systematic sampling of information difficult. Where might the information regarding criteria be in a large report? It would be unrealistic to think that even if conservation studies provided a balanced cross-section of landscapes, they could be evenly sampled for criteria. They were therefore considered to be unreliable and extremely difficult to use as a source for establishing criteria.

The properties or landscapes themselves may be considered to be sources regarding criteria. How does one choose a heritage landscape to sample? Does one choose those already set aside? If so would the statements of significance have been a shorter and more concise way to get to the same information? How can one reliably choose those not already set aside without the benefit of the criteria which we are seeking? Even if one could select these for sampling in a representative way, on what basis would sampling of the individual landscape be made? Landscape as text is very revealing in many ways, but very hard to sample systematically, repeatably, reliably and with enough utility to make the task practically feasible. To obtain a sensible geographical spread would be extremely difficult. How would one come to terms with criteria for assessing wilderness? Even if one was out in the wilderness, evidence relating to
species diversity, rarity, Aboriginal habitation, geomorphological formations, to name a few criteria, would not necessarily be evident. Significance relies on a general understanding of and comparison with other sites; for instance to label a place as the oldest cremation ground known, one must understand sites all round the world.

The landscape itself as source of information on criteria was thought to be too vast to be reliable as a source for this work, and to have too little utility to be practically useful for this research.

Therefore the most reliable and useful sources of information on criteria were considered to be statements of significance, and the criteria that heritage organisations say they use.
5.4 Choice of research methods

The previous section examined the data sources and concluded that statements of significance and the criteria set down by heritage organisations were the most reliable, valid, sensitive and useful sources of information on criteria. This section considers research methods to see which would be most appropriate for investigating these sources.

5.4.1 Major methodological approaches to research

Seamon, a researcher in environmental psychology (1982, pp.119-140) groups research methods into 'conventional methods' and 'phenomenology'. Phenomenology relies on all kinds of evidence, both tangible and less tangible. It emphasises discovering the thing in its own terms and seeks to retain the holistic nature of the thing. It seeks to have a detailed understanding of the phenomenon in question. It is highly focussed and investigates a relatively narrow phenomenon very deeply. Thus it is not appropriate for this research, as it does not permit the scope required.

Leedy groups what would be regarded by Seamon as more conventional research techniques into four main categories or methodological approaches: historical method, descriptive survey method, analytical survey method and experimental method. The nature of the data dictates the broad type of research methodology that must be employed in processing data (Leedy, 1985, p.133).

Historical method aims to assess the meaning of the historical record, and is primarily concerned either with past events and people or with developments over time. This type of method is not suitable for analysing the kinds of sources relating to landscape heritage as identified in Section 5.3, as it depends on changes with time and progressions through time, or events and people in the past, rather than dealing with the current situation (Leedy, 1985, pp.119-130).

Descriptive survey method is employed to process data obtained by observation. The phenomenon being investigated is observed intensely
and then described. The method might best be described as observation with insight. This method is frequently used for behavioural assessment, for instance in psychology, sports, recreation and education, and includes techniques such as direct behavioural observation and remembered experiences as expressed in exercises such as cognitive mapping (Nachmias & Nachmias, 1976, pp.73-99; Missingham, 1985, Sections 1.5-1.11). This method does not suit the wide-ranging study on criteria for assessing landscape heritage being undertaken here (Leedy, 1985, pp.133-171).

The 'experimental method' (Leedy, 1985, pp.211-224) involves testing the subject, doing something to change a variable or variables under consideration, and then testing again. In this type of method the research situation is controlled, and only certain variables are permitted to be changed. This is the 'pure science' type of research method, and is less applicable to the social sciences, as in these it is harder to understand the variables, let alone control them. The experimental method can only be used when the different variables have been identified and can be changed. This is not the case for heritage, and identification of the factors involved must precede experimental research. Therefore this type of method is not useful for this investigation.

The analytical survey method involves analysing data in a systematic way, gaining insight into the variables by a process of analysis. Frequently this method is quantitative, and statistical methods are applied to the data, but it may also be qualitative, in which case numerical and statistical methods may have little bearing on the validity of the method. Analytical surveys can be carried out at different levels, either broad-scale or very detailed, and are appropriate for the type of data sources outlined in Section 5.3 (Leedy, 1985, pp.173-209). This type of research is useful for the type of investigation being undertaken here. It has many subsets, the most applicable of which are dealt with in Section 5.5.

5.4.2 Chenoweth and Gobster's research framework
The system developed by Chenoweth and Gobster for wildland assessment (1986, pp.81-101) provides another useful framework for examining research approaches to a range of landscape issues, including landscape
heritage. It involves five levels on a 'branching tree' diagram, where at each level a choice is made. Choice at the first level involves selection of either systematic or non-systematic methods. At the second level it involves choice between professionally-based methods or publically-based methods, and at the third level it involves choice between qualitative and quantitative methods. At the fourth level it considers visual, verbal and economic methods, and at the final level, choice between physical, artistic and psychological methods is considered. The choice at the fifth level is not useful for considering landscape heritage and is not investigated here.

The first decision is whether to choose a systematic or non-systematic research method. Chenoweth and Gobster (1986, p.90) point out that artists and authors have been eloquently describing and evaluating landscapes for hundreds of years using unsystematic approaches, while the public also feels it has the right to say without justification what it likes and dislikes in the landscape. However, Chenoweth and Gobster take it as given that the researcher will adopt a systematic approach. A systematic approach is essential if the experimental method is to be sensitive, valid and reliable, so that the procedure can be replicated with consistent results. Unsystematic approaches, therefore, are not suitable for the present research.

The second choice in Chenoweth and Gobster's system is whether to use professionals or the public to assess the variable in question. Incorporated in the use of expert opinion is an assumption that the expert knows what is good for the community as a whole. According to Zube, Sell and Taylor (1982), this approach dominated visual assessment throughout the 1960s and into the 1970s, while during the mid-1970s methods using public appraisal became more popular.

Methods using public participation have their grounding in the social sciences. These methods are designed to provide direct community input, and may satisfy requirements for public consultation.

Chenoweth and Gobster (1986, pp.91-93) believe that, whatever the advantages and disadvantages, professionally-based approaches will continue to be major methods of landscape description and evaluation. In landscape heritage, experts can, and do, represent the community very
credibly (Snelling, 1992). It may be that by sampling the opinion of experts a more concise and informed opinion is gained than by sampling a large community group who have varying levels of information about the place being considered.

In Australia, landscape heritage has traditionally been assessed by experts. All the Registers are prepared by heritage professionals, although there may be the opportunity for community input. The Australian Heritage Commission encourages community input, as do state government heritage organisations. For instance, in Victoria the Department of Planning and Housing, which administers many of the local government heritage studies, makes a point of calling for community involvement:

A heritage study is about a community's own environment. The role that the community plays in any heritage study is therefore extremely important. In many cases, it is the community that is most aware of and best able to identify those places that are of particular importance to it. The community should therefore be encouraged to become involved in all stages of the study and the implementation of the study's recommendations.

(Department of Planning and Housing, 1991, p.14)

Although Chenoweth and Gobster (1986, pp.90-92) raise the issue of choosing either professionally-based or publicly-based methods, in practice it may be possible to have a combination of both, and there may be no need to choose between the two. In the final analysis, validity of the method is the over-riding concern in heritage assessment. Any method, whether professionally or publicly-based, must represent the people for whom the place has heritage value.

The choice between qualitative and quantitative methods is discussed by many authors, among them Brenner, Brown and Canter (1985, pp. 128-132), Glaser and Strauss (1979, pp.15-18) and Berg (1989). Chenoweth and Gobster (1986, pp.93-94) refer to the terms 'quantitative' and 'non-quantitative'. The term qualitative is to be preferred to non-quantitative, as the latter is negative and does not convey the nature of the approach. Qualitative research refers to meanings, concepts, definitions, metaphors, symbols and descriptions of things, while quantitative research refers to
counts and measures of things.

Choice again depends on the data to be analysed. Open-ended data, where the researcher cannot anticipate what will eventuate, is ideally suited to a qualitative approach. This applies to identification of criteria. It is difficult, if not impossible, to carry out valid quantitative studies if the variables being measured or counted are not fully understood. Landscape architects and other allied professions have traditionally described landscapes and their attributes in qualitative terms. The trend, particularly in visual assessment, has been to increasingly use quantitative approaches. The advantage of a quantitative approach is the ability to apply statistical methods to the results, so that comparisons may be carried out. However, in the present investigation words will more fully indicate the nature of the properties being assessed, and information will be lost if words are converted to numbers.

While Chenoweth and Gobster's system offers a clear choice between the qualitative and quantitative approaches, in practice the choice may not be as clearcut. An experimental procedure which combines the best attributes of both approaches, allowing data to be statistically analysed while retaining the descriptive power of the written word, may be an appropriate choice.

Professionals assessing heritage in Australia have been particularly wary of venturing into quantitative work, and have deliberately kept heritage work qualitative, on the grounds that it must be understood qualitatively before numbers are applied. Heritage professionals are concerned that information is lost when numbers are substituted for the written word, and that numbers can falsely legitimise data.

Qualitative methods allow the development of grounded theory, that is, allow the data to generate theory (Glaser and Strauss, 1979, pp.1-5). This implies finding theory rather than verifying current theory, that is, the discovery of theory from data systematically obtained. Elements of this approach are useful for studies such as the present one where the theory is not well established, and, to some extent, must evolve as the data is explored.
The fourth decision to be made in Chenoweth and Gobster’s system is whether to use what they term ‘verbal’, ‘visual’ or ‘economic’ approaches. Visual here refers to methods using sketches, photographs or other graphic representation, or the actual landscape, while ‘verbal’ is defined as both the spoken and written word. ‘Economic’ refers to market value and is not a useful choice for heritage assessment (see Section 3.6).

Visual approaches to the assessment of landscape heritage incorporate the danger of confusing visual assessment with heritage assessment, and aesthetic value, which is largely assessed visually, is one of the four basic values listed in the *Burra Charter* (Australia ICOMOS, 1988a, p.1). It is important to try to avoid confusion between visual assessment and heritage assessment, while recognising that visual assessment may be part of heritage assessment.

Chenoweth and Gobster’s ‘verbal’ methods include the spoken and written word, and arguably offer the most appropriate methods for researching landscape heritage (see Section 4.3). Oral sources might also be useful but are harder to track down and are more ephemeral and variable than written sources.

5.4.3 Triangulation of research methods
Where possible, several research methods which support each other and focus on the same problem should be employed. In each method, a different approach is made towards the same point or focus, the research question. By combining several different approaches, researchers obtain a more reliable and a richer picture of the issue under investigation than if only one approach is used. Complementary techniques may fill in different parts of the picture (Eyles and Smith, 1988, p. 5).

So far we have seen that the most useful sources are criteria set down by heritage organisations, and statements of significance. We have also concluded that research methods used to investigate these sources should satisfy the general requirements of reliability, sensitivity, validity and utility. It has been established that systematic research methods are required, that either professionally-based or publicly-based methods are acceptable, provided the the community is appropriately represented, that
economic approaches to heritage assessment do not provide a useful basis for research, that 'visual' methods may prove too confusing, and that 'verbal' methods, incorporating the written word, are the most reliable type of research method. This supports the data sources chosen. A qualitative approach is considered to be more appropriate than a quantitative approach, but it is desirable for some numerical comparisons to be made. Some form of triangulation is also desirable.
5.5 Detailed consideration of potential research methods

As will be recalled from the Section 4.3, the most reliable, valid and useful sources of information regarding criteria are the statements of significance and criteria set down by heritage organisations. Section 4.4 explored the broad requirements of research methods for extracting information from these sources. It was concluded that any research method selected should:

- Retain information, that is retain the words and the flavour of the source in question;
- Be predominantly qualitative, but permit numerical comparisons to be made where appropriate;
- Be systematic, reliable, repeatable, useful and sensitive enough to pick up criteria and the ways in which they are used;
- Come at the problem from several different directions, that is, provide for triangulation.

How can we sample heritage organisations and statements of significance in a detailed and rigorous fashion to meet these objectives? This question is addressed in detail in Appendix 3, under 'A3.3: Detailed consideration of potential research methods', and the main findings are outlined below.

5.5.1 Research methods for investigating heritage organisations and their criteria

Organisations and their criteria are diverse. In many instances they have developed theoretical approaches to inform practice. In turn, this theory may have been modified by practical experience, and been written up in documents such as guidelines and policies. These may take the form of highly philosophical approaches, or straightforward ground rules and working lists of criteria for use in particular situations. Some criteria are general, and apply broadly to all types of heritage. Others are more detailed and may apply only to landscape, or to one type of landscape. It must be recognised that an organisation's guidelines and policies are
intentions which may or may not be reflected in practice, or which may be adapted in various ways for practical use. To make sense of these criteria, some means of systematising the information is required.

The most productive line of investigation was considered to be a classic literature review of documents relating to criteria, prepared by heritage organisations. This review could be systematic, representative for Australia, flexible in approach, and could give an accurate picture of the criteria on which organisations aimed to base their judgements on landscape heritage. A review of documents produced by heritage organisations could be carried out in conjunction with input from staff of the organisation concerned. This would enrich and verify the data obtained.

Focussed interviews offered the best method of using staff expertise. Focussed interviews provide some structure, while retaining flexibility. In conjunction with a review of policies and guidelines, focussed interviews would give a comprehensive view of the way in which staff understand and use the criteria described in the documents.

5.5.2 Research methods for investigating statements of significance
Content analysis was considered to be the most appropriate method for investigating statements of significance. Content analysis involves the interpretation of text, or 'hermeneutics', and provides a way of analysing information contained in documents and texts. Content analysis is a research technique used to systematically and quantitatively transform communication content, in this case writings on landscape heritage, into data that can be summarised and compared. Weber (1990, p.9) defines content analysis as 'a research method that uses a set of procedures to make valid inferences from text'.

Content analysis can preserve the written word and can deal with ideas and concepts, as well as words and phrases. It can manage the underlying or 'latent' meaning in the document, as well as the obvious or 'manifest' meaning. It can cope with blended 'latent' and 'manifest' meanings (Holsti, 1969, pp.12-14). It can maintain the written word while allowing some numerical comparisons to be made (Holsti, 1969, pp.5-12). It can also
cope with sites of varying sizes and levels of significance.
A content analysis of the statements of significance can extract the criteria required and can provide a research method that is reliable, repeatable, valid and useful. Content analysis is therefore a very useful and defensible tool for investigating statements of significance.

Cluster analysis was also considered. This is a technique for aggregating similar entities into groups, thus revealing patterns of association within the data (Wyatt, 1989, pp.42-44). Cluster analysis requires numerical data, and therefore has some fundamental limitations in that there must be a conversion from words to numbers during which information is lost. However it might be possible to use this as a supporting technique in conjunction with other methods.

Questionnaires, Delphi technique, factor analysis and comparative analysis were all rejected for the present work, for the reasons outlined in Appendix 3, Section A3.3.
5.6 Conclusions

In practice, heritage organisations and their criteria, and statements of significance, were considered to be the most useful sources of information on criteria. The most appropriate methods for investigating heritage organisations and their criteria were a classic literature review and analysis of documents relating to criteria, supported and expanded by focussed interviews with staff. The most suitable methods for investigating statements of significance were considered to be content and cluster analysis. These research methods are all capable of being systematic, reliable, valid, sensitive and useful. They are predominantly qualitative, but have the capacity for some basic numerical comparisons to be applied. Together they provide for triangulation of methods, so that the problem of criteria is approached from several directions, thus generating more reliable and richer data than if only one method was used.
Plate 18: Aboriginal rock art in Kakadu, Northern Territory, illustrating the boardwalk which keeps visitors and art separated. Note water damage to painting. Photo: Author
Chapter 6: HERITAGE ORGANISATIONS IN AUSTRALIA AND THEIR CRITERIA FOR EVALUATING LANDSCAPE AS HERITAGE

6.1 Introduction

We have seen from preceding chapters that there are some gaps and confusions regarding criteria used for evaluating landscape as heritage. A hypothesis has been proposed that there are three major categories related to criteria. These are components of value, measures of value and economic value, but that economic value is not used for assessment. The analysis in Chapter 3 suggests that, when assessing landscape heritage value, components of value are used to establish the presence of heritage value, while measures of value are used to determine if there is sufficient of this value present to designate the place worthy of heritage recognition.

The theory regarding heritage value has been investigated, now heritage practice is investigated. The aim in Chapters 6 and 7 is to identify the criteria by which heritage value in the landscape is judged in practice. The intent is to tease out of the mass of information generated by heritage organisations, the criteria they use in practice to assess landscape as heritage. To do this it is important to determine the criteria organisations say they use, and those they actually use, as criteria used by organisations are not always clearly stated, and those stated may not be those used in practice.

In Chapter 5, a range of research methods were evaluated and it was concluded that the following techniques were reliable, sensitive, valid and useful methods for identifying criteria and understanding their use:

- a review and analysis of heritage organisations and the criteria they use, or believe they use, as revealed in an analysis of documents on criteria, combined with focussed interviews of staff who carry out the assessments;

- content and cluster analyses of statements of significance, to
establish the criteria that they actually do use.

These two approaches provide different perspectives on criteria, and offer some triangulation in investigating them.

This chapter (Chapter 6) describes the selection of appropriate heritage organisations, how the document analysis and focussed interviews were carried out and the results obtained. The next chapter (Chapter 7) describes the content and cluster analyses of statements of significance and the results obtained in these analyses.
6.2 Selection of heritage organisations

In Australia, landscape heritage is dealt with by a diverse range of organisations at the federal, state and local government levels. Many organisations see landscape heritage as a section of their total heritage portfolio. Others see landscape heritage, or a subset of landscape heritage, for instance wilderness areas or national parks, as their major area of responsibility. As the field is diverse, and is dealt with in different ways by individual states, using both voluntary and statutory organisations, and by the major federal heritage organisation, the Australian Heritage Commission, a selection had to be made.

6.2.1 Criteria for selection of heritage organisations

When selecting organisations to investigate, it was considered important that they should include:

- A variety of levels of organisation, for instance international, national and state;
- A range of government and community organisations;
- Organisations dealing with all types of landscape heritage;
- Organisations representing a wide geographical range;
- Organisations with a range of philosophies regarding landscape heritage;
- A range of well-established to recently established organisations;
- Organisations which prepare statements of significance or listings.

Sub-section 6.2.2 lists the organisations selected. The organisations and the review of their documents relating to criteria and results of the focussed interviews are recorded in detail in Appendix 4. To facilitate analysis, organisations are divided into state and territory organisations,
national, and international organisations. Local government organisations have not been included, as they deal with heritage in a diverse and varied way, and mostly concern themselves with architectural heritage and not landscapes. Many do not state their reasons for setting aside heritage, and they rarely have statements of significance. Local government areas vary greatly in size, resources, and appreciation of heritage, making comparisons difficult, if not invalid. Therefore local government heritage organisations were not investigated.

6.2.2 Organisations selected

State and territory organisations
In Australia, individual states and territories have their own heritage organisations and legislation. Generally speaking, the key organisations for assessing and protecting landscape heritage in Australia are the National Trusts, state government organisations and the Australian Heritage Commission. The roles of the National Trusts in each state vary, but usually they are voluntary heritage organisations which assess, register, and write summary statements of significance for all types of heritage places, including landscapes. In addition, they frequently carry out more detailed studies and manage heritage properties in order to maintain their heritage value and to educate the public about heritage matters. They have been very influential in promoting heritage legislation, and have assisted government organisations in heritage matters. State government organisations have also played a major role in conserving landscape heritage, but have few registers or listings, and many of those that they do have are directed to architectural heritage. At the federal level, The Australian Heritage Commission has played a vital role in the assessment and conservation of landscape heritage. Its Register of the National Estate is an integrated list of places of heritage significance for Australia. Coordination between the Trusts, the state organisations and the Australian Heritage Commission is generally good.

Lack of time and resources meant that not all states could be visited. When choosing which states to visit, the criteria for selection of heritage organisations outlined in Sub-section 6.2.1 (above) were considered.

To obtain the required data, visits to the key organisations were essential.
As this meant travelling to the individual states or territories, and to the Federal capital, it was important to target the key organisations carefully, as resources would not permit all organisations to be visited. The states and the organisations investigated are listed below, and are detailed in Appendix 4. Various voluntary and statutory organisations other than those listed were examined, but the list below indicates the major organisations which met the criteria for selection outlined above.

Northern Territory
   National Trust of Australia (N.T.)

Western Australia
   National Trust of Australia. (W.A.)

Queensland
   The National Trust of Queensland

New South Wales
   Heritage Council of New South Wales
   Historic Houses Trust
   National Parks and Wildlife Service N.S.W.
   The National Trust of Australia (N.S.W.)

Australian Capital Territory
   The National Trust of Australia (A.C.T.)
   The A.C.T. Heritage Committee

Victoria
   Department of Planning and Development - Heritage Branch
   Historic Buildings Council
   Victorian Conservation Trust
   National Trust of Australia (Victoria)

South Australia
   State not visited.

Tasmania
   State not visited.
National organisations
Australian Garden History Society
Australian Council of National Trusts
Australian Heritage Commission

International organisation
World Heritage Committee
6.3 Method used for document analysis and focussed interviews

Appropriate organisations were selected, their documents regarding criteria were collected and examined, and focussed interviews were carried out with the staff most expert in landscape heritage conservation. This whole process involved visiting the organisations around Australia. While in the offices of the organisations concerned, the opportunity was taken to review the state of the listings of each organisation, and to determine whether they could be used for the content analysis detailed in Chapter 6. If suitable, statements of significance were photocopied for the content and cluster analyses.

A time was made to meet and interview staff, and to ask about documents relating to landscape heritage assessment. The focussed interview was carried out using the framework and questions outlined in Appendix 4: Section A4.1 and Table 1 (see over), and revealed information about documents, as well as staff's interpretation of criteria.

The focussed interview aimed to provide an understanding of the organisational philosophy, the context in which landscape heritage was viewed by the organisation, and how this was interpreted by the staff concerned.

The framework of questions permitted comparisons to be made across organisations, while allowing freedom to explore relevant new directions as they arose (see Sub-section 5.5.1). The focussed interview was directed to the landscape expert within the organisation, as in most organisations there was a particular person who dealt with either landscape or the natural environment. This was particularly true of the National Trust organisations in various states, but applied less to larger organisations such as the Australian Heritage Commission. In the Australian Heritage Commission, several staff in different departments had differing degrees of responsibility for listing landscapes.

The focussed interview was designed to take into account the theoretical concerns outlined by Zeisel (1981, pp.137-153), specifically the pre-interview analysis, which requires an understanding of the issues,
Table 1: Focussed interview: Questions and rationale

The questions are listed below. Immediately after each question, the rationale is given in italics.

1. Full name/details of organisation.
   Administration/tracking information.

2. Name/position of respondent.
   Administration/tracking information.

   To establish credibility and experience in dealing with landscapes.

4. Do you have 'statements of significance' or 'listings'? (those without were not pursued, although general information and perspective was gained and used). Name of 'listing', e.g. statement of significance, citation, listing etc.
   To decide whether the organisation was suitable for statement of significance analysis, and to determine their terminology with respect to listings.

5. Are landscape listings separate from other listings? Are they accessible?
   To determine whether statements of significance could be systematically and reliably sampled. This generally meant that the landscape listings needed to be able to be separated from other types of listings, such as buildings, either by the data being on computer or in separate landscape registers. This was important, as data is held in different states and required a visit of one or two days to sample, even when accessible.

6. Do you deal with all types of landscape heritage? If not, with which do you work? In particular ask about cultural landscapes, Aboriginal landscapes.
   To identify any known bias in the organisation’s sampling and recording techniques. This is particularly important with Aboriginal landscapes as some organisations may steer away from dealing with them as classification may be felt to encourage land rights disputes and because there may be a reticence in attempting to understand cultures outside the western tradition.

7. Do you have criteria for evaluating landscape heritage? Overall criteria? Criteria specific to landscape type? Get copies!
   To establish the values and criteria upon which the organisation, in theory, evaluates landscape as heritage. To establish if these criteria are general or specific, firstly to landscape, and secondly to a particular type of landscape. To get personal explanations and copies of any relevant documents relating to values and criteria.

8. Do you own any heritage landscapes? If so, do they have studies or masterplans attached?
   When organisations own and manage heritage landscapes they frequently study and understand them in detail, determining carefully the reasons for retaining them. This assists their assessment of landscape as heritage in general. It also assists in understanding the portfolio of the organisation.

9. Do you work on or carry out studies on properties you do not own?
   Organisations may gain the additional perspective highlighted in Question 8, even if they do not own properties. This also assists in understanding the portfolio of the organisation.

10. Do you covenant land for conservation? If so, how does this work?
    Covenanting is an agreement between owner and organisation to maintain heritage value. Covenanting requires assessment of heritage value. In undertaking covenants, organisations develop criteria for establishing heritage value.

11. What other major landscape heritage organisations do you know of in your state?
    To identify any organisations not previously known about.

12. Special issues and general comments.
    To pick up particular emphases of organisations and any issues they either deal with very well or with which they have difficulty.
the objectives of the interview, and the need for probes. Probes are questions or lines of inquiry aimed at exploring new areas as they arise. Probes can be scheduled, or unscheduled and used only if the opportunity arises (Berg, 1989, pp. 18-20).

The interview framework was developed in consultation with several heritage organisations and was pretested with the National Trust of Australia (Victoria), along the lines suggested by Zeisel (1981, pp.137-153). The final set of questions and the rationale behind their use took on the form given in Appendix 4: Section A4.1 and Table 1. Some slight variations on the format were used for different organisations, depending on their particular area of interest, portfolio of landscapes, and their responsibilities to the individual state or to the nation. These variations usually took the form of unscheduled probes. The questions formed a framework for investigation, but the process was open-ended, in that new lines of investigation could be followed if they arose.

When interviews were carried out, the underlying values and philosophies regarding landscape heritage were also discussed with the staff. The presence or absence of statements of significance or listings was also ascertained. When little useful material was obtainable, or when the organisation was judged not to be highly relevant, the interview was truncated, but when there was a rich source of information it was carried though to Question 12. After the interview, where appropriate the files and the listings were sampled in a systematic and detailed way, and photocopied to take away for the later content and cluster analysis (see Chapter 7). As this required about a day in each office, staff frequently had time to recall additional information or documents which might be of use during this time.

On returning from the interview the documents were examined and analysed along the lines of a classical literature review, and any useful comparisons with other organisations were made. Interviews were written up as soon as possible, to accurately retain the flavour and detail of the the visit.
6.4 Results

Findings are documented in detail in Appendix 4 and are summarised in Table A4.1. Key points arising from the documents and focussed interviews, and the implications of these for the assessment of landscape as heritage, are explained here (refer Table 2, see over).

6.4.1 The preponderant use of the *Burra Charter* criteria

The first and most obvious trend evident is the preponderant use of the *Burra Charter* or Australian Heritage Commission criteria. It will be recalled that *Burra Charter* and Australian Heritage Commission criteria are essentially the same, the latter having an additional criterion 'or other special value'. The only organisations which do not use these are the World Heritage Committee, the National Trust of Australia (Western Australia) 'Old Code' (which is being phased out), and the Victorian Conservation Trust, which deals almost exclusively with nature conservation and natural landscapes and whose main concern is biodiversity.

While the *Burra Charter* criteria are widely used, many organisations have either added additional criteria, or have expanded or further explained their use of the *Burra Charter* criteria. These additions and expansions are listed in Table 2 and are discussed below.

6.4.2 Components of value: psychological, aesthetic, historic, scientific and social value

It will be recalled from Sections 4.3, 4.4, 4.5 and 4.6 that landscape heritage value was divided into three major categories, components of value, measures of value and economic value. It was postulated that these three categories played different roles in landscape heritage. Components of value as expressed by heritage organisations are examined in this sub-section, measures of value are examined in Sub-section 6.4.3, and economic value is addressed in Sub-section 6.4.4.
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Psychological value
The component of value which is called 'psychological value' in the present work (refer Sub-section 4.4.2) includes environmental meaning and memory, symbolism, and the need for wilderness and closeness to nature. These have been largely ignored by heritage organisations in their criteria for assessment. The few expressions of psychological value used by heritage organisations are given below:

- **Environmental meaning.** The only expression of this was 'atmosphere' (National Trust of Australia (Victoria)), which was regarded as an extension of 'landscape character', here listed under 'aesthetic'. 'Atmosphere' bridges aesthetic and psychological value. There was no reference to memory, even though it was considered important in the literature (refer Sub-section 4.4.2).

- **Symbolism.** This is listed under social value, as religious or spiritual associations, by the Heritage Branch (Victoria), and under Criterion G of the Australian Heritage Commission. 'Landmark quality' is used in the Macedon Study, Victoria.

- **The need for wilderness and closeness to nature.** Criteria which come closest to expressing this are 'conservation' and 'natural beauty' (World Heritage Committee), possibly 'fragility', depending on the interpretation given it, and 'naturalness' (National Trusts of N.T. and W.A).

Aesthetic value
The only organisation not listing aesthetic value is the 'Old Code' of the National Trust of Australia (Western Australia), and, as noted above, this code is being phased out. Aesthetic value means many things (see Sub-section 4.4.3). Manifestations of the concept of aesthetic value used by heritage organisations are as follows:

- **General aesthetic quality.** For instance 'aesthetic recognition or quality' (Macedon Study, Victoria), 'visual quality' (National Trust of Australia (Victoria)), 'important design or visual qualities'
Aesthetic value as art. This includes the concepts of 'art' (World Heritage Committee), 'artistic' and 'formal aesthetic' (National Trust of Australia (N.S.W.)).

Aesthetic value specifically in nature - 'natural beauty' (World Heritage Committee).

Aesthetic values of particular cultural groups. For instance 'importance in exhibiting particular aesthetic characteristics valued by a community or cultural group' (Australian Heritage Committee, Criterion E).

Aesthetic value as creative or technical achievement (Heritage Branch, Victoria).

Architectural value. This could be regarded as falling under the heading of aesthetic value. However it does not fit entirely comfortably under this heading, as frequently architectural value embodies ideas relating to architectural history. It is only expressed as a specific criterion 'architectural significance' by the National Trust of Australia (N.S.W.) and as 'architectural style or design innovation, noted architect or builder, old, rare, representative, unusual materials (Heritage Branch, Victoria).

Historic value

Historic value is also used by every organisation examined. Historic value has many manifestations (see Sub-section 4.4.6). In addition to the simple and comprehensive term 'historic value' the concept of historic value has been expressed by organisations in the following ways:

- Historic value subdivided into 'Aboriginal history' and 'European history' (National Trust of Australia (N.S.W.)).

- Historic value as an expression of the pattern of cultural history, for instance 'Importance in the course or pattern of Australia's natural history' (National Trust of Australia (N.S.W.)).
or cultural history' (Australian Heritage Commission, Criterion A), 'illustrate patterns of evolution' (Heritage Branch, Victoria).

- Rare or endangered elements of historic value, for instance 'possession of uncommon, rare or endangered aspects of Australia's natural or cultural history' (Australian Heritage Commission, Criterion B).

- Historic value as potential research resource, for instance 'importance to yield information that will contribute to an understanding of Australia's natural or cultural history (Australian Heritage Commission, Criterion C).

- Historic value by association, for instance 'special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history (Australian Heritage Commission, Criterion H), 'associational links' (National Trust of Australia (N.S.W.)), associated with events, developments, phases, persons, groups, activities, site of an important event, illustrate patterns of evolution (Heritage Branch, Victoria).

- Archaeological value which could be regarded as one type of historic value. It is listed as a criterion by the Victorian Conservation Trust and by the 'Old Code' of the National Trust of Australia (W.A.). It was subsequently dropped by the Trust and does not appear in the 'New Code'.

**Scientific value**

Scientific value is used as a criterion by all organisations examined. It too has many different expressions (see Sub-section 4.4.4). Scientific value generally relates to the geology, landforms, ecology and natural systems of a place. These concepts of scientific value have been represented by organisations in the following ways:

- Scientific value as environmental quality, for instance 'naturalness' (National Trust of Australia (N.T.) and National Trust of Australia (W.A.)), 'environmental importance' and 'scientific importance'
(National Trust of Australia (W.A.) 'Old Code'), 'habitat quality' (Macedon Study) and 'scientific interest' (National Trust of Australia (Vic.)).

- Scientific value as potential to provide scientific, environmental or research information or ability to demonstrate aspects of the environment. For instance 'science', 'conservation' (World Heritage Committee), 'importance to yield information that will contribute to an understanding of Australia's natural and cultural history' (Australian Heritage Commission, Criterion C), 'importance in demonstrating the principal characteristics of a class of Australia's natural or cultural environment (Australian Heritage Commission, Criterion D), 'information source' (Heritage Branch, Victoria), 'scientific contribution/natural sciences' (Macedon Study).

- Scientific value as an expression of environmental history, for instance 'Importance in the course or pattern of Australia's natural or cultural history', including flora, fauna, landscapes, climate, natural processes (Australian Heritage Commission, Criterion A), evidence of technical, creative or scientific process (Heritage Branch, Victoria), technical accomplishment (Macedon Study).

- Rare or endangered elements of scientific value, for instance 'possession of uncommon, rare or endangered aspects of Australia's natural or cultural history', including species, communities, ecosystems, landscapes or wilderness (Australian Heritage Commission, Criterion B). Also includes endangered species and rarity (National Trust of Australia (N.T.); National Trust of Australia (W.A.); and the Victorian Conservation Trust.

- Aspects of ecology as scientific value, including ecological diversity, ecological nodes, links, corridors, buffers, inliers, unusual occurrences of species, remnant vegetation, regeneration (Victorian Conservation Trust), diversity of species and communities and position in the ecological or geographical unit (National Trust of Australia (N.T.) and National Trust of Australia (W.A.)).
• Geological or landform value as scientific value, including geology, minerals, fossils; erosion control is specifically mentioned as a criterion only by the Victorian Conservation Trust.

• Horticultural value as scientific value. This is not specifically mentioned, but is dealt with by the National Trust of Australia (Victoria) in its garden assessment as 'original form and original planting', by The National Trust of Australia (N.S.W.) in criteria specifically for cemeteries as 'botanical', and by the Australian Heritage Commission in criteria specific to parks and gardens such as 'type, style and period'.

Social value
All organisations have some expression of social value in their criteria, predominantly through the Burra Charter, but also through criteria such as 'social or community asset' (National Trust of Australia (W.A.), 'Old Code'), 'public value' and 'local value' and 'cultural associations' (Heritage Branch, Victoria), and 'cultural interest' (National Trust of Australia (Victoria), see also Sub-section 4.4.5). In the analysis of criteria used by organisations social value was found to take the following forms:

• Social value as the study of humans - 'ethnological' and 'anthropological' (World Heritage Committee). These do not fit very comfortably into social value as it is defined by the Burra Charter, but they do have something in common with social value.

• Social value as educational value (National Trust of Australia (N.T.), National Trust of Australia (W.A.), 'New Code'; and Victorian Conservation Trust).

• Social value as recreational and tourism value (National Trust of Australia (N.T.); National Trust of Australia (W.A.), 'New Code').

• Associational links as social value. For instance 'Strong or special associations with a particular community or cultural group for social, cultural or spiritual reasons' (Australian Heritage Commission).
Commission, Criterion G, or 'community identification' (Macedon Study). 'Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group' links aesthetic and social value (Australian Heritage Commission, Criterion E).

- Custom or way of life as social value, for instance 'life patterns' (Macedon Study), 'way of life/custom at risk' (Heritage Branch, Victoria).

6.4.3 Measures of value

Measures of value as outlined in Section 4.5 included integrity, state of preservation and condition, authenticity, representativeness, rarity and uniqueness. In the analysis of organisations undertaken here, these were found to occur as follows:

- Integrity, state of preservation, condition (see Sub-section 4.5.1). 'Integrity' was used only by the World Heritage Committee for natural sites, and by the Macedon Study. Therefore it is really not specifically used in assessment in Australia, despite being well-entrenched in the literature and much spoken of in heritage discussions. 'State of preservation' is used by the World Heritage Committee for cultural sites. 'Intactness of features' is used for describing the condition of gardens by the Heritage Branch (Victoria).

- 'Authenticity' is used only by the World Heritage Committee for cultural environments. No other organisation mentions it as a criterion, although the need for authenticity is well understood in the literature (see Sub-section 4.5.2)

- 'Representativeness' is a commonly used measure of value (see Sub-section 4.5.3). The National Trust of Australia (N.T.), the National Trust of Australia (W.A.), the Heritage Branch (Victoria) and the National Trust of Australia (N.S.W.) (cemeteries only) all use it. Closely related to representativeness is 'ability to demonstrate', used by the National Trust of Australia (N.S.W.).
• Rarity and uniqueness (see Sub-section 4.5.4). 'Rarity' and 'uncommon' are used by many organisations, including the Australian Heritage Commission, the National Trusts of the Northern Territory and Western Australia, and the Heritage Branch (Victoria). In addition to these terms 'endangered', 'endangered species' (or habitats or communities) and 'threatened species' are also widely used (Australian Heritage Commission; National Trust of Australia (N.T.); National Trust of Australia (W.A.); Heritage Branch (Victoria); and the Victorian Conservation Trust). 'Unique', which is the most extreme case of 'rarity', is not used by any organisation.

6.4.4 Economic value
Economic value refers to the market value of heritage places. As discussed in Section 4.6, it was not mentioned by any heritage organisation as a criterion for assessment of landscape heritage value.

6.4.5 Difficulties and gaps in the existing criteria
Chapters 2, 3 and 4 explored the theory relating to landscape heritage value, and set up some expectations as to what criteria might be used for its assessment. The present sub-section highlights some of the difficulties and gaps which were identified when organisations and their practices were compared with the theory. These will be dealt with under the headings of components of value, measures of value, economic value and landscape type.

Components of value
There was little reference to environmental meaning in practice and no reference to memory, even though it was considered important in the literature.

There are few criteria which specifically describe symbolic, sacred and spiritual values in the landscape. Criterion G of the Australian Heritage Commission uses 'social, cultural or spiritual reasons' for setting aside places of heritage significance. Symbolic value is recognised in the
Macedon study as 'landmark quality'. Religious value is used for cemeteries only by the National Trust of Australia (N.S.W.); while religious and spiritual associations are considered to be part of social value by the Heritage Branch (Victoria). Garden work by the National Trust of Australia (Victoria) uses 'romantic' and 'atmosphere'. Although there are several criteria which address these relatively intangible values, they tend to be buried amongst the more tangible criteria which can be more effectively demonstrated and communicated.

There is no mention of wilderness value or quality, and few organisations mention criteria which reflect the need for closeness to nature, despite its wide currency in the literature (see Sub-sections 2.4.2, 4.4.2 and Appendix 2).

Scientific value demonstrates difficulties in interpretation, possibly because of the original confusions in the Burra Charter definition, while archaeological value is skirted around by several organisations, but is not adequately dealt with. Possibly this is because no-one is ever sure if archaeological value is part of scientific value or historic value, so it tends to be ignored.

Social value still causes problems of definition and interpretation. While 'ethnological' and 'anthropological' are listed as criteria for the World Heritage Committee they are not listed for any heritage organisation within Australia.

Measures of value
In practice, there is a lack of clarity about definition and use of 'integrity', and, with the exception of the World Heritage Committee, organisations have tended not to use it. The same comments apply to 'authenticity'. Likewise 'state of preservation' and 'condition' are not generally used as criteria.

No organisation is prepared to state that they are using the measure of value 'uniqueness', possibly because this is seen as being too extreme, when 'rarity' can be modified to cover essentially the same concept, for
instance by the use of terms such as 'extremely rare'.

Of the measures of value, representativeness and rarity are the only ones commonly used.

The use of thresholds was discussed by the Australian Heritage Commission but their use is not yet fully understood and staff give the impression of not understanding them.

Economic value
Economic value has not been used by any organisation.

Landscape type
One of the major gaps is the absence of the use of landscape type, let alone 'typology'. The Australian Heritage Commission and the Heritage Branch (Victoria) uses 'parks and gardens' as a very broad landscape type. Cemeteries are dealt with specifically by the National Trust of Australia (N.S.W.). Gardens are specified by the National Trust of Australia (Victoria) and are all that the Australian Garden History Society deals with. Natural landscapes are the area of interest of the Victorian Conservation Trust. There was no evidence of typologies or themes in practice, although these were discussed in the literature. One cannot establish typical criteria for assessing different types of landscape if one does not have landscape types.

Not all organisations feel capable of assessing Aboriginal landscapes, for many reasons, including cultural differences and political agendas.

6.4.6 The general confusion
Much effort has been invested in developing complex methods for assessing landscape as heritage while relatively little effort has gone into establishing criteria. As a result, methods are complex and often difficult to use, while the criteria on which they are based are frequently ill-defined or hard to interpret. An example of this is the parks and gardens assessment method of the Australian Heritage Commission, which, if all
possible combinations of criteria were represented, would require over one thousand categories of gardens to be on the Register of the National Estate. Difficulties in using these methods has caused the rate of assessing and registering places to decrease greatly over the last five years, as effort has been put into methods, rather than establishing reliable criteria as the foundations for these methods, and then testing them in practice.

Not only are the methods confused. Criteria themselves may contain a number of different strands. For example, the complexity of concepts or strands involved in many of the Australian Heritage Commission criteria indicates some of the confusions, and contributes to the subsequent difficulties in the assessment of landscape heritage, and heritage places in general.
6.5 Conclusions

In this chapter the objective was to determine criteria heritage organisations think they use, or which they aim to use, for the evaluation of landscape heritage.

Almost all heritage organisations used the *Burra Charter* criteria (aesthetic, historic, scientific and social) although many operated using the additional 'or other special value' from the *Australian Heritage Commission Act 1975*. This additional criterion was seen as being so unspecific as to have little meaning. Organisations that do not use the *Burra Charter* criteria have criteria which are very close to them, or which incorporate them. Therefore there is a broad common base from which to proceed. These criteria may not always be useful in dealing with the detail, but they provide a firm foundation for comparisons across organisations and across heritage places, including landscapes. The *Burra Charter* criteria are simple enough for people at all levels to use. Many organisations have found the need to use criteria additional to *Burra Charter* criteria, partly as a response to their generality.

As organisations were examined, it became increasingly evident that the three major categories for criteria proposed in Chapter 4 did, in fact, exist. These categories were components of value, measures of value and economic value.

Components of value were regarded as key criteria whose presence indicates heritage value. These include aesthetic, historic, scientific, social and psychological value. The more tangible of these are well-known and used. For instance aesthetic value is widely used and understood, and is expressed in a variety of ways. Historic value was one of the first criteria to be used by organisations, and is possibly the best understood of all the criteria, although there is some confusion about the inclusion of 'archaeology' under the banner of 'historic value', as, for very old sites, it may merge with scientific value.

Difficulties arose with the use of 'scientific value'. In part these are related to the definition of scientific value given in the *Burra Charter*, which is
not particularly useful and is obviously not written by scientists. In part it is related to the need to justify heritage in 'objective' terms by adopting scientific reasons for keeping heritage places. For instance, justifying the deep feelings for wilderness by speaking of it in terms of habitat for rare species. Many of the psychological needs for nature and wilderness, and hence criteria attached to these, are masked by this approach. Much work is needed on the concept of scientific value.

Organisations are not sure if archaeological value should be viewed as an aspect of scientific value or of historic value. It is probably an aspect of either, depending on the context. Their confusion about where to place it meant that it was largely ignored.

There are difficulties attached to the use of social value as a criterion, as one must identify the community for which a place has value. 'Ethnological' and 'anthropological' are not particularly comfortable in the social value category and it is difficult to see how these values are being addressed in Australia.

Some of the most obvious gaps in the criteria relate to evaluating feelings related to place, and generate the need for a new group of criteria which here have been collectively called psychological value. These include much more explicit use of symbolic, spiritual, sacred and religious values. Some organisations make minor mentions of these under social value, but they are not adequately defined or dealt with. They are more introspective and reflective qualities than social value, and need a separate category. Likewise none of the organisations mention environmental meaning or memory, sense of place, feelings of closeness to nature, or wilderness experience, yet all of these might be the key reasons people identify the landscape in question as heritage.

Of the measures of value, the only ones clearly understood and commonly used were 'representative' and 'rarity'. Despite their currency in the heritage literature, 'integrity' and 'authenticity' were rarely mentioned, and there was a lack of clarity regarding their meanings. 'State of preservation' and 'condition' were also infrequently mentioned. No organisation was prepared to venture the criterion 'unique'. The work on measures of value supports the view that they are generally more to do
with planning and managing heritage than assessing it.

Economic value was not mentioned at all in relation to assessment, supporting the view that economic considerations come after the assessment of heritage, and are related to conserving heritage rather than identifying it.

Across the different heritage organisations investigated, all types of landscapes were represented, yet organisations generally made little attempt to specify landscape type, or criteria relative to type. Use of typologies and themes or storylines were discussed in the theory, but are not evident in practice. The use of thresholds is discussed by the Commission, but their use is not fully understood and great confusion attaches to them.

Not all organisations felt able to assess Aboriginal landscapes because of cultural differences and political agendas. Assessing Aboriginal landscapes highlights the need for a broader definition of the term 'cultural landscape', as both Aboriginal landscapes and the cultural landscapes of the Australian Outback do not fit the narrow definition of cultural landscape.

The complexity of concepts involved in the Australian Heritage Commission criteria demonstrate some of the confusions in heritage criteria, and generate many of the subsequent difficulties in assessment methods. If one cannot get clear and unambiguous criteria, there will be no prospect of straightforward methods of assessment.
Chapter 7: CONTENT AND CLUSTER ANALYSES OF LISTINGS

Plate 19: The restored fernery at Rippon Lea, Melbourne, which contains an important horticultural collection of ferns, demonstrating the ongoing usefulness of historic landscape structures. Photo: Author
Chapter 7: CONTENT AND CLUSTER ANALYSES OF LISTINGS

7.1 Introduction

So far, criteria that organisations aim to use for the assessment of landscape heritage have been examined and compared with the criteria expected from the theory. This has highlighted problems and gaps in criteria used in practice, which in turn has provided insights into the criteria that should be used for assessment. To gain another perspective on criteria, it is instructive to examine the criteria that organisations actually use, and compare them with those they aim to use and with those expected from the theory. The aim of this chapter is to discover the criteria actually used by organisations to judge landscape heritage value.

Section 5.3 identified statements of significance as the most useful, reliable and valid source of information on the criteria organisations actually use. It will be recalled that statements of significance, also known as 'listings' or 'citations', are concise summary statements encapsulating reasons for significance, are prepared by heritage professionals, have the endorsement of the organisation concerned, and apply at the international, national, state and local level. They deal with all types of landscape heritage, and are prepared by organisations which have different foci and philosophies. They describe the reasons for valuing each place, rather than general policies or intent.

It was found in Chapter 5 that content and cluster analyses would be useful, reliable and valid research methods. Content analysis is the major investigative tool, with the information further refined by cluster analysis of the data obtained from the content analysis. Section 7.2 describes the content analysis which extracts criteria from statements of significance. Section 7.3 describes the cluster analysis which further clarifies criteria and their use. Section 7.4 integrates the results of the two analyses.
7.2 Content analysis of listings

Content analysis involves the interpretation of text, or 'hermeneutics'. It is a research technique for systematically transforming information in documents into data that can be summarised and compared (see Subsection 5.5.2). It is more than a key word exercise, and can deal with ideas and concepts underlying the words. Weber (1990, p.9) describes content analysis as 'a research method that uses a set of procedures to make valid inferences from text.'

7.2.1 Characteristics of content analyses

Holsti (1969, pp.2-3) says that content analysis involves the objective, systematic and rigorous analysis of the content of communications. In this it can be regarded as scientific method, and, while catholic in nature, it requires that the analysis be rigorous and systematic, and have the capacity to generate theory, which he calls 'generality'. The advantages of content analysis as a tool for the present research are outlined in detail in Appendix 5, A5.1.

Berg (1989, p.1) says that objective analysis of the message is accomplished by means of explicit rules which he calls 'criteria of selection', established before the actual analysis of data. Here these will be called 'rules of selection' to distinguish them from the criteria which are being analysed (see Appendix 5, A5.4: Rules of selection). 'Systematic' means that the inclusion and exclusion of content or categories is done according to consistently applied rules (Holsti, 1969, p.4). 'Generality' requires that the findings must have theoretical relevance, that is, it must be possible to extract information which yields generalities or theories regarding the issues being analysed (Holsti, 1969, p.5).

Holsti (1969, p.5) says that in most cases the measuring system relates to frequency of occurrence of words or themes. Underlying this measurement system is the assumption that frequency is the only valid index of concern. Holsti states that 'often this may in fact be a valid premise'. However, 'contingency analysis', in which the coding of material depends on the presence or absence of the attribute, rather than
on its frequency of occurrence in a particular work under examination, provides another method of scoring. The method of scoring in the present work provides for both frequency and contingency analysis.

Holsti (1969, pp 15-17) suggests the use of content analysis when the evidence is to be extracted from documentary and written information. Henderson (1991, p. 91) recommends content analysis when the requirement is for an unobtrusive, non-reactive research method for the analysis of text, as it can deal with the written word and allow its transformation into quantitative information (see Appendix 5, 5.1: qualitative and quantitative approaches to content analysis). She sees the written source of information as stable, rich, easy to use, frequently readily available, and able to be representative and valid. An example of content analysis in environmental work is the study on environmental perceptions among a group of farmers in Spain (Barrios et al., 1985, pp2-8).

7.2.2 Selection of organisations for content analysis, and collection of listings

In Chapter 6 the organisations which dealt with landscape heritage were evaluated and those most suitable for analysis of statements of significance were identified. Selection of organisations for the content analysis was based on the following:

- relevance to the assessment of landscape heritage;
- representing government and community organisations;
- demonstrating a variety of levels, i.e. state, national and world heritage;
- dealing with all types of landscapes heritage;
- representing a wide geographic range;
- representing a range of heritage philosophies;
- possessing statements of significance which are accessible and can be practically sampled.

When visiting organisations for the document analysis and focussed interviews, where appropriate the opportunity was taken to photocopy their statements of significance for the content analysis stage of the work. Organisations were discussed in detail in Appendix 4 and Chapter 6.
Statements of significance for landscapes of heritage value were collected from the following organisations:

<table>
<thead>
<tr>
<th>Name of Organisation</th>
<th>No. of listings (statements of significance) collected</th>
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<tbody>
<tr>
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<tr>
<td>The National Trust of Australia (W.A.)</td>
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<td>The National Trust of Australia (A.C.T.)</td>
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<td>Australian Heritage Commission</td>
<td>72</td>
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<td>World Heritage List</td>
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</table>

The fact that The National Trust of Australia (W.A.) and The National Trust of Australia (A.C.T.) both have 58 statements of significance for analysis is coincidental.

As can be seen from the list of organisations, 100% of the listings were collected for many. In these cases, there was no danger of missing key pieces of information or trends, as all statements of significance were considered. This was not possible for the Australian Heritage
Commission data as the data base had approximately 9000 places on the Register of the National Estate at the time of collection of the listings (April 1991).

Collecting landscape listings from the Australian Heritage Commission data base proved extremely difficult. This was partly due to the difficulties of accessing the complex mainframe computer system, which was not set up for public access, and partly because of the nature of the listings. Three types of environment are recognised by the Australian Heritage Commission: 'natural', 'Aboriginal' and 'historic'. Overlain on these types is a complex system of 'groups' of places. It is at this level that landscapes can be separated out of the 9000 or so entries. At this point the help of the Statistical Consulting Service at The University of Melbourne was sought, and an acceptable method of sampling was devised with their assistance. The detail of this is described in Appendix 5, A5.2.

Of the 468 listings collected, only 432 could be analysed for the following reasons:

- Some places were represented on several registers, for instance on a National Trust register, on the Register of the National Estate (Australian Heritage Commission) and on the World Heritage List. In these cases the highest level register sample was used, as only one entry per site was appropriate. When a site warranted World Heritage recognition, it was considered that those listings should be used, as opposed to the national listings. Using this approach state focus, as opposed to the national or international focus, tended to become marginally under-represented. This was compensated for by the 100% samples at the state level.

- Some places were listed but no reasons for listing were provided. This meant there was no text to analyse and the listing could not be used.

- Individual trees were excluded from the analysis as they were seen as single items. While they are components of a landscape and may have heritage value in their own right, they were not a heritage landscape per se. Most organisations run separate Registers for trees, but several
statements of significance describing trees crept into their main Registers.

7.2.3 The content analysis method
When faced with a piece of text, such as a statement of significance, to analyse, there are a number of steps which must be gone through (Weber, 1990, pp. 21-24). These are described in detail in Appendix 5, A5.3, and are summarised below:

1. Define the recording units;
2. Define the categories;
3. Test coding on sample of text;
4. Assess accuracy or reliability;
5. Revise the coding rules (if necessary return to Step 3);
6. Code all the text;
7. Assess achieved reliability or accuracy.

Defining the recording units: setting up the content analysis
The first step is to define the coding unit, that is, when looking at the text, what level of information should be recorded? Definition of the basic unit of text is one of the most fundamental decisions in content analysis (see Appendix 5, A5.3: Defining the recording unit). In this research 'word sense', words and phrases which constitute a semantic unit, was considered the most appropriate coding unit. Actual words and phrases were retained to capture the diverse expression of criteria and to keep as much information as possible. This meant that ideas and information could easily be tracked back through the charts, by simple examination.

Using 'word sense' also meant that blended manifest and latent meaning could be recorded (see Appendix 5, A5.3: Manifest and latent content).

Defining the categories: establishing the framework for the analysis
Once the coding unit has been defined, the next step is to establish a means of categorising the information. Each statement of significance was carefully read through and every expression of a criterion was underlined
These underlined words and phrases were to be transferred to a spreadsheet, but before this could be done, the categories (columns on the spreadsheet) had to be defined (see Appendix 5, A5.3: Defining the categories).

It will be recalled from previous chapters that some criteria, for instance those of the Burra Charter, are expected, and these might form categories (columns in the spreadsheet). We have also hypothesised that criteria fall into three broad groups, components of value, measures of value, and economic value, and these should be represented on the spreadsheet. It is also anticipated from Chapter 6 that there would be some gaps, such as symbolic value and archaeological value, which might be present in statements of significance and should therefore be included as categories.

Categories and a framework for analysis were developed, based on the theory outlined in Chapters 3 and 4 and the information obtained in Chapter 6 (for detail see Appendix 5, A5.3: Defining the categories and A5.4: Rules of selection). Categories (columns) were exclusive, in that an entry could appear in only one column, rather than simultaneously in more than one (Weber, 1990, p.23). Exclusivity assists with the statistical analysis, in that it allows valid comparisons to be made between categories and maintains the assumption of variables being discrete.

Measures of value selected for the content analysis included 'integrity', 'state of preservation', 'authenticity', 'uniqueness', 'rarity', 'representative of...' and 'example of...'. Components of value included 'symbolism', 'aesthetic', 'scientific' expressed as 'general scientific', 'geology and landform' and ecological value. Value related to waterbodies was found to be such a recurring theme, for instance rivers and wetlands, that it was listed as a separate criterion. Archaeological value was also included. 'Social', 'economic', 'historic' were also included. 'Other' was used to catch any categories not provided. Wilderness value and closeness to nature were incorporated into 'other', as there was no indication of their being common in the pilot test (see below and Table 3).

Test coding: pilot testing the categories
The next step was to test the usefulness of the categories developed for the
content analysis with a pilot study using listings representing the range of
landscape types. The criteria were found to be satisfactory, in that they
were comprehensive enough to cope with all entries, they were broad
enough to cope with the diverse criteria emerging from the listings, they
could retain the detail, and their definition was clear enough to prevent
ambiguity. They are reliable and valid categories and were adopted for the
content analysis and for the coding of all text.

Coding the text: setting up the spreadsheets
After the categories were found to be suitable in the pilot study, the next
step was to set up spreadsheets to record the content analysis data.
Spreadsheets were set up for each landscape type (see below for
explanation of landscape type). Firstly, a manual spreadsheet was set up
for each landscape type on a large sheet of paper. Working with
spreadsheets manually may be thought to be cumbersome when
computers are available. However it enabled the whole sheet to be viewed
at once, something the computer screen could not do, and thus displayed
all criteria options to the coder. There was also an important perception
issue in viewing the spreadsheet in total, as it offered all options to the
coder, increasing comprehension of the categories available. This
increased reliability of coding, and any changes necessary could be easily
made as the analysis proceeded.

Next, the spreadsheet was transferred to the computer-based spreadsheet
program, Excel. The program Excel was chosen as it is relatively easy to
use and has sophisticated and useful graphing and data processing
functions.

The spreadsheets were organised with criteria across the top and
individual landscapes down the left-hand side. The spreadsheet column
headings (the categories indicated above) were the same for all landscape
types, so that criteria for different landscape types could be compared.

The first five columns across the top of the spreadsheet (A-E inclusive)
were devoted to locational and organisational information: name of the
landscape concerned, location, state, organisation and date of listing
preparation. This was done in order to track the characteristics of different
organisations and their criteria.

The next eight columns (G-M inclusive) were for the 'measures of value' criteria which were developed from the literature and from the first part of the research, described in Chapter 6. These headings were 'integrity', 'state of preservation', 'authenticity', 'symbolism', 'uniqueness', 'rarity', 'representative of...', 'example of...': Note that 'Symbolism' is a 'component of value' criterion, but was mixed up with the 'measures of value' set, at this stage of the research, as components of value and measures of value had not yet been fully resolved. However, its position on the spreadsheet does not matter, provided it is recognised as a 'component of value', but the arrangement is less tidy than it might be.

The following ten columns (N-W inclusive) were based on 'components of value' criteria: 'aesthetic', 'scientific' (which was broken down into 'general scientific', 'geology/landform', 'water' and 'ecological'); 'social', 'economic' and 'historic'. 'Archaeological' was also given a column, which was placed between scientific and social. A column labelled 'other' was included to catch any criteria not covered by the above, and to deal with wilderness value and 'closeness to nature'.

Table 3: Content analysis categories: columns in the spreadsheet

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Location</td>
<td>State</td>
<td>Organisation</td>
<td>Date</td>
<td>Integrity</td>
<td>State of Preservation</td>
<td>Aesthetic</td>
<td>Scientific</td>
<td>Social</td>
<td>Economic</td>
<td>Economic</td>
<td>Historic</td>
<td>Other</td>
<td>Archaeological</td>
</tr>
<tr>
<td>Gen/Landform</td>
<td>Water</td>
<td>Social</td>
<td>Economic</td>
<td>Historic</td>
<td>OTHER</td>
<td>Aesthetic</td>
<td>Scientific</td>
<td>Social</td>
<td>Economic</td>
<td>Economic</td>
<td>Historic</td>
<td>Other</td>
<td>Archaeological</td>
<td></td>
</tr>
</tbody>
</table>
Managing the different types of landscape in the content analysis

The next step was to extract the information from the statements of significance. Listings were dealt with in batches relating to landscape type, for two reasons. Firstly, the hypotheses that landscape type may assist in the assessment of landscape heritage, and that different landscape types may have different criteria profiles, could be tested using this approach. Secondly, as the number of listings to be dealt with was large (432), some system had to be applied to them to make the process manageable.

From Chapters 2 and 3, particularly Sub-section 3.2.4, and arising also from the analysis undertaken in Chapter 6 and the pilot study for the content analysis, the following types were settled upon. The types were found to be comprehensive, and all landscapes could be dealt with within this framework.

<table>
<thead>
<tr>
<th>Landscape type</th>
<th>Primary criterion</th>
<th>No. analysed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural landscapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geological/landform landscapes</td>
<td>Geology/landform</td>
<td>59</td>
</tr>
<tr>
<td>(scientific)</td>
<td>(scientific)</td>
<td></td>
</tr>
<tr>
<td>Waterbodies e.g. rivers, wetlands</td>
<td>Water (scientific)</td>
<td>31</td>
</tr>
<tr>
<td>Ecological landscapes</td>
<td>Ecology (scientific)</td>
<td>107</td>
</tr>
<tr>
<td>Aesthetic landscapes</td>
<td>Aesthetic</td>
<td>49</td>
</tr>
<tr>
<td>Aboriginal landscapes</td>
<td>Archaeological</td>
<td>20</td>
</tr>
<tr>
<td>Historic landscapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cemeteries</td>
<td>Historic</td>
<td>9</td>
</tr>
<tr>
<td>Historic sites</td>
<td>Historic</td>
<td>13</td>
</tr>
<tr>
<td>Parks and gardens</td>
<td>Historic</td>
<td>72</td>
</tr>
<tr>
<td>Pastoral landscapes</td>
<td>Historic</td>
<td>34</td>
</tr>
<tr>
<td>Urban conservation areas</td>
<td>Historic</td>
<td>20</td>
</tr>
<tr>
<td>Non-urban industrial landscapes</td>
<td>Historic</td>
<td>18</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>432</td>
</tr>
</tbody>
</table>

For each landscape type there was a primary criterion. Thus landscapes set aside for their aesthetic value have the primary criterion 'aesthetic',...
cemeteries have the primary criterion 'historic', landscapes important for biodiversity have the primary criterion 'ecology', which is a subset of 'scientific' and so on. So the main reason for setting aside a landscape determines the landscape type spreadsheet on which it is entered. While the predominant reason for ascribing heritage significance, called here the primary criterion, determined which landscape type was used, and was recorded on the spreadsheet in all its manifestations, other aspects of significance were also recorded. For instance a natural landscape primarily significant for its biodiversity may also contain significant Aboriginal heritage and a historic site. All these can be entered on the spreadsheet, but the primary criterion determines that the landscape type is an 'ecological landscape'. Thus all criteria were represented, but the primary criterion determined the landscape type. The landscape type relevant for each listing was determined by reviewing the listing concerned and determining its primary criterion.

Coding the text and entering the information on the spreadsheet

Once the landscape type of the listing being analysed had been determined, the next step was to extract all criteria used and enter them in the spreadsheet for that landscape type. Each statement of significance was first read right through to fully comprehend its content. Then it was re-read and criteria used were identified and underlined. Once this had been done for the whole statement of significance, criteria were then transferred to the manual spreadsheet, ensuring that every criterion mentioned had been recorded in its original form. To ensure a systematic and consistent approach to the analysis, the procedure was repeated in the same manner for each statement of significance.

Figure 7.1: Example of a statement of significance

Central Western Slopes | THE WARRUMBUNGLES

Reasons for Listing

Scenic: Dramatic volcanic spires and domes, massed flowering of wattles and other native species, and extensive views of the western plains.

Scientific: Geological and geomorphological features of the extensive volcanic landforms and the associated ecosystems which merge with those of the western plains.
As some listings represented a general criterion in many different ways, or represented subsets or different aspects of criteria, each expression was recorded. For instance, under aesthetic, several different aspects could be represented, such as 'contrast', 'visual character', 'spectacular art work' and so on. These were all listed under the heading 'aesthetic', but the words 'contrast', 'visual character', 'spectacular art work' were all retained to keep the flavour and accuracy of the entry. Note that all words entered are direct quotes from the statements of significance, and that context may determine the column or category, rather than the exact words.

When the manual spreadsheet had been checked to ensure that it was correct, the whole spreadsheet was transferred to the Excel program. In doing this, care was taken that each entry took up only one cell of the spreadsheet, so the total would be an accurate record of the entries. During the process of transferring criteria from the manual sheet to the Excel program there was an opportunity to check and confirm the data, and any minor adjustments could be made. Because words were retained, ideas relating to criteria and different expressions of criteria could be easily tracked back through the charts.

Spreadsheets were completed for all landscape types and entered into the Excel program. These were then used to generate histograms showing the 'frequency' and 'contingency' of each criterion for each landscape type. See Sub-section 7.2.1 for a discussion on frequency and contingency. 'Frequency' for a particular criterion is the number of times it appears in statements of significance for the landscape type being analysed, and is shown as a clear bar on the histograms. The 'contingency' of a particular criterion is whether it is present or not, that is, 0 or 1 is registered for each listing analysed in a particular landscape type. This is represented by a solid bar on the histograms.
Figure 7.2: Example of histogram. Clear bars indicate frequency, or number of occurrences of criteria for a particular landscape type. Solid bars indicate contingency, the summed presence or absence of the criteria concerned. The histogram shown above is for geological/landform landscapes. There were 59 (column: no. of entries) of these amongst the 432 total listings. Aesthetic criteria occurred in 38 of the 59 listings (contingency), but was mentioned 103 times in total (frequency). The same process can be applied to all criteria.

Content analysis histograms for all landscape types are shown in Appendix 5, A5.5. Finally the results for all landscape types were combined to give a histogram for all the listings considered. This is also shown in Appendix 5, and as Figure 7.5 in Section 7.4.

After discussions with statisticians in the School of Environmental Planning, it was decided to interpret the histograms in terms of criteria being of 'high', 'medium' or 'low' occurrence, and to provide the actual percentages of occurrence of criteria where it was useful to do so. 'High', 'medium' and 'low' were preferred to cut-off scores, as cut-off scores cannot be determined until there is a better understanding of criteria (which is the task undertaken here).

Spreadsheets could not be included in Appendix 5, as the larger ones are the size of a table top. If required, they may be examined by contacting the researcher at the School of Environmental Planning, at The University of Melbourne.
Coding reliability
To ensure that the analysis could be reliably repeated, a selection of listings
was left for several weeks and then the content analysis was carried out
again. It was found that repeatability was very good, with only one or two
entries different in the second attempt at the same analysis. This test
indicated that the coder made predictable and reliable decisions regarding
the placing of criteria on the spreadsheets.

Because there was a danger of the eye skipping criteria, they were checked
repeatedly, and when sitting down to attempt a new batch the last one
completed would be routinely checked to ensure the technique was
consistent.

Only one coder, the researcher, was used. This was a disadvantage in one
sense, as other coders may have interpreted criteria differently. On the
other hand it offered great advantages, as the coder became very aware of
every detail, and important perceptions developed during the data entry
phase. Mostyn (1985, p.128) describes the process by which one researcher
becomes focussed on the major themes from which theory emerges. She
says, 'While most intelligent, conscientious people can be trained to code
quantitative data without previous experience, this is definitely not the
case with qualitative research; here experience is the best teacher (Mostyn,
1985, p.132).
7.3 Cluster analysis

Content analysis was the major part of the research, and it has provided much useful information on criteria. This information was further explored using a cluster analysis technique. Cluster analysis is a 'technique for aggregating similar entities into groups, thereby revealing patterns of association within the data' (Wyatt, 1989, p.42).

The cluster analysis was undertaken as a pilot study only, to see if it would generate any further useful information about criteria. It was not attempting to be anything more than a minor part of the research and an adjunct to the content analysis. Because of this, and because cluster analysis refines the content analysis data, results from the content and cluster analyses are reported together (see Section 7.4). If the pilot study proved worthwhile, future research could follow the investigation further. The 'purity', or internal integrity, of clusters is a matter which should be addressed in a more detailed study.

7.3.1 Characteristics of cluster analyses

Cluster analysis is based on mechanical sorting (Wyatt, 1989, p.46). In this instance data was converted to a binary form, where presence in a particular category was indicated by 1 and absence was indicated by 0. There is a loss of information in the transformation from words to 0/1 format, and inferences drawn from cluster analyses must take this into account (Wyatt, 1989, pp.42-50).

In cluster analysis there is a hierarchical fusion of individual cases into clusters. The hierarchical fusion ceases when there is one large cluster. At this point all differentiating information is lost. It is important to stop the clustering process at a point where meaningful clusters are formed and sufficient information which differentiates them is retained (Edgington, 1984, pp.11-15). This process of agglomeration may be diagrammatically represented by a dendrogram (see Figure 7.3).
7.3.2 Data sources for cluster analysis
Data sources for the cluster analysis were the Excel spreadsheets for each landscape type which were developed in the content analysis. As the purpose of the cluster analysis was to refine content analysis information, the spreadsheets were the only possible data sources to achieve this.

7.3.3 Method
The first step in the cluster analysis process was to convert words in the spreadsheets to a binary form (0 - absence of word, 1 - presence of word). Therefore the words in the spreadsheets had to be converted into 0s and 1s, that is, the presence or absence of the particular expression of criteria. For instance if we are dealing with the spreadsheet 'Aesthetic landscapes', any listing containing an expression conveying the 'aesthetic' criterion, such as 'pleasant views down valley', receives a '1'. If the listing does not contain such an expression, it receives a '0' for this criterion.

There may be a second expression 'majestic peaks', which is also converted to '1'. So information is lost during cluster analysis, but patterns of association can be revealed. Conversion from words to 0/1 format was done using a computer program developed by Dr John Riley of the Physics Department at La Trobe University, Melbourne.

Next, the re-formatted data was fed into the Agglomerative Binary Cluster Analysis program developed by Dr. Ray Wyatt, School of Environmental Planning, The University of Melbourne. This program scrolls through the data and progressively agglomerates individual entries into clusters of
entries with similar criteria profiles (see Figure 7.3).

The program is run until a manageable number of clusters are generated. All clusters then have maximum internal homogeneity and maximum external heterogeneity.

Cluster analysis results were printed out as tables of listing numbers and criteria, and as histograms (see Appendix 5, A5.5). On the histograms, 1.0 on the vertical axis represents an average occurrence of the criterion, above 1.0 means above average and below 1.0 means below average occurrence of the criterion. The primary criterion is, by definition, represented as 1.0. Although all criteria were graphed, only those significantly above or below average were discussed (see Appendix 5:A5.5). Whether a criterion was significantly above or below the mean was judged individually for each cluster, because the scale of values was very variable. In some cases a difference of 0.2 may be significant, while in others 2 may be less significant, depending on the relative values of other criteria. Within each landscape type, clusters are named by the number of the first listing which occurs in them, for instance Cluster 7 means the cluster whose first number is 7, not the seventh cluster.

For the present analysis, the program was run on data for each landscape type (each spreadsheet) until five clusters had been generated for each landscape type. This was considered to be enough to express the variations within the landscape type but few enough to clarify and systematise the data. By examining each cluster and the criteria represented in it the nature of each cluster could be understood.

For example, within the geological/landforms landscape type, five clusters were formed. Of these, three contained only one entry and there were two large clusters. After inspection, the three individual entries were discounted as no pattern was evident, and the two remaining clusters were examined. It was found that they were very different in nature. The first cluster represented large and complex landscapes primarily set aside for their geological or landform value but containing many other values as well. These were characteristically national parks and the like. The second cluster represented much smaller, local landscapes primarily set aside for geological or landform value and having few other values.
represented. These were characteristically roadside cuttings demonstrating geology, fossil sites and the like (see Figure 7.4).

Figure 7.4: Examples of cluster analysis histograms. The first histogram represents Cluster 1: the larger, more complex geological landscapes with many other values represented, the second histogram represents Cluster 2: local geological sites with fewer other values represented.

Histogram: Cluster 1

Histogram: Cluster 2
7.4 Results of content and cluster analyses

Sections 7.2 and 7.3 described how the content and cluster analyses were carried out. The combined results for both are documented in Appendix 5, A5.5. This section sets out to draw the main inferences together from the wealth of information provided by the two analyses.

The content analysis histogram for all landscapes ('Total entries') is shown in Figure 7.5 (below). This is included here to assist discussion of the points which follow. Content and cluster histograms for each landscape type are shown and interpreted in Appendix 5, A5.5.

From Chapters 4 and 6 it will be recalled that it was hypothesised that landscape heritage could be divided into three major categories: components of value, measures of value and economic value, and that these categories played different roles in landscape heritage assessment. These categories are discussed below, preceded by comments on Burra Charter criteria and followed by discussion regarding difficulties with use of some criteria, gaps in criteria, and the use of landscape types.

Figure 7.5: Content analysis histogram for total landscapes. Clear bars indicate frequency, or number of occurrences of criteria. Solid bars indicate contingency, the summed presence or absence of the criteria concerned.

Total Entries
7.4.1 The preponderant use of Burra Charter criteria
From Figure 7.5 it can be seen that in general terms the Burra Charter criteria of aesthetic, historic, scientific (including general scientific, geology/landform, water and ecological) and, to a lesser extent, social value, are the dominant criteria used in practice for assessment of landscape heritage value. Note that 'scientific' had to be divided into subsets to be useful, something the Burra Charter has not come to grips with. These criteria and others which emerged are discussed below.

7.4.2 Components of value: psychological, aesthetic, historic, scientific, social and archaeological value,

Psychological value
Psychological value includes environmental meaning, symbolism and the need for wilderness and closeness to nature (see Sub-section 4.4.2). These are discussed below.

Environmental meaning
Expressions of environmental meaning were dealt with under headings such as social and symbolic value which were more specific than 'environmental meaning'. Thus, there was no need for a specific 'environmental meaning' criterion.

Symbolism
A range of expressions of symbolism occurred in 53 of the 432 entries (contingency 12%) and it was represented 69 times (frequency). This is a significant occurrence for a criterion which has been formerly regarded as relatively unimportant and which is rarely singled out by heritage organisations as a criterion for assessment. Symbolism can be an expression of any of the following concepts.

* Aboriginal art as a symbol of legend and culture
  The Northern Territory listing describing Kakadu clearly indicates the symbolic importance of its Aboriginal art. However no mention of symbolic value is made in the World Heritage 'Justification for Inclusion on the World Heritage List' for Kakadu, even though the art
itself is described in detail, often in fine art terms such as 'documents stylistic sequence' and 'sophisticated art'. At Kakadu, when rangers interpret these works of art, they carefully explain many of the dreamtime legends and the relationship of the art to the landscape. This indicates that the symbolic importance of the art work and its relationship to the landscape is well recognised but it is not fully explained in the World Heritage listing 'justification'.

- **Landscape as Dreamtime symbol and sacred site**
  Many places are known for their mythological importance. For instance Pudlowinna Soak is known as a focal point in the 'grass seed myth' and the 'two boys myth'. The Grampians in Victoria are well known for Dreamtime legends but these are not recorded in the National Trust listing except as 'significance to the Aborigines of the Western Plains'. These areas need much greater attention by heritage organisations. The presence of sacred objects may also be mentioned, for instance Corroboree Rock in the Northern Territory is recorded as important for the location of Aboriginal sacred objects. More often an unspecific entry of 'sacred site' is recorded.

- **Landscape as landmark**
  Landscape features can have symbolic value as landmarks, for instance Chambers Pillar in the Northern Territory was recorded as a 'landmark for explorers and pastoralists'. Even mundane features such as telecommunication towers on top of significant geological features are noted as having landmark quality. For instance the Telecom towers on Baranduda Range in Victoria are cited as providing identity and a geographical reference point. In cultural landscapes buildings may provide landmarks, for instance the church is a significant landmark in Beechworth's Urban Conservation Area.

- **Landscape as monument**
  Some landscapes carry expressions of environmental meaning and act as monuments, places which have the power to remind us of something important. Blackboy Hill in Western Australia is the site of a war memorial and is the location of the ANZAC vigil services and as such, has symbolic value. Another kind of monument is a building evocative of, and symbolising, an era, for instance the Yarralumla
Woolshed and outbuildings in the A.C.T. symbolise the early pastoral era in Australia.

Some landscape types have higher occurrences of symbolic value than others. Symbolic value occurs in 35% of Aboriginal landscapes, mostly as sacred sites, places of Dreaming significance or places of Aboriginal cultural meaning. Urban Conservation areas were next, with 30% of landscapes showing the presence of symbolic value, often as landmarks or various kinds of character, or feeling for a place. Both Water and Aesthetic landscape types had symbolic value present in 16% of landscapes and in both it was related to Aboriginal symbolism and landmark quality.

Wilderness and closeness to nature
Wilderness value is commented on in two entries in the Geological/landform landscape type and in six entries in Ecological landscapes. These are the only occurrences of the word 'wilderness' in the whole analysis of 432 listings.

Those references to wilderness that are present are general expressions such as 'wilderness values', 'outstanding wilderness values', 'wilderness area', 'wilderness' or the most specific 'last wilderness area near Perth'. The last place quoted is not very wild by some people's standards, highlighting the problem of how wild does a place have to be to be called a wilderness.

Very occasionally a listing included the psychological benefit of closeness to nature in oblique references to passive recreation or to 'tranquil pools', implying peaceful places. The most specific reference to closeness to nature was in The Holmes Jungle Nature Park (Northern Territory) listing, which referred to providing 'relief from surrounds'.

Aesthetic value
It will be recalled from Sub-section 4.4.3 that aesthetic value includes visual quality, appearance, scale, spatial definition and character, colour, unity, variety, texture and sensory reactions to the landscape.
'Aesthetic' was found to be the most used criterion overall, occurring in 289 of the 432 listings (contingency - 67%) and being represented 774 times within these (assuming the various scientific value categories were not summed, something the present researcher was reluctant to do, as they were not similar in nature). There were many expressions of aesthetic value. These are outlined below.

- General aesthetic quality
  Expressions include phrases such as 'Aesthetically attractive', 'scenic attractiveness', 'high scenic quality', 'spectacular', 'great beauty', 'visually striking' and the like. These are non-specific and do not tell the reader why the landscape is attractive, only that it is.

- Aesthetic value as art
  Expressions of aesthetic value as art fall into several broad categories: works of art found in the landscape such as Aboriginal art, landscapes worthy of being art and described in formal aesthetic and artists terms, and views and vistas. These are dealt with separately below.

- Aesthetic value as works of art in the landscape
  Many landscapes contain art work of beauty and interest: fine rock paintings, engravings and other expressions, predominantly of Aboriginal art. Many criteria used are related very closely to those derived from the appreciation of any type of fine art in the Western fine arts tradition - good examples of particular styles, fine execution of work or unusual motifs or materials. There is overlap here with the criterion 'archaeological', as one is never sure when a rock etching becomes a work of art in the landscape. This category is relatively small, even though the paintings and rock carving abound, as there is a reluctance to deal with Aboriginal values.

- Aesthetic value as formal aesthetic qualities
  This group was represented in a number of landscape types, and included expressions such as 'harmonious landscapes', 'textures and colours', 'focal landscapes', 'valley of majestic scale and 'variety of contrasting scenery'. There was also one reference to a landscape as an object of art work, 'popular with photographers and painters'. In
landscapes with a horticultural emphasis there were mentions such as 'juxtaposition of open space and trees'.

- Aesthetic value as views and vistas
  This included views to and views from certain landscape features such as 'spectacular panoramas over valley', 'vantage points on ranges', 'views from Echo Point', 'scenic vistas of vineyards' and 'visible for miles'.

- Aesthetic value as expressions of attitudes to nature
  Many landscapes were spoken of in terms reminiscent of the Romantic movement and the Picturesque. These were predominantly Geology/landform landscapes, Ecological landscapes or Aesthetic landscapes. Expressions such as 'rugged grandeur', 'picturesque valley', 'majestic peaks', 'dramatic entrance', 'bold headlands', 'precipitous terrain', 'enchanted lakes' and 'dramatic volcanic spires and domes' were used. In landscapes primarily set aside for their ecological value, aesthetic expressions such as 'superb natural features', 'exceptional natural beauty', 'massed wattles' and 'wildflowers form veritable carpet' were used. Sometimes Romantic expressions were given an Australian flavour, for instance 'gnarled rugged Coolibahs'. Sometimes descriptions were effusive, for instance 'jewel with a forested landscape'.

- Aesthetic values of particular cultural groups
  Landscapes interpreted by Aborigines have a different meaning from those interpreted in the Western cultural tradition. A landscape may be a setting for a Dreamtime legend, or its particular configuration may indicate aspects of tribal law. In this, aesthetic value starts to merge with symbolic value (see above). There were few references to other cultural groups.

- Aesthetic value as architectural or landscape style or technical achievement
  This category referred to garden style, such as 'tropical garden style', 'paradise garden, innovative at the time', 'demonstrates taste of the period', or to architectural style in both buildings, gardens and landscapes. For instance 'fine fountains and sculpture', 'iron lace',
'classical Georgian elements', 'elegant and elaborate Victorian environment', 'magnificent setting' (for building) and so on. There was no appreciable mention of technical achievement in an aesthetic sense except for comments such as 'headstones and railings of aesthetic importance' (in a cemetery). Frequently the general criterion 'architectural importance' was used.

Aesthetic value occurs in very high percentages in all landscape types. Urban conservation areas have the highest percentage occurrence with a contingency of 85%, followed by parks and gardens (82%), water landscapes at 70% on down through the landscape types, with ecological landscapes having the lowest occurrence at 35%, which is still very high, confirming that aesthetic value is an extremely important criterion.

**Historic value**

Historic value includes associations with historic figures, events, eras, and the story of a place over time, amongst other expression. 'Historic' occurred in 241 of the 432 listings (contingency of 56%) and is represented 720 times (frequency). As frequency is nearly double the total number of listings, this criterion is regarded as highly significant for the assessment of landscape heritage. There were many expressions of historic value, and these are discussed below.

- **General historic significance**
  There were many references to unspecified historic significance such as 'important historic landscape' or 'high historical significance'. These do not explain the significance but indicate only that it is present.

- **Historic value as Aboriginal history: prehistory, contact history and recent Aboriginal history**
  Prehistory overlaps with archaeology, and historical timescales blend into geological timescales. Many of the prehistorical criteria were entered under 'archaeological' and will be discussed under that heading. This highlights the problem of whether archaeology is science or history.

  There are many references to contact history, referring to contact
between the European settlers and the Aboriginal inhabitants. For instance Devil's Rock, Maroota, in N.S.W. records an Aboriginal engraving of a European ship, and at Arrawarra in N.S.W. there are remains of Aboriginal fishtraps which were adapted by settlers for their use. Fingal Head in N.S.W. is of historic significance because of the Aboriginal uprising against the cedar cutters.

Pinda Springs site in South Australia illustrates recent Aboriginal history, and is of historical significance to the present tribe.

- Historic value as an expression of the pattern of cultural history
  This usually refers to post-European settlement history, and can include the history of a wide range of community sectors. For instance 'part of convict establishment in Tasmania', 'associated with gold exploration and mining', 'long dead sealing industry', 'original German missionaries', 'evidence of pastoral optimism before the 1840s depression' and the like.

- Rare or endangered elements as expressions of history
  For instance site of 'first official settlement in Victoria', 'site of Australia's first farm', 'one of few convict built homesteads' (within a region) and the like.

- Historic value as a rich source of information for the future
  For instance 'surviving sawmill, waterpowered', 'records the development of industry', 'past roadmaking practice' and the like. This type of historic value and the two above merge into each other, and discrimination between the three is difficult.

- Historic value by association: individuals, groups, places, events or eras
  Historic value by association with individuals is much cited. For instance 'masterpiece of W.R. Guilfoyle', 'associated with May Gibbs, author and artist', 'associated with Mrs Vladimir Petrov's defection', 'associated with William Buckley, escaped convict who lived with the Aborigines', and 'home of William Farrer, founder of wheat industry'.
Association with groups is also much used. For instance 'many properties owned by original families', 'associated with ANZACs and Gallipoli' and 'association with sealers prior to settlers in Western Australia'.

Historic value by association with place is represented by expressions such as 'historic open space in Dubbo', 'site of convict coalmines', 'school and flax mill' and 'artisan's quarters/workshop'.

Historic value by association with events is represented by statements such as 'gazetted 1871', 'Commonwealth birthplace of first A.I.F' (Australian Army), 'Lieut. James Cook landed in 1770', 'Captain Arthur Phillip and the First Fleet established colony', 'Stuart crossed continent' and the like.

Historic value by association with eras tends in practice to overlap with the 'pattern of cultural history'.

Historic value is well represented in all landscape types. It occurs in 100% of the group called Historic landscapes as it is their primary criterion (see p.200), in 35% of Aesthetic landscapes and 28% of Ecological landscapes, with the remaining non-Historic landscape types between these values.

Scientific value
Scientific value relates to the geology, landforms, ecology and natural systems of a place. It can also refer to horticultural value or value as a research resource for scientific information. Of itself, the criterion 'scientific' is not particularly useful without further subsets, and it can usefully be broken down into 'general scientific', 'geology/landform', 'water' and 'ecological'. Without these subsets, 'scientific' tends to be unmanageable in that it incorporates too many concepts. These subsets are dealt with below.

General scientific value
'General scientific' referred to statements such as 'scientific reference area', scientific interest, 'great biological significance', 'biogeographical
significance' and the like. It can also include the concept of general environmental quality. General statements about horticultural value were also included in this group. 'General scientific' was present at modest levels in all the natural landscapes and some of the historic landscapes. Overall it was represented in 85 of the 432 listings analysed (20%), with a frequency of 131 mentions in 432 listings. While not a high occurrence, it was considered sufficient to warrant a separate category.

Geological/landform value
The criterion 'geological/landform' included all mentions of geology and landform values unless they were closely linked to romantic concepts, when they were then put under the 'aesthetic' criterion. It was a straightforward criterion with expressions such as 'complex of coastal dunes', 'granite country', 'dissected sandstone ridges', 'base of faultline', 'friable sandstone', 'Australia's highest peak' and the like. There were variations in scale of the features and associated values, for instance some listings described large mountain ranges while others described small sites containing one species of fossil. Overall, it had a surprisingly high occurrence of 170 in 432 listings (39%), with a frequency of 388 mentions in 432 listings.

Water
Water was also a relatively straightforward criterion that indicated the presence of waterbodies of various types that were considered to have significance. Often this was a simple statement about the presence of a waterbody where water was scarce, such as 'billabong' or 'lagoon, permanent water'. Sometimes the value of linked waterbodies was expressed, such as 'waterholes' and 'connecting falls', or the fact that linking assisted in habitat maintenance. In this case there were frequently ecological values expressed also. Aesthetic value and the value of water are also often closely linked. Maintenance of hydrological regimes locally and regionally is another aspect of 'water' value. This criterion was present in 99 of the 432 listings (contingency - 23%) and was mentioned 169 times in the total listings.
Ecological value
Ecology as scientific value include ecological diversity, ecological links and corridors, rare or unusual occurrences of species, and species and habitat diversity. Unlike the other subsets of scientific value, ecological value divides into relatively easily defined sub-groups which are discussed below.

• General ecological value
  Expressions such as 'ecological significance', 'dynamic nature of the environment', 'natural processes', 'biogeographical unit', 'naturalness' and the like.

• Ecosystems
  This aspect of ecological value was expressed as 'wide range of ecosystems', 'arid ecosystems', 'Callitris forests', 'diversity of malee ecosystems', and as mentions of many different ecosystems by name.

• Rare and endangered species
  There were many mentions of rare and endangered species in the analysis: 'rare species', 'endangered species', 'rare plants'. Particular species were mentioned by name. For instance 'Bogong moth sites', 'high densities of the rare freshwater crocodile', 'Coolibah trees', 'world site for ground parrot' and 'Superb Lyrebirds'.

• Species at the edge of their normal limits or in uncommon associations. For instance 'anomalous occurrence of species', 'uncommon plant associations' or 'northern limit of River Red Gums'. One entry was particularly noted, that of 'new species' in the Rainbow Valley, Northern Territory.

• Species diversity
  Many expressions of species diversity for both plants and animals were found in the analysis: 'species diversity', 'large number of species', 'diverse plant communities', 'rich faunal populations', 'wildflowers' and the like.
• Habitat
  There were many expressions of ecological value relating to habitat. For instance 'wide range of habitats', 'habitat diversity', 'breeding areas', 'platypus habitat', 'sandstone spinifex', 'remnants of creekside vegetation', 'wallaby habitat'.

• Ecological links and networks
  For instance expressed as 'plant and animal corridors', 'mosaic of open forest and woodlands and pasture'.

• Wildlife refuge
  Wildlife refuge was mentioned as a type of ecological value: 'wildlife refuge', 'drought refuge for waterbirds' and the like.

Ecological value was present in 226 of the 432 listings (contingency - 52%) and was mentioned a total of 826 times. Thus it is a very important criterion for assessment.

The highest scientific values occur in the natural landscapes and lowest in the historic landscapes. Ecological landscapes, Water landscapes and Geology/landform landscapes are all high in scientific value, Aesthetic and Aboriginal are medium and the rest are relatively low.

Social value
Social value refers to cultural values held by groups or nations. It is a value held by the present population and embraces the qualities for which a place has become the focus of sentiment to a majority or minority group.

'Social' occurred as a criterion in 140 listings (32%), with a frequency of 238. The fact that it occurred in nearly one third of the listings meant that it was also an important criterion. Social value was expressed in the following ways.

• General social value, including unspecified 'social value', 'social record' and the like.
• Social value as educational value
Some thought was given as to whether to include educational value in social value. It does not fit well, as anyone can become educated about any of the values discussed to date. In the analysis, if education had a community focus it was included under social value but if it was related to another criterion it was placed in the 'other' category.

• Social value for recreation
'Important recreational resource', 'recreational value', 'large passive recreation area', and the like were mentioned.

• Social value as community place
'Hotels focus of community life', 'appreciated by residents', 'meeting place', 'focus for city', 'important rest area on highway', 'used by locals,' and similar expressions were used.

• Associational links as social value
These include 'cultural associations', 'open space networks' and 'community groups'. This group also included comments about access or lack of access to the place in question.

• Social value as custom or way of life
This may relate to pastoral activities or traditional industries in rural towns.

• Social value as reflection of society
An example was 'class distinctions in planning'.

In the different landscape types, social value ranged from a presence of 52% in 'Water' landscapes to 8% in Historic sites. High values occurred in Aesthetic and Ecological landscapes, Parks and gardens and Urban conservation areas. Low values occurred in Pastoral landscapes and Geology/landform landscapes.

Archaeological value
Archaeological value referred to material evidence of the past, frequently the distant past or prehistory. History is seen by archaeologists to deal with
documentary evidence while archaeology deals with material evidence. In practice archaeology deals with very old history as evidenced by the fabric of a place. While there is not always a clear distinction between history and archaeology, a category for archaeology was included here to pick up the numerous references to material Aboriginal culture found in the landscape.

Archaeology was present in 55 of the 432 listings (contingency - 13%) and was mentioned 121 times. This occurrence is approximately the same as symbolic value, and in many cases the two may be related. It was the primary criterion for Aboriginal landscapes but also occurred at significant levels in Historic sites (contingency - 15%) and Ecological landscapes (contingency - 20%). Expressions varied from the general 'archaeological significance' through to details of middens, rock art, Aboriginal tools and the like. There were no references to European archaeological value in the listings analysed. It was a very useful criterion which could deal with some aspects of landscape heritage previously largely ignored.

7.4.3 Measures of value
We turn now to measures of value. These include integrity, state of preservation and condition, authenticity, uniqueness, rarity, representativeness and example of a class. The analyses showed that in general they are either less important in establishing heritage value than was thought, or they are implicit rather than explicit. Measures of value are detailed below.

Integrity
Integrity was present in 3% of the listings, predominantly as a simple statement that the place possessed integrity. Most of the places for which this criterion was recorded were World Heritage sites, as it is a criterion of the World Heritage Committee. 'Integrity' is of such low occurrence as to put into doubt its role as a criterion.

State of preservation
State of preservation included statements about condition, and occurred in 8% of the total listings. Statements such as 'well-preserved', 'remarkably good condition' and 'poor condition' were used.
Authenticity
'Authenticity' occurred in slightly less than 1% of the listings and these were all World Heritage listings, as authenticity is a criterion of the World Heritage Committee. It was not used once by any Australian Heritage organisation.

Uniqueness
'Uniqueness' is present in 27 of the 432 listings (contingency - 6%), usually with some qualifying statement such as 'unique geology', 'unique character' and 'unique proportions'.

Rarity
Rarity occurred in 45 of the 432 listings (contingency - 10%). It was also qualified and was expressed in statements such as 'regionally rare', 'rare ship motif' and 'rare in Victoria'.

Representativeness
'Representative' occurred in 7% of the listings and again was qualified, in statements such as 'represents arid ecosystems', 'represents fossil landscape' and 'representative of an era in style development'.

Example
'Example' was seen as slightly different to 'representative' and was separated out in the analysis. It occurred in 16% of the listings in statements such as 'example of City Beautiful design', 'fine example of rail engineering' and 'best example of scoria cone in district'. 'Example' appears to be the most useful and most clearly understood of the measures of value.

7.4.4 Economic value
'Economic' is present in 25 of the 432 listings (contingency - 6%). It may refer to economic activities being carried out on the land listed, or tourism potential. It is expressed in statements such as 'important tourist attraction', 'highly productive flats', or simply 'of economic value'.
7.4.5 Difficulties and gaps

Components of value

The new criterion 'symbolism' which was introduced in the content analysis proved to be very useful (see Sub-section 7.4.2).

The problem of wilderness value did not resolve itself as easily as symbolism did. Because of its very low occurrence it may be that the concept is too general and diffuse to function as a criterion.

Scientific value, when divided into subsets, worked effectively, but there was some overlap, and some boundaries between the subsets were unclear. Nonetheless the arrangement clarified the use of 'scientific' as a criterion.

Social value was taken to include recreational value. Recreational value can overlap with tourism and this area became a little unclear, as tourism was generally regarded as economic value.

Educational value also proved difficult, as anyone can be educated about any place. On occasions educational value (particularly as in 'schooling') can be included under social value; on other occasions it could be included under various components of value.

Archaeological value proved its usefulness as a criterion. There are difficulties with its definition and some overlap with historical value, but it was very useful in dealing with aspects of Aboriginal landscapes.

The category 'other' was used to catch expressions of criteria which did not fit into specific categories. It was also used to record wilderness value and miscellaneous references to tourism which, because of their context, did not fit into the 'economic' category. Statements such as 'world heritage site' were also entered into the 'other' category. If the issues of criteria for wilderness and tourism could be resolved, the category 'other' would hardly be needed.

Occasionally there was overlap between criteria. Further work will assist in minimising this.
Measures of value
Overall, measures of value proved to be of low or very low occurrence with the exception of 'example'.

Economic value
Economic value also proved to be of low occurrence.

7.4.6 The usefulness of landscape types
Dividing the listings into landscape type became a very powerful tool in analysing and understanding landscape heritage. It became evident that typical criteria profiles existed for each landscape type, but that within this general profile there was also some diversity. This was explored in the pilot cluster analysis which assisted in understanding variations within landscape types.

From the content analysis histograms (see Appendix 5, A5.5) it could be seen that the range of criteria used were useful for almost every landscape type, but that they occurred in different proportions for different landscape types.

Natural landscapes made up by far the largest percentage of heritage landscapes sampled, and it is evident that these landscapes are a very important sector of landscape heritage. In addition, nearly all landscapes set aside for purely aesthetic value are natural landscapes, increasing the percentage of natural landscapes. Water landscapes and Ecological landscapes are quite close in their criteria profiles. Almost all World Heritage List places in Australia have a significant Aboriginal component, yet Aboriginal landscapes are not well represented at the state level. Historic landscapes, including cemeteries, urban conservation areas, non-urban industrial landscapes, historic sites, parks and gardens and pastoral landscapes had similar criteria profiles to each other.
7.5 Conclusions

In this chapter the objective was to determine criteria organisations actually used for the evaluation of landscape heritage.

It was found that the Burra Charter criteria were necessary but insufficient for the assessment of landscape heritage. They provided a solid foundation but contained inadequacies and gaps. The worst inadequacy related to the definition and use of scientific value as a criterion. Gaps included an inability to handle symbolism and archaeological value.

As listings were examined it became increasingly apparent that the major categories of landscape heritage value proposed in Chapter 3 of this thesis (components of value, measures of value and economic value) were confirmed. These major categories proved to be a logical and useful way of understanding and systematising the wealth of information on criteria, and their roles in assessment.

It was found that components of value were the key criteria for assessing landscape heritage value. This was clearly evidenced by their high frequencies and contingencies, their diversity and richness, their capacity to cope with assessment requirements, and because they had no need to be qualified as did the measures of value.

Components of value which are necessary to provide a full range of criteria for assessment of landscape heritage were found to be symbolism, aesthetic value, scientific value as expressed by general scientific value, geology/landform value, 'water' value and ecological value, archaeological value, social value and historic value. While useful as a criterion, archaeological value needs further work to clarify its boundaries. Although the importance of wilderness value as a concept is recognised, it was found to be too general and diffuse to function as a criterion for the assessment of landscape heritage. Many concepts relating to wilderness are expressed under other criteria such as ecological and aesthetic value. Educational value and tourism value need to be clarified before their role in assessment is clear, but it is likely that they can be incorporated into the
existing framework of criteria, for instance under social value, and that no new criteria would be required to accommodate them. Problems still attach to defining communities represented by social value. It appeared that the multi-cultural nature of Australian society was not as fully represented in the listings as it is in the actual landscape. There is also a great reluctance to use statements about feelings related to place, such as 'sense of place' or 'character of place' in listings.

Within each component of value subsets of that value were possible. These increase the usefulness and understanding of what that value encompasses; for instance ecological value contains species diversity, habitat, ecological links and corridors and other specific expressions of ecological value.

Measures of value were found to be different in nature from components of value. They are not key criteria for establishing heritage value but are applied to components of value to determine 'how much' heritage value a place may have. Of measures of value, the most used and best understood was 'example'. With the exception of 'example', measures of value were of low to very low occurrence. In addition, they almost always had to be qualified by some word which related the measure of value to a component of value, for instance 'rare example of architectural style'. Their role as measures of 'how much' heritage was confirmed during these analyses and it was evident that they are applied to the 'components of value' criteria. The confusion regarding definition of integrity in Australia, and its subsequent low usage, was noted.

Economic value was found to be of low occurrence and was usually included as an aside, rather than as the criterion establishing heritage value. It was never used as the single criterion for determining heritage value. It is concluded that it is not a necessary criterion for the assessment of heritage value, but that it may be considered when managing heritage.

Landscape types were found to be a very powerful tool in understanding and analysing landscape heritage. It was found that typical criteria profiles existed for each landscape type, but that within each landscape type there was some degree of diversity. This diversity could be understood by using cluster analysis, but, as it was only undertaken as a pilot study here, the
author has been cautious in drawing inferences from it. Cluster analysis was found to be a useful analytical tool and supported the content analysis. It would be very worthwhile to further explore cluster analysis as a means of understanding each landscape type in the future.

Apart from the World Heritage listings, Aboriginal landscapes were greatly under-represented. While it is recognised that there are sensitivities and historical reasons for this, and that some heritage organisations have been more willing to address this matter than others, there is still a great need to rectify this imbalance.
Chapter 8: DISCUSSION

8.1 Introduction

To this point many aspects of landscape heritage have been explored in order to understand criteria for its assessment. In Chapter 2 the history of heritage was investigated to provide a basis for understanding our current attitudes to heritage. Heritage theory was reviewed in Chapters 3 and 4 to determine which criteria might be expected to be useful for judging landscape heritage value. This theory permitted the formulation of a set of hypotheses which are outlined below.

- There are three major subsets of heritage value: components of value, measures of value and economic value.
- Components of heritage value form the principal criteria by which heritage value is judged, while measures of value are secondary criteria applied to components of value to determine the level of heritage value.
- Economic value has no place in landscape heritage assessment.
- Heritage organisations in Australia do not have a clear understanding of criteria for assessing landscape heritage value.
- In existing approaches to assessment, certain criteria have been omitted or under-represented.
- Use of landscape types assists in the assessment of landscape heritage value.
- Each landscape type has a typical criteria profile.

These hypotheses were tested by examining heritage practice. Sources of information on criteria were investigated in Chapter 5. The most appropriate were found to be heritage organisations: their documents and staff, and statements of significance. The analysis in Chapter 5 generated an understanding of criteria that heritage organisations aim to use, or believe they use. Content and cluster analyses of listings clearly demonstrated the criteria that organisations actually use (Chapter 7).

This chapter brings together all the above strands to establish the criteria which should be used for judging landscape heritage value.
8.2 Influence of the origins of landscape heritage on current theory and practice

As can be seen from Chapter 2, landscape heritage is derived from two major streams, the built environment and the natural environment. These have converged to produce our current attitudes to landscape heritage. Many attitudes from both streams have been incorporated into the common stream of landscape heritage. This has generated richness on the one hand, and some confusion on the other. This is particularly evident in the definition and understanding of criteria for the evaluation of landscape heritage: the influence of the two streams is felt at every level, from World Heritage down to the local level.

Inheritances from the Age of Enlightenment and the Romantic movement colour our attitudes to heritage. Enlightenment philosophies of the seventeenth and eighteenth centuries saw the separation of 'science' into 'the sciences' and 'value' into 'values', thereby opening the way for consideration of a number of values in the landscape. The Romantic movement generated new attitudes to wilderness and nature which led to the National Parks movement and modern attitudes to wilderness areas. Social, scientific and aesthetic ideas generated in the eighteenth and nineteenth centuries provide the basis for our modern concept of heritage and the values encapsulated in the Burra Charter.

As the two strands of heritage converged, there was a growing acceptance that attitudes to nature were culturally determined, and an increasing awareness that the natural environment and the cultural environment could not always be separated. It became evident that natural significance is a cultural construct and that 'cultural significance' can be generalised as simply 'significance'. Current heritage practice supports this view, for while heritage organisations have difficulty defining and understanding the concept of scientific value, the concept is widely and consistently used in practice in assessing natural places of significance.
8.3 Landscape heritage value

When a landscape is recognised as holding special significance, it is considered to have value. In Chapter 3 it was shown that landscape heritage value stems from landscapes having meaning to individuals, groups and nations. It was demonstrated that a clear understanding of the groups for whom the landscape in question holds value is needed before heritage value can be defined. As heritage is a cultural matter, values can vary from one cultural group to another.

There is a range of values which may contribute to heritage value in the landscape. This includes aesthetic, historic, scientific and social values. These become criteria when they are used as the standards by which landscape heritage is judged.

For judgements to be clear and unambiguous, each criterion upon which they are based must embody a single concept or idea. Whilst criteria can be hierarchical, provided each criterion contains only one concept at each level of the hierarchy, the decisions are relatively straightforward. The single concept criterion is fundamental for clarity and forms the foundation of sound methods for assessment.

8.4 Approaches to understanding criteria

Most approaches to understanding criteria were found to be based on the Burra Charter. Some organisations used only the Burra Charter criteria, while others expanded them or added to them.

It was found that the Burra Charter criteria are necessary but insufficient for the assessment of landscape heritage. This view was supported by analysis of the theory and practice of landscape heritage. The Burra Charter criteria of aesthetic, historic, scientific and social value provide a solid foundation for assessment, but are too broad to be useful without some additions and expansions. Nonetheless, the Burra Charter criteria are widely accepted, form an important common basis from which to proceed, and apply to all types of landscape heritage.
Gaps in current approaches to criteria include an inability to handle symbolic value and archaeological value. Inadequacies include a lack of understanding of scientific value, primarily because heritage professionals are rarely scientists. There is also some caution about using social value as a criterion because of the problem of defining community. As the Burra Charter or very similar criteria are used by all heritage organisations in Australia, the gaps and inadequacies mentioned above can bias landscape heritage assessment across the country.

The Australian Heritage Commission has expanded the Burra Charter criteria and the result is an extremely complex set of interlinked criteria in which individual concepts cannot easily be separated. These expanded criteria, and any assessment methods derived from them, are thus very difficult to use.

Another approach to understanding criteria is proposed here: that of components of value, measures of value and economic value. From the review of landscape heritage theory and from investigations of criteria heritage organisations say they use (see Chapter 6) and those they actually use (see Chapter 7), it was concluded that landscape heritage value comprises three major subsets: components of value, measures of value and economic value. These play different roles in the assessment and management of landscape heritage, as discussed below. There is no specific mention in the literature or by heritage organisations of the distinction drawn here between these major types of criteria. However there is evidence in both the literature and in heritage practice of the different roles played by them.

8.5 Components of value, measures of value and economic value

8.5.1 Components of value
Components of landscape heritage value are the principal criteria for the assessment of landscape heritage. The principal components of value are: symbolic, aesthetic, historic, scientific (incorporating subsets), social and archaeological. Theoretical aspects of each component were examined in
Chapters 3 and 4. Practical aspects were investigated in Chapters 6 and 7. The interplay between these led to the following conclusions.

Symbolic value was discussed in Section 4.4 under psychological value, and its use was examined in Chapters 6 and 7. It was found that, of all the expressions of psychological value, at this stage it was the only one to warrant inclusion in criteria for assessment. Organisations have paid little attention to symbolic value in theory, but it has been used in practice. Expressions of symbolism include Aboriginal art in the landscape as cultural symbol, landscape as Dreamtime symbol and sacred site, landscape as landmark and landscape as monument. Further work is needed to develop this criterion.

Also considered under the broad heading of psychological value were wilderness value and environmental meaning. These, while very important in understanding the environment, are both difficult to define and too broad to be used as criteria. Further work on these may clarify their meaning with respect to landscape heritage value and make it possible to incorporate them into criteria for assessment. Furthermore, wilderness value can be expressed as an aspect of both social and scientific value, so is included indirectly. It may very well be true that sense of wilderness is a state of mind evoked by a state of nature.

The importance of aesthetic value is recognised by many heritage organisations, but few understand how it should be assessed. Aesthetic value is recognised in terms of general and formal aesthetic qualities, art in the landscape, views and vistas, expressions of attitudes to nature, aesthetic expressions of different cultural groups and architectural or landscape style or technical achievement.

Historic value was generally understood by heritage organisations. In particular, European settlement history as expressed in the landscape is well understood (see Chapter 6) and is well represented in practice (see Chapter 7). Aboriginal history is not generally so well addressed, although some organisations, notably the Australian Heritage Commission, have tackled it. Historic value was not found to be the overarching value that some organisations claimed it to be, but rather just one component value amongst criteria for assessment.
Scientific value has been poorly understood and handled by heritage organisations to date (see Chapter 6), but its use has been clarified here by an examination of practice (see Chapter 7). Scientific value must be broken down into subsets to be useful as a criterion. The most appropriate subsets were found to be general scientific value, geological/landform value, 'water' value and ecological value. Some of these in turn have their own subsets. For instance, ecological value includes general ecological value, the value of ecosystems, rare and endangered species, species at the edge of their normal limits or in uncommon associations, species diversity, habitat, ecological links and networks and wildlife refuge value.

Ecological value is a particularly important subset of scientific value - 'water' value is related to it. Geological/landform value is also important and constitutes a useful criterion. Scientific value is frequently linked to aesthetic value, and the nature of these links should be further explored. There is still much work to be done to incorporate the proper use of scientific value into heritage theory and practice in Australia.

Many organisations had difficulty with social value (see Chapter 6) and its expression in practice reflected this (see Chapter 7). Social value included general social value, educational value (in certain contexts), recreational value, social value as community place, associational links as social value, social value as custom or way of life, and social value as reflection of society. The overlap between these subsets demonstrates the lack of clarity of the concept of social value and points to the need for future work in this area. Future directions should also address the role of educational value, its inclusion in or exclusion from social value, and its relationship to other values.

Archaeological value is the fifth principal criterion. It is not consciously used by heritage organisations at present, except for specific subsets being used by the Australian Heritage Commission (see Chapter 6). Gaps created by its absence contribute to the inadequate assessment of Aboriginal landscapes, which was evidenced by the content analysis carried out in Chapter 7. Archaeological value encompasses the general archaeological resource, and more specific archaeological value related to middens, rock
art and the like. Although all expressions found were related to Aboriginal places, archaeological value could also apply to sites of European significance. It was considered to be a very useful criterion which could deal with aspects of landscape heritage previously largely ignored. Further work is needed to develop this criterion.

Components of value are not always clear-cut and can overlap. They can also have problems of boundary definition, or be interlinked or related to each other. The question 'to whom does a place have heritage value?' assists in clarifying heritage value and provides the link between people and place.

8.5.2 Measures of value
Measures of landscape heritage value are indicators of how much value a place may have, rather than why it is significant. They are secondary criteria which are applied to the principal criteria (components of value), to determine the level of heritage value of a place, as opposed to its quality. Measures of value include integrity, state of preservation or condition, authenticity, uniqueness, rarity (excluding 'rare and endangered species', which was considered to be an ecological value), representativeness and example. While they were considered to be important by heritage organisations (see Chapter 6), their use in practice, with the exception of 'example', was low (see Chapter 7). It was concluded that one of the reasons for this was that their role in assessment was not fully understood.

It was also concluded that thresholds, which the Australian Heritage Commission is attempting to use to determine whether a landscape has heritage value or not, are outcomes of the use of measures of value. The process of threshold setting needs further investigation. It is likely that the confusion regarding thresholds arises because heritage organisations do not understand the different roles of components of value and measures of value, or the relationship between thresholds and measures of value.

Measures of value were examined in the theory (Chapter 3 and 4) and their use was explored in practice (Chapters 6 and 7). The following
conclusions were drawn.

Integrity was found to be a concept which needed clarification. This partly explained its low usage. State of preservation or condition were quite clear in meaning, but were also of low occurrence. The use of authenticity was almost negligible in practice, possibly because it is implicit rather than explicit in that it is assumed that a place is authentic. Uniqueness, rarity and representativeness also had low use in practice. 'Example' was the most clearly understood and frequently used measure of value.

The precise nature of the role of measures of value should be further investigated in future work.

8.5.3 Economic value
Of the three subsets of landscape heritage value, it was concluded that economic value was not a relevant criterion for assessment of landscape heritage. This was inferred from an analysis of the theory (Chapters 3 and 4) and was confirmed in both the review of heritage organisations and their criteria (Chapter 6) and the content and cluster analyses (Chapter 7). While it plays no part in assessment, it may be a useful tool for planning and managing landscape heritage.

8.6 The usefulness of landscape types
We have seen from the theory (Chapter 3) and practice (Chapter 7), that a range of landscape types can have heritage value. This range can be best understood as a landscape heritage continuum, with natural landscapes at one pole and urban landscapes at the other, with all other landscape types included between the poles. Different types of landscape heritage have different notional places relative to each other on the continuum, and different criteria will predominate at various points. This scheme is being further developed.

Landscape types found to be useful for categorising landscape heritage are listed below. These could all be placed on the landscape heritage continuum.
Natural landscapes
  Geological/landform landscapes
  Waterbodies
  Ecological landscapes

Aesthetic landscapes

Aboriginal landscapes

Historic landscapes
  Cemeteries
  Historic sites
  Parks and gardens
  Pastoral landscapes
  Urban conservation areas
  Non-urban industrial areas.

Criteria profiles exist for each landscape type and assist in understanding which criteria may be present when assessment is undertaken. Further development of cluster analysis would enable variations within landscape types to be better understood, and would further explain the criteria profiles. The cluster analysis provided useful information which helped in the understanding of criteria and criteria profiles. It will be of continued use in investigating the detail of each landscape type during future research in this area.

Landscape heritage typing is useful in dealing with the complexity of landscape heritage, as it permits description and definition of landscape heritage - allowing like to be compared with like. No organisation sampled used landscape types in a systematic way, although some separated out one or two of the types, such as parks and gardens, cemeteries or natural landscapes (see Chapter 6). However, there was nothing in any heritage organisation as specific, systematic and as theoretically underpinned as the system proposed here.
A method for landscape heritage assessment

A proposed method for assessment involves preparation of a checklist of the criteria and their subsets as identified above. These are clear and single concept criteria, and they form the foundations of a sound method for assessment. Landscapes to be assessed are then allocated to the appropriate landscape type. Then, for each landscape, all criteria are reviewed to see if and how they are represented, bearing in mind the criteria profile for that landscape type. The criteria profile for the landscape type in question sets up some expectations of the criteria which might be present. Attention may be focussed on these but all criteria should be checked. The resultant presence of components of value criteria, and their qualification by measures of value, enable landscapes to be assessed in terms of their heritage value.

This method would greatly streamline and simplify assessment and would ensure that values were not inadvertently missed. It has great advantages over methods currently used, as it is simple, easily understood and user-friendly. It can handle the large variation in scale found in landscape heritage, the diversity of landscape types and criteria, and the difficult issue of the assessment of Aboriginal landscapes.

It would be able to be used by the community at large, would not be restricted to experts, and would obviate the current problems arising from use of methods which are inaccessible to the community at large. The community has a significant investment in landscape heritage and the need for direct input to assessment is recognised. Use of this method needs to be further developed and tested. However the building blocks are now in place.

From the analyses carried out in the present work the idea of all heritage being represented by four dimensions: space, time, people and things, emerged. It may be that by use of these dimensions landscape heritage could be fully described and its assessment further simplified. Future work in this area would need to focus on whether such a simple overarching concept could be sustained.
One limitation of the present study is that less than half the listings (39%) had the date of preparation attached. This matter has been raised with some of the heritage organisations concerned and many now say that any new listings will bear the date of preparation.

While new listings are regularly added to Registers, there is very little revision of old entries. This means that they represent the heritage thought of the era in which they were prepared, and do not necessarily reflect current thinking. This is a problem that heritage organisations must address. However the Registers still stand as the views of the heritage organisation.

The spreadsheet data can be analysed using dimensions other than those used for the present work to provide more information on landscape heritage. For instance if dates of listing preparation are analysed (even though they are not available for all listings) some idea of heritage trends with time can be established. Similarly, an analysis by organisation can be carried out, providing an understanding of each heritage organisations 'portfolio' and areas of interest. If the spreadsheets are regularly updated, say every two years, information can regularly be compared to determine heritage trends.

It would be interesting to see how ideas and criteria developed for landscape heritage would apply to other types of heritage such as architectural heritage. It is possible that many of the concepts would be very relevant, but this also requires further investigation.
Plate 21: The simplest landscapes can have value. Planting delineating boundaries and providing stock shelter on land long settled and managed near Woodstock, Victoria.

Photo: Mark Schapper
Chapter 9: CONCLUSIONS

The objective of the research undertaken here was to establish criteria for the evaluation of landscape as heritage. To do this it was necessary to understand the history of landscape heritage. It was found that the origins of heritage have influenced modern heritage theory and practice in profound ways.

Landscape heritage is derived from two major streams, the built environment and the natural environment. These streams have converged to produce our current attitudes to landscape heritage. The derivation of landscape heritage from these two streams has influenced the way it is viewed at every level, from World Heritage to the local level.

The Age of Enlightenment and the Romantic movement have also influenced modern views on landscape heritage value and criteria for its assessment. Social, scientific and aesthetic ideas developed in the eighteenth and nineteenth centuries provided the foundations for our modern concept of heritage and led ultimately to the values incorporated in the *Burra Charter*.

Natural and cultural environments cannot always be separated - natural and cultural factors operate in both. 'Natural significance' is a cultural construct and 'cultural significance' can be generalised simply as 'significance'.

Landscapes can hold meaning for individuals and groups and are thereby considered to have heritage value. Value may differ from one cultural group to another. There is a range of values which may contribute to overall landscape heritage value. It was found that the criteria by which the values are judged must be single ideas or concepts. They can be hierarchical but each unit must embody only one concept. This is fundamental to clarifying criteria and thereby simplifying assessment.

Most approaches to criteria for assessment were found to be based on the *Burra Charter*, or some modification of it. The *Burra Charter* criteria - aesthetic, historic, scientific and social, are necessary but insufficient for
the assessment of landscape heritage. However, they do provide a good
foundation upon which to develop, are widely accepted and are applicable
to all types of landscape. Therefore they form an important common basis
from which to proceed.

As all heritage organisations in Australia use the *Burra Charter* or similar
criteria, the gaps and inadequacies can cause systematic problems in
landscape heritage assessment across the country. The expanded criteria
used by the Australian Heritage Commission are complex and difficult to
use and do not provide a useful alternative.

A new approach to the grouping of criteria is proposed: 'components of
value' and 'measures of value'. While economic value might be useful
for planning and managing heritage, it has no place as a criterion for its
assessment - therefore it is rejected.

Components of landscape heritage value are the principal criteria for the
assessment of landscape heritage. They are those values which allow
landscape heritage value to be established. Components of value include
symbolic, aesthetic, historic, scientific (including its subsets of general
scientific, geological/landform, 'water' and ecological value), social and
archaeological. All these criteria are important for the assessment of
landscape heritage. Wilderness value and environmental meaning are
considered to be too broad and diffuse to be used as criteria.

Measures of landscape heritage value are indicators of how much value a
place may have, rather than why it is significant. They are secondary
criteria which are applied to the principal criteria to determine the level of
heritage value. Measures of value include integrity, state of preservation
and condition, authenticity, uniqueness, rarity, representativeness and
example of a class. Thresholds or cut-off points for listing heritage
landscapes are related to measures of value. By clarifying the criteria a
sound basis for methods of assessment is established.

It is found that landscape heritage typing assists the assessment of
landscape heritage and that typical criteria profiles exist for each landscape
type. The use of landscape types permits like to be compared with like,
and renders the assessment of a large and diverse range of landscapes manageable.

A method of assessment is proposed in which a checklist of the criteria outlined above is prepared, the landscape in question is typed, and the criteria checklist is worked through to determine which criteria are present and how they are expressed. The criteria profile for the landscape type in question implies that certain criteria in particular are likely to be present, but all should be checked.

The criteria and landscape types established, and the proposed method for using them, provide an advance on current systems in that they streamline and simplify the assessment process. The method may also be applied more broadly, perhaps with some adaptation, to other types of heritage such as architectural heritage.

It is vital that we understand landscape heritage and the reasons why we set certain landscapes aside. Landscape heritage reflects attitudes of people to the environment they live in. The community at all levels has a large stake in landscape heritage - it embodies our culture and identity, for, as Henri-Frederic Amiel says:

*Un paysage quelconque est un état de l'âme*

*Any landscape is a condition of the spirit*

*Henri-Frederic Amiel (1821-1881)*
Plate 22: Pastoral land in central Victoria, illustrating the complex overlay of cultural features on the natural landscape.

Photo: Mark Schapper
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GLOSSARY:

Adaptation
Adaptation means modifying a place to suit proposed compatible uses. Compatible use means a use which involves no change to the culturally significant fabric, changes which are substantially reversible, or changes which require a minimal impact.

Anastylosis
Anastylosis incorporates the idea that the components of a place which have been separated in some way can be reassembled. The term includes the ideas that to put extant original pieces together and to replace missing pieces with indentifiable and neutral substitutes is acceptable conservation practice.

Attribute
Attribute is regarded as a quality ascribed to a person or thing and is defined in the landscape sense as 'The ecological, cultural and aesthetic properties of natural and cultural resources that sustain and enrich human life' (Grinde and Kopf, 1986, p. 310).

Classify
Classify, in the sense used in the present work, means to place on a heritage list, rather than the normal English usage of distributing something into in classes according to a method or system.

Components of landscape heritage value
Components of value are the principal criteria for the assessment of landscape heritage. They are those values which allow landscape heritage to be established, and include symbolic, aesthetic, historic, scientific, social and archaeological value.

Conservation
'Conservation' in Australia defines the broad process of protecting values, and may include historic conservation as well as nature conservation. In the U.S. 'conservation' generally refers to nature conservation, while 'preservation' applies to protection of the historic environment.
Criterion
The standard by which something (in the present work - landscape heritage), is judged.

Cultural landscape
Landscapes modified by human use. Rural and urban landscapes which clearly show the influence of human activity. In the Australian context, 'cultural landscape' and 'rural cultural landscape' are seen as being interchangeable. The term 'townscape' is commonly used for the urban cultural landscape, while the term 'urban conservation area' also defines heritage areas in the urban environment. Rural industrial landscapes such as mining landscapes may also be referred to as cultural landscapes.

Cultural Significance
'Cultural significance means aesthetic, historic, scientific or social value for past, present or future generations' (Australia ICOMOS, 1988a, p.1).

Cultural significance is a concept which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past or enrich the present, and which will be of value to future generations.

Environment
The whole complex of physical, social, cultural, economic and aesthetic factors which affect individuals and communities and ultimately determine their form, character, relationship and survival.

Fabric
'Fabric means all the physical material of the place' (Australia ICOMOS, 1988a, p.1).

Heritage
'That which has been or may be inherited; any property and especially land which devolves by right of inheritance' (Simpson and Weiner, Vol VII, p.167). Places worthy of conservation. Heritage is more than an uninformed or unknowing response to a place. It relies on some awareness of the activities or events occurring over time which have given the place its present characteristics and values.
Heritage Landscape
A particular landscape considered to have heritage value may be called a heritage landscape. They are dynamic natural and cultural systems expressed in the landscape, and considered worthy of preservation for present and future generations. Landscape heritage describes landscapes which are considered to be of sufficient significance to retain for future generations. This definition allows both natural and cultural landscapes to be regarded as heritage. This is compared with the term 'landscape heritage', the term which describes the discipline or field of interest.

Historic Environment
'Historic environment' embraces a wide range of historic places considered to have cultural value, including landscapes. It is a term used by the Australian Heritage Commission.

Landscape
The U.S. Forest Service (1973) defines landscape as:

The sum total of the characteristics that distinguish a certain area on the earth's surface from other areas. These characteristics are a result, not only of natural forces but of human occupancy and use of the land. (U.S.Forest Service.in Grinde & Kopf, 1986, p.311).

Landscape Heritage
The general term which describes the discipline or field of interest of dealing with heritage as expressed in the landscape.

Maintenance
The continuous protective care of the fabric, contents and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction and it should be treated accordingly (Australia ICOMOS, 1988a, p.1).

Measures of landscape heritage value
Measures of landscape heritage value are secondary criteria which indicate how much heritage value a place may have. They are applied to the principal criteria to determine the level of heritage value.
National Estate

This term is used in Australia to describe the collective property which Australians have decided is worthy of conservation. The Australian Heritage Commission Act 1975, Part I, 4(1) defines the national estate as follows:

For the purposes of this Act, the national estate consists of those places, being components of the natural environment of Australia or the cultural environment of Australia, that have aesthetic, scientific or social significance or other special value for future generations as well as for the present community...

Such places include wildlife habitats, natural ecosystems, landscapes of great beauty, grand buildings and structures, humble dwellings, work places, ruins, sites of historic events and Aboriginal places such as dreaming tracks, rock art sites, ceremonial and archaeological sites.' (Australian Heritage Commission, 1987, p.1).

Place

The term 'place' is used to describe the diverse range of sites which it is possible to list on the Register of the National Estate. The Burra Charter (Australia ICOMOS, 1988a, p.1) defines place as 'Place means site, area, building or other work, group of buildings or other works, together with associated contents and surroundings.' This definition is expanded by the note 'Place includes structures, ruins, archaeological sites and landscapes modified by human activity'.

Preservation

'Preservation means maintaining the fabric of a place in its existing state and retarding deterioration' (Australia ICOMOS, 1988a, p.1). Preservation is the highest level of protection with the least interference.

Register of the National Estate

The list of the places recognised as part of the National Estate in Australia is known as the Register of the National Estate. It is prepared by the Australian Heritage Commission.

Reconstruction

Reconstruction means returning a place as nearly as possible to a known
earlier state and is distinguished by the introduction of materials [new or old] into the fabric.

Restoration
Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Threshold
Thresholds are cut-off points, above which the values of a place are considered to be high enough to warrant conservation as part of the National Estate and below which the place is considered not worthy of recognition by the Australian Heritage Commission.

Townscape
The term 'townscape' is commonly used for the urban cultural landscape.

Urban Conservation Area
The term defines heritage areas in the urban environment. Urban conservation areas or zones are pieces of town considered to have heritage value.

Value
Value is defined as having worth, either intrinsic worth or material or monetary worth.

Vernacular landscape
Vernacular landscapes are landscapes identified with local custom and tradition. They indicate relationships between the occupants of the land and their activities and the land itself.
Appendix 1: SELECTED MILESTONES IN THE DEVELOPMENT OF LANDSCAPE HERITAGE

The following points detail some of the key events in the development of landscape as heritage.

A1.1: Early approaches to heritage (refer Section 2.2)

The Renaissance
During the Renaissance a society arose which felt the need for culture and had the leisure and the means to obtain it. It took as its model ancient civilisation '...with its wealth of truth and knowledge in every spiritual interest. Both the form and the substance of this civilisation were adopted with admiring gratitude...' (Burckhardt, 1960, pp.148-149). Antiquity made itself felt in the visual arts, literature, buildings and sculptures.

Development of museums
Prior to the 18th century collections of objects and artworks had traditionally been private and not accessible to the public. They were either the property of wealthy families or noble houses, princely and royal collections or ecclesiastical collections. These collections were displayed only on ceremonial or grand occasions, if at all, and then usually only to privileged students and connoisseurs (Galbally, 1992, p.8). It was no longer acceptable that knowledge was the exclusive prerogative of the wealthy and ruling classes. In the first half of the 19th century the concept of a museum changed 'from being an expression of the personal tastes and interests of the educated and the dilettante, it was re-formed into the central focus of 19th-century urban idealism' (Galbally, 1992, p.8).

Yencken (1986) and Galbally (1992) trace the movement to make history and cultural experiences more accessible to the public through landmarks such as the creation of the British Museum, under the bequest of Sir Hans Sloane in 1759 and the public opening of the Louvre in 1793. The British Museum was modelled on the Ashmolean Museum established at Oxford University in 1683, itself based on the Cabinet of Rarities set up in London
by John Tradescant (c1577-1638). These institutions, among others, signalled the expansion of the museum movement throughout the western world.

In 1800 there were only five museums in England, but by the beginning of the twentieth century this had increased to two hundred (Whitmore, 1985, p.6). These museums were not only for housing ancient artifacts and dusty relics but were organised to illustrate many different aspects of history, and more recently, aspects of science and technology. By the time of the Great Exhibition at the Crystal Palace in London in 1851, there was a realisation that relatively prosaic objects, such as machines dating from the early years of the Industrial Revolution, were legitimate forms of heritage (Whitmore, 1985, p.6). In Australia, by 1870 four of the six colonies had established museums. Convict and free settlers alike saw the need for such institutions in a land that they considered to be culturally barren.

A1.2 Development of the concept of heritage in the built environment (refer Section 2.3)

The City Beautiful, New Towns and the Arts and Crafts movement
The City Beautiful Movement advocated consciously returning to the virtues and styles of the past to revitalise the cities of the future, 'to the sort of idealised Classical city that had periodically returned in painting ever since the early Italian Renaissance (King, 1991, p.74).

The City Beautiful Movement was linked to the Beaux Arts style in Europe, and one of its major tools was the pattern book, where styles of the past were presented in the manner of a catalogue. Paxton, who bridged the areas of architecture and landscape, used this approach.

New Towns or utopian cities were developed in response to the appalling conditions in industrial towns. These projects were initially company towns, where industrialists attempted to create new cities in line with utopian socialist ideals in the hope that the new cities would have none of the disadvantages of the old. In these, the old was denied, as developers sought to start afresh (King, 1991, p. 77).
The Arts and Crafts movement also sought to retreat from the industrial age, but by using pre-industrial art and craft skills which were the antithesis of the machine era. As an undergraduate at Oxford in the 1850s, William Morris was influenced by Ruskin and Pugin. Ruskin had responded to the wave of 'restoration' of medieval buildings carried out by prominent architects, notably Scott, who added much of his personal style to these buildings. Pevsner (1976, p.36) says 'we should not blame Scott too much' as medieval buildings were in a shocking state of neglect when the Victorian restorers started work. Ruskin strenuously opposed Scott's view, stating of restoration:

It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false descriptions of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture.

(Ruskin, 1849, quoted in Pevsner, 1976, p37)

A1.3: Development of the concept of heritage in the natural environment (refer Section 2.4)

Amenity movement
The yearning for countryside and the sense of loss of communion with nature was beautifully captured by William Blake (1757-1827).

And did those feet in ancient time
walk upon England’s mountains green?
And was the holy lamb of God
On England’s pleasant pastures seen?

And did the Countenance Divine
Shine forth upon our clouded hills?
And was Jerusalem builded here
Among these dark satanic mills?

Frequently the urban commons were the nearest countryside available to
urban workers and represented to them the rural landscape. The Commons, Open Spaces and Footpaths Preservation Society, formed in 1865, was one of the first expressions of the amenity movement. This was a forerunner of the national parks movement and was the first private environmental group formed in England, having unrivalled lobbying and legal expertise at the time. Robert Hunter, its honorary solicitor, was a dedicated conservationist who worked first with the Commons, Open Spaces and Footpaths Preservation Society, and then assisted in the formation and early directions of the British National Trust. From 1868 for the next forty years, Robert Hunter worked tirelessly to preserve the landscape heritage of Britain (see Section 2.3).

The Commons, Open Spaces and Footpaths Preservation Society acted as the coordinator of a wide range of other voluntary preservation efforts and campaigned successfully for the preservation of land for its amenity value, notably the common lands and rights-of-way across farmland which are a feature of English rural life. The Society, according to its first chairman, G. Shaw-Lefevre, was dedicated to 'restore to the Commons something of the attributes of the ancient Saxon Folk-land' (Shaw-Lefevre, 1894, quoted in Lowe and Goyder, 1983, p.21). In 1868 the Society was responsible for saving six thousand acres of Epping Forest and also played a major role in the preservation of Hampstead Heath (Fedden, 1974, p.20; Allen, 1976, p.199).

**Pioneering landscapes**

By the time of the Civil War in America, rapid development had changed many of the landscapes of the eastern States, in particular of New England. Most of the original timber had been removed and railroads and industry cluttered the landscape. Industrial wastes polluted the streams and the marshes and fields which sheltered wildlife around major cities were drained and developed. Almost every wild tract in the region had been exposed to lumbermen and mill owners who were concerned with little other than the commercial value of the timber resource (Fabos et al., 1968, p.42). The eastern seaboard increasingly reflected human dominance, although the lands west of the Appalachians were still relatively unchanged (McCormick, 1989, p.1).
In Australia the vast grassy plains beyond the coastal mountains of the eastern seaboard beckoned the squatters, as they saw the potential for huge herds of cattle and flocks of sheep. To get to these grassy plains, the massive barrier of the Blue Mountains had to be crossed. This barrier had put a rein on the expansion of the colony since its settlement at Sydney Cove in 1788, and it was a matter of time and daring before squatters would settle to the west of the mountains. While recognised as a barrier, the mountains were also acknowledged as having great beauty and grandeur, and became, in fact, one of the early areas to be designated as national park.

Early Australian settlers, like those in America, saw forests as obstacles in the path of progress. In 1803, less than twenty years after settlement, Governor King issued a proclamation forbidding tree felling along river banks and water courses. This was because of the severe land degradation which had occurred along river banks, particularly along the Hawksbury River, close to Sydney. He outlined the reasons for the proclamation:

From the improvident method taken by the first settlers on the sides of the Hawksbury and creeks in cutting down timber and cultivating banks, many acres of ground have been removed, land inundated, houses, stacks of wheat, and stock washed away by former floods, which might have been prevented in some measure if the trees and other native plants had been suffered to remain...

(King, 1803, quoted in Bolton, 1981, p.37)

In 1861 it was reported that 90% of Victoria's land area was covered by open woodland, mountain forest or dense mallee scrub. Between 1869 and 1987 the forested area of Victoria was reduced from 88% to 35% (Woodgate and Black, 1988, p.v). Bolton (1981, p.46) argues that Australia's slowness to practise enlightened forest husbandry was an attitude inherited from the British, who lagged behind the rest of Western Europe in forestation practice.

In southern Africa also, the story was similar. Environmental destruction followed closely on the heels of settlement in 1652. Clearance of forests for firewood and timber and wanton destruction of wildlife were rife. Hunting spread during the eighteenth and nineteenth centuries as skins, ostrich feathers, hides, game meat and ivory were all highly sought after,
either for consumption or for trade. By the 1830s the elephant population of the Eastern Cape had almost disappeared (McCormick, 1989, p.9). Although there were some laws enacted during the mid 1800s regarding clearing of land and destruction of wildlife, enforcement of them was difficult, as settlers were increasingly moving inland and up the coast of eastern Africa, away from Cape Town which was the centre of civilisation and administration in southern Africa at the time.

Development of the national parks movement
Wordsworth reflected the idea that nations should preserve land of collective value when he wrote of his hopes that the English Lake district be regarded as '... a sort of national property, in which every man has a right and interest who has an eye to perceive and a heart to enjoy' (Wordsworth, 1952 ed., p.127, quoted in McCormick, 1989, p.viii).

The national parks concept became more specific with the writings of the artist, George Catlin. During his travels in the American West in 1829-1832, Catlin concluded that both buffalo and American Indians were threatened with extinction. Catlin eloquently pleaded the case of man and beast in his letters:

...they might in future be seen, (by some great protecting policy of government) preserved in their pristine beauty and wildness, in a magnificent park, where the world could see for ages to come, the native Indian in his classic attire, galloping his wild horse, with sinewy bow, and shield and lance, amid the fleeting herds of elks and buffalo. ...A nation's Park, containing man and beast, in all the wild and freshness of their nature's beauty!

(Catlin, 1989, p.263)

Ideas similar to those of Catlin were expressed by Henry David Thoreau in 1858 when he wrote in Atlantic Monthly describing his second trip to Maine five years previously. Thoreau defended wilderness as a reservoir of intellectual nourishment for civilised people and asked:

Why should not we... have our national preserves ... in which the bear and panther, and some even of the hunter race, may still exist, and not be "civilized off the face of the earth" - our forests ...not for idle sport or food, but for inspiration and
our own true recreation? (Thoreau, 1858, quoted in Nash, 1982, p.103)

In 1864 the author George Perkins Marsh published his influential book, Man and Nature, espousing embryonic ideas of conservation and sustainable development. At this time Congress transferred the Yosemite Valley and the Mariposa Grove of Big Trees to the State of California. This was the first time that an area for recreational enjoyment had been incorporated into land management in the United States (McCormick, 1989, p.11). Frederick Law Olmsted, the father of landscape architecture, helped to frame the National Bill which made Yosemite Valley a State Reservation. He held strong convictions that natural beauty was more restful than human imitations of nature, and that nature had healing properties. It was these convictions that motivated his involvement in establishing the national parks movement in the United States (Fabos et al. 1968, p.45; Oldham 1980, p.251). Olmsted was subsequently appointed a commissioner of the Yosemite Valley and Mariposa Grove of Big Trees reservations and supervised the preparation of an influential policy report to the California legislature defining the duties and responsibilities of administering this public land (Fabos et al. 1968, p.45). The legislation for Yosemite provided a precedent for the establishment of the world's first true national park - Yellowstone. This marked the official foundation of the national parks movement in the United States.

In 1872 Yellowstone National Park was established. This was an area of two million acres of wilderness in Wyoming. That the first national park was American has been attributed to there being a demand for preservation of wilderness at a time when there was still wilderness land available in the public domain. This availability coincided with a pattern of settlement where developed land coexisted alongside undeveloped land (Nash, 1970, pp.726-35).

In Australia, the philosophical societies and the early field naturalists clubs of the late nineteenth century embodied the early approaches to conservation and were the forerunners of the national parks movement there. These natural history and related organisations, collectively known as 'organised science', began to actively petition governments for the establishment of national parks (Bardwell, 1974, p.4). In 1879, Australia followed America's lead and established the second national park in the
world, south of Sydney, known as The National Park from its inception until 1954, when it became The Royal National Park on the occasion of the visit of Queen Elizabeth II. This park, although in an area of high quality bushland, was reserved more for recreational pursuits than wilderness preservation (Bardwell, 1974, p.139, expanded by pers. comm., 1988). Prior to this there had been state parks and reserves set aside in Australia. These reserves were the antecedents of national parks in Australia, just as Yosemite had been a precursor of Yellowstone in the U.S., and they provided the preconditions for promotion of national parks ideals in Australia. By 1915 Victoria had more national parks than any other state in Australia and was well advanced in this area on a world-wide basis. Bardwell writes:

The history of Victoria’s national parks can broadly be described as the emergence, albeit often shadowy, of a type of conservation ethic towards the land and natural resources in general, and specifically of the appearance of a ‘preservation’ branch of the conservation movement which sought the reservation of crown land for non-economic purposes.  

(Bardwell, 1974, p.300)

In Canada, the Banff National Park was reserved in 1885, and in New Zealand the Tongariro National park was reserved in 1894 (McCormick, 1989, p.12). These also built on the U.S. models, and were part of the development of the national parks movement worldwide.

British national parks effectively developed after World War II and were of a different type to those in the U.S., being for the preservation of the countryside at large, including agricultural land, rather than just wilderness, as in the national parks tradition in most other countries (McCormick, 1989, p.6).

A1.4 Twentieth century approaches to heritage (refer Section 2.5)

Preservation versus conservation
Two responses to the excessive clearing of timber during settlement of new lands were evident, those of preservation and conservation. One of the early preservationists and champions of wilderness in its modern
form was the American naturalist, John Muir, who helped found the influential Sierra Club in 1892. The Sierra Club worked for preservation of the mountain regions of the Pacific coastline of America and was a rallying point for preservationists. Muir was also involved in the reservation of Yosemite as a national park and was influential in the early national parks movement (McCormick, 1989, p.12; Hanley, 1977, pp.224-237).

Preservationism was solidly founded in the British protectionist approach to land, and was partly derived from issues such as commons preservation, and partly from preservation of the built environment, based on the ideals of William Morris and others. The preservationist attitude required rather liberal translation to move from the built environment to the natural environment, as the natural environment had one essential feature denied the built environment, the power to regenerate itself. Consequently the concept of preservation provided rather a rigid framework for managing natural areas, where, under this approach, the only permitted uses were recreation and education.

The conservationist philosophy which evolved in the U.S. around the turn of the century contrasted with the preservationist philosophy of Muir. It was centred on the ideas of Gifford Pinchot, a wealthy Pennsylvanian who had studied forestry in Europe, where he had learned that forests could be both protected and managed for sustained yields. Although American forests were in a parlous state, he believed they should not be withdrawn completely from occupation or use, and should contribute to the nation's economy. He also believed that conservation should be based on three main principles: development (the use of existing resources for the present generation), the prevention of waste, and the development of natural resources for the benefit of many rather than for a select few.

Pinchot's ideals of sustainable use were incorporated into U.S. Government policy after 1901, when he became President Theodore Roosevelt's adviser on conservation. Roosevelt, while acceding to some of the demands of Muir and the preservationists for additional national parks and reserves, generally saw conservation as the rational management of natural resources. He backed this approach by appointing
experts and professionals in fields such as forestry, hydrology and geology (McCormick, 1989, p.14). This approach, built on the European forestry tradition, was gradually adopted worldwide, opening up the possibility of using areas of lesser conservation status for productive forestry and other enterprises. McCormick discusses the claim that conservation was one of America's great contributions to world reform movements and that its ideas were eventually exported to other nations. 'In truth, American conservation was heavily influenced by German forestry, and conservation was practiced in parts of Europe - and even in South Africa and India - before it appeared in the United States' (McCormick, 1989, p.viii).

Merging of attitudes - Australia
In Australia it was only post-World War II that attitudes to heritage in the built and natural environments really came together. The National Trust was not established in Australia until 1945 (N.S.W.), and prior to this there had been only scant interest in the history of early settlement, usually when there was some threat such as demolition. Preservation of old buildings was often closely allied to conservation of the natural environment and 'appealed to much the same vein of anti-modernist, but nationalistic sentiment that inspired the landscapes of Hans Heysen, Lionel Lindsay and Septimus Power' (Davison, 1991, p.16). The conservative idea of a legacy of the past, a 'trust', bequeathed by one's forebears and handed on to one's descendants, appealed to a generation that had witnessed the human and environmental devastation of war. After the war, organisations dealing with heritage arose in each state, with the various state National Trusts being at the fore. Davison says:

For most of the 1950s and 60s the Trust remained almost the only voice of preservationist sentiment. From the late 1960s, however, defence of the built heritage began to engage a broader coalition of interests prepared to employ more diverse, and often more militant tactics.

(Davison, 1991, p.19)

The Athens Charter
A milestone in the adoption of a more international approach to heritage
conservation was the intellectual house party boasting the presence of Siegfried Giedeon and Le Corbusier, held at La Sarraz, Switzerland in 1928. This ultimately led to the formulation of the *Athens Charter*, the forerunner of many of today's heritage charters. The meeting addressed the responsibility of modern architects and set new directions for architecture to make it more relevant to the pressing urban problems of the day (Banham, 1963, p.70). The Congres Internationaux d'Architecture Moderne, or CIAM as it was known, was formed and was to meet regularly and influence some sections of architecture and historic preservation for many years.

CIAM IV took place in 1933 aboard the liner S.S. Patris, and was the first of the cruise congresses. By this time CIAM was predominantly the domain of the French and Le Corbusier. The delegates departed from Athens and conferenced their way to Marseilles, briefly leaving behind the worsening situation in Europe and producing the *Athens Charter*.

The *Athens Charter* consisted of 111 propositions; in part statements about the conditions of towns and in part proposals for fixing those conditions. These were grouped under five main headings: dwellings, recreation, work, transportation and historic buildings. Reyner Banham refers to the *Athens Charter* as 'Olympian', rhetorical, and as ultimately destructive (Banham, 1963, p.70). However it provided a framework for the consideration of heritage as part of the planning process and was a very important foundation stone for the preservation movement internationally. It also provided a point of departure for the evolution of simpler and more relevant heritage charters. The *Athens Charter* was subscribed to by a number of important and influential architects of the time, including Le Corbusier and Giedeon, and had considerable status because of these associations. It was adopted by the League of Nations, the forerunner of the United Nations.

UNESCO

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) is a major international body concerned with scientific and cultural issues. Its constitution embodies the idea that all nations have a collective responsibility towards the great monuments and relics of
civilisations as they belong to the history of humankind.

In 1954 UNESCO issued an updated version of the *Hague Convention, the Convention for the Protection of Cultural Property in the Event of Armed Conflict*. In 1960 UNESCO defined cultural property as:

> The product and witness of the different traditions and of the spiritual achievements of the past and...thus an essential element in the personality of the peoples of the world'. [It was the responsibility of governments] to ensure the protection and preservation of the cultural heritage of mankind, as much as to promote social and economic development.

(Davison, 1991, pp. 2-3)

The emergence of definitions of 'cultural property' and 'heritage' in UNESCO conventions is discussed in Prott & O'Keefe, 1984.

The fact that UNESCO addressed the issue of heritage conservation and had the imprimatur of the United Nations gave the matter international support, and by 1979 sixty eight countries had ratified the convention (Australia, Parliament, 1982, p.212). Although Australia was not a signatory to the convention, it influenced directions that the Australian Heritage Commission was later to take.

**The World Heritage Convention**

The idea that nations had a responsibility to protect their heritage was expanded at the United Nations Conference for the Human Environment, held in Stockholm in 1972. Here the *International Convention for the Protection of the World Cultural and Natural Heritage* was developed and subsequently came into force. This was later called the *World Heritage Convention*. Under this convention, State parties who were signatories to the convention were required to protect, conserve and present cultural and natural heritage. It also required preparation of an inventory of places of outstanding universal value, the *World Heritage List* (Australia, Parliament, 1974, p.211). The World Heritage Convention is designed to complement national initiatives and is concerned with 'immoveable property', and therefore does not cover museum objects, artworks and the like (UNESCO, 1983, p.3).
A number of non-government organisations came into being closely associated with UNESCO. Among these were ICOMOS, IUCN - the World Conservation Union, which deals with nature conservation and the natural environment, and the World Heritage Committee. ICOMOS, with members and national organisations in over fifty countries, is the international organisation concerned with the study, conservation and care of all places of cultural significance (Bickford, 1991, p.38).

Following UNESCO'S initiatives, the Conference on Security and Cooperation in Europe (C.S.C.E.), meeting in Cracow, Poland, in June 1991, agreed on a statement on the protection of cultural heritage, linking it to democratic rights and artistic freedom. It clearly states the importance of conservation of the cultural landscape, highlighting the need for international collaboration in this area (National Trust of Australia (Victoria), 1991, p.3).

Also in 1991 the Second World Conservation Strategy Project stated the importance of conservation of 'landscape, cultural heritage and biological diversity', and incorporated these into action plans, notably Action 4.9 (IUCN, UNEP, WWF, 1991, pp. 23, 36). The strategy and the C.S.C.E. statement both marked the increasing interest of landscape as an expression of cultural heritage and recognised people's rights to this expression.

The Venice Charter
An international congress of architects and specialists in historic buildings, The Ilnd. International Congress of Architects and Technicians of Historic Monuments, held in Venice in 1964, resulted in development of the International Charter for the Conservation and Restoration of Monuments and Sites, known as the Venice Charter. This charter, produced by experts and practitioners rather than by international organisations, was more specific than the Athens Charter, and was able to address issues in a more detailed and informed way. The Venice Charter superseded the Athens Charter and became the antecedent of more recent heritage charters.

Initially the Venice Charter had no particular status and was not ratified
by any international organisation. However the following year, 1965, ICOMOS was formed in Warsaw and it adopted the *Venice Charter* as a foundation document. ICOMOS was set up to promote the study and conservation of historic monuments, buildings and districts, and to cultivate an interest in cultural heritage.

In 1966 the *Venice Charter* was ratified in Vienna, was accepted on an international basis and was later to become the basis for development of the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)* (Australia ICOMOS, 1988a, p.1; Bickford, 1991, p.39).

**Moscow conference**

In 1978 an ICOMOS conference was held in Moscow. The following notes on the Moscow Conference are based on discussions with Dr. Miles Lewis, Department of Architecture and Building, The University of Melbourne, who led the Australian delegation.

One of the aims of the Moscow conference was to review the *Venice Charter*, as there was some dissatisfaction from some countries, including Australia, regarding its applicability to their situation. The *Venice Charter* was designed for the European situation where monuments, classical temples and Gothic cathedrals were the main objects of conservation. It was initially drafted in French and then indifferently translated into English, finally being produced in four languages. It was considered to be inappropriate for dealing with conservation of primitive or vernacular architecture, ephemeral buildings such as mud buildings, townscapes, industrial architecture or modern buildings and landscapes.

Some delegates felt the charter was itself a historic artifact and did not want to change it. Others who had been involved in drafting the original document also resisted change. The delegates at Moscow were divided into roughly three camps: those that wanted no change, those that agreed that the charter was out of date but was now a historic document and hence should not be revised, and those that thought it should be revised but did not quite know how to approach the issue. There was also some
debate as to whether ICOMOS had the right to change the document, as it was inherited from the organisation which preceded it. The outcome was that the Venice Charter was not changed. The meeting did, however, produce a document Resolutions of 5th. General Assembly of the International Council on Monuments and Sites (ICOMOS) (Bickford, 1991, p.39).

Australian heritage prior to the 1970s
Prior to World War II, there was little perception of the historic environment and no wartime destruction to focus the issue. The history of conservation of buildings and landscapes in Australia is entirely post-war.

The first Australian National Trust had been set up in the 1945 in New South Wales and was followed by Victoria in 1956 and branches in other states. These Trusts set out to deal primarily with conservation of the built environment and their activities were purely voluntary. At this time no government organisations were empowered to deal with heritage conservation in a systematic way. There was little contact between states, and professionals working on historic conservation were operating largely in isolation until the Inquiry into the National Estate commenced in 1973.

Interest in nature conservation had been gradually developing in the twentieth century and was based on work done by the National Parks Movement and by various honorary and professional groups (see Section 2.4). The evolution from a more limited nature-based interest to a broader interest in the wider environment allowed consideration of the cultural and natural environments to move closer together. A rapid rise in public interest, and protests over conservation questions and urban problems, led the Australian Government to set up the Committee of Inquiry into the National Estate in May 1973 (Webb & Wright-McKinney, 1976, p.273).

Committee of Inquiry into the National Estate
Notes on the Inquiry into the National Estate are based on discussions with and the personal papers of Professor David Yencken, member of the Committee of Inquiry and foundation chairman of the Australian
While national parks initiatives were clearly the responsibility of the Minister for the Environment, Moss Cass, and his department, heritage initiatives came from the Department of Urban and Regional Development, or more particularly from its Minister, Tom Uren. Uren had an interest in heritage and also reflected Prime Minister Gough Whitlam's interest in cities and urban environments and, having become Minister, was keen to inject funds into certain aspects of the environment. As the Department of Urban and Regional Development was concerned that the funds be spent to greatest effect, it was considered appropriate to carry out a national survey to set some priorities regarding the national estate. To this end the Inquiry into the National Estate was set up in May 1973 and reported to Parliament in 1974 (Australia, Parliament, 1974). The Inquiry marked a turning point in the history of conservation of both natural and cultural heritage in Australia and was to provide the foundations for conservation work at both national and local levels from the 1970s to the present.

The Committee of Inquiry was formed in 1973 and was headed by Justice Hope who was associated with a landmark environmental case at the time. The members of the Committee of Inquiry came from diverse backgrounds and incorporated skills in different areas of environmental assessment and management.

The terms of reference of the Inquiry were that the Committee was to examine:

(a) the nature and state of the National Estate;
(b) the measures presently being adopted;
(c) the measures which should be adopted;
(d) the role which the Australian Government could play in the preservation and enhancement of the National Estate;
(e) the manner in which the National Trusts of Australia and other appropriate conservation groups could be supported by public funds and the amount required in order that these bodies can immediately increase their effectiveness in arguing and working for the preservation and enhancement of the National Estate.

(Australia, Parliament, 1974, p.34)
The Committee invited written submissions, held hearings around Australia at which people could present arguments, visited many sites and commissioned studies. The Inquiry ranged across the full spectrum of natural and human environments and carried out a survey of unprecedented scope in Australia, crystallising many of the diverse issues relating to the National Estate. One of the main concepts to emerge from the report was the idea that places of heritage significance, whether natural or cultural, were to be regarded as part of a continuum which required a unity of approach and thinking on a regional and national scale (Webb & Wright-McKinney, 1976, p.276).

The *Burra Charter*

The first major principle underlying the *Burra Charter* derives from art restoration, where missing or damaged parts may be blanked out in plain tones. This provides an impression of the whole, but the original work and the new additions are clearly distinguishable. When dealing with a building, a missing element could be replaced by a plain piece similar in overall shape, but without the detail and not pretending to be the original. In many cases the new section would be clearly marked and dated for future reference. This means that the strength, stability and design intent of the structure is maintained but new elements are not added. In landscape this principle is harder to apply, as landscapes do not always have a design intent and they change with time due to natural processes. However the principle that infill should be recognised and recorded as such is still useful.

The second major principle, known as anastylosis, was derived from archaeology. This principle incorporates the idea that it is legitimate to put back together the components of a place which have been separated in some way. Anastylosis is based on the archaeological principle that you may literally 'raise the columns', that is, if, for instance, the columns of a Greek temple have fallen over and become scattered around a site, it is legitimate conservation practice to collect them and put them together again.

As these principles developed and were incorporated into conservation
philosophy and practice, the term anastylosis took on a broader meaning and came to include both the second and the first principles, as the ideas were related. Therefore it is considered legitimate conservation practice to put extant original pieces together and to replace the missing pieces with identifiable and neutral substitutes. Recreation of structures is only carried out when other alternatives are not practicable or possible, and new parts or structures should be clearly defined as such.

The principles outlined above also apply to the moving of structures, for instance moving the Egyptian temples from the site which became the Aswan Dam, and more locally, moving La Trobe's Cottage to save it from demolition. The heritage object loses its context and the archaeological deposits with which it may be associated by being moved. This principle may apply to elements and structures within, and forming part of, the landscape.
Appendix 2: LANDSCAPE HERITAGE VALUE

The meaning of landscape heritage (refer Sections 3.2 and 3.3)

Evolution of the term 'heritage'
Originally, 'heritage' referred to the property which parents handed on to their children, although the word could also be used to describe an intellectual or cultural legacy. Davison (1991, p.1) describes heritage: "Heritage" is an old word, drawn from the vocabulary of those old societies in which primary values derived from ancestral relationships'.

Until recently 'heritage' meant the tangible assets left by immediate forebears, property handed down from parent to child. It also traditionally signified the great estates, artworks, jewels, armories and treasure stores of Europe. Lowenthal (1986, p.42) indicates that the meaning of the word has shifted from this traditional use to a broader one encompassing intangible as well as tangible assets and including the knowledge and precepts of past generations and the physical evidence of the past. Lowenthal links this shift to emerging national self-consciousness:

Only with the rise of national self-consciousness in war-torn Europe after Napoleon did 'heritage' broaden to embrace collective folkways and physical monuments. Nations like individuals were then conceived as organic beings who acquired legacies from progenitors...

(Lowenthal, 1986, p.42)

As we have seen in Chapter 2, the meaning of heritage gradually broadened with this shifting emphasis and came to include a range of things and places, permanent or ephemeral, large or small, and moveable or immovable. Heritage items ranged from great sweeps of the natural environment, forests, coasts and mountains, to small objects often reflecting the ordinariness of daily life. The expanded view of heritage was expressed by the content of museum collections, where there was a trend to collecting items evidencing everyday life and diverse cultural groups, rather than just the traditional objets d'arts and objets trouve of western culture (Yencken, 1986, p.4, Galbally, 1992, pp. 8-9). Davison (1991,
p.1) says that 'In our time heritage has come to refer to things both more tangible, and more fragile, than the imperishable ideals of our ancestors. By the 1960s heritage as ideals and heritage as things had become closely inter-twined.

Evolution of the concept of landscape

In Anglo-Saxon times the word landskift, a precursor of the word 'landscape', was used to represent a natural unit of the land surface, such as a river valley or a range of hills. As the boundaries of these natural units in some cases coincided with territorial or tribal boundaries, the meaning of the word gradually changed to incorporate both physical and social divisions. A particular tribe or group of people could occupy lands frequently delineated by natural boundaries, for historical, territorial or agricultural reasons. In some cases these lands came to be ruled by a feudal lord (Calder 1981, p.6). Classic examples of landscape units becoming tribal units are the medieval territories of Scotland and Wales.

In the 16th century the Dutch school of landscape painters introduced the concept of landscape as seen view: an area of land which could be perceived visually from a fixed point without reference to features which were hidden from the observer. If a feature was obscured it was not part of the landscape, even though it was still physically present. These landscapes were translated into visual images, that is, landscape paintings. This concept of landscape involved the observer's view rather than an appreciation of the characteristics of the land (Calder 1981, p.6).

The later German word landschaft, derived from the Dutch word, and from which the English word 'landscape' has evolved, embodies both the Anglo-Saxon and Dutch landscape painter's concepts of landscape, that is, both the seen view and the functional land unit. Landschaft is therefore a slightly ambiguous term whose interpretation is determined to some extent by the context in which it is used. The ambiguity present in the word landschaft has been carried through to the English word 'landscape', which was initially used as a painter's technical term, but also took on meaning related to characteristics of tracts of land (Calder, 1981, p.6).

Early English forms of the word 'landscape' reflect its evolution: landskip,
landtschap, landskip, landschaft, with landskip being the earlier 'corrupt' form (The Oxford English Dictionary, 1989; Webster's New International Dictionary of the English Language, 1953). The English termination skip or ship, like the German schaft, is connected with the verb schaffen, to shape. Thus landscape is a shape of land, or the artistic representation of it' (Smith, 1871, p.433).

The Oxford English Dictionary (1989) defines landscape as follows:

A picture representing natural inland scenery, as distinguished from a sea picture, a portrait, etc... a view or prospect of natural inland scenery, such as can be taken in at glance from one point of view; a piece of country scenery....A tract of land with its distinguishing characteristics and features esp. considered as a product of modifying and shaping processes and forces (usually natural).

It is interesting to note the general shift in the concept of landscape as it has evolved further in the twentieth century. Shifts towards ecological processes can be noticed in later editions compared with the 1933 edition.

What landscape is not

Landscape is related to, but is not identical with, nature. Nature is a part of every landscape, but it is no more than a part of any landscape which has felt the impact of man. In this view landscape is always inclusive of man and nature....Indeed the idea of landscape runs counter to recognition of any simple binary relationship between man and nature.

(Meinig, 1979, p.2)

Every landscape is a scene, but landscape is not identical with scenery. The idea of scenery is limited in that it is a conscious selection of certain prospects or kinds of country as having aesthetic quality. Interest in landscape may include aesthetics but is not defined by it.

Landscape is related to, but is not identical with, environment. Meinig says of landscape and environment:

Environment is an inherent property of every living thing, it is that which surrounds
and sustains; we are always environed, always enveloped by an outer world...
Landscape is defined by our vision and interpreted by our minds... Strictly speaking we
are never in it, it lies before our eyes and it becomes real only as we become conscious of
it...Environment sustains us as creatures; landscape displays us as cultures.

(Meinig, 1979, p.3)

Landscape is related to, but is not identical to, places. Places have been
defined in a particular way by Australia ICOMOS (1988a, p.1, see Glossary).
Meinig (1979, p.3) says of place: 'Place commonly refers to a definite area, a
fixed location; events "take place" and we can be in a place.' Meinig
differentiates between public and private 'place', the former being
locational and related to recognised identity, the latter being experiential
and individual. He says:

Still landscape tends to be something more external and objective than our personal
sense of place; and something less individual, less discrete, than the usual named place;
it is a continuous surface rather than a point, focus, locality, or defined area.

(Meinig, 1979, p.3)

Similarly landscape is related to, but is not identical to, region, area or
geography.

Ordinary landscapes
Ordinary landscapes are the continuous surface that we see all around us.
Meinig regards all landscapes as expressions of cultural values, social
behaviour and individual actions worked upon particular localities over a
span of time (Meinig, 1979, p6). Ordinary landscapes may be equated with
everyday landscapes, from which we may infer that there is nothing
particularly outstanding, old or remarkable about these landscapes, but
that nonetheless they have meaning and can tell us things about the
culture that they represent. There is also an inference that there is a
present-dayness about the landscape, and no need for obvious evidence of
past land use.

Vernacular landscapes
Vernacular landscapes are landscapes identified with local custom and
tradition. They may demonstrate a pragmatic adaptation to circumstances and an unpredictable mobility and change. They indicate relationships between the occupants of the land and their activities and the land itself. They may be the ordinary everyday rural landscape or countryside, but there is an element of continuity from past to present that may be inferred (Jackson, 1984, p.xii, pp.149-151). This concept overlaps with that of ordinary landscapes, but includes more evidence of past activity and its links with present activity.

Cultural landscapes
Cultural landscapes are landscapes modified by human use: rural and urban landscapes which clearly show the influence of human activity. They are the landscapes that people have settled and altered with time and in which people continue to live. 'Cultural landscape' refers to landscapes of settlement, pastoral and agricultural landscapes, and mining or other types of rural industrial landscapes, and may include historic landscapes and sites, and parks and gardens. General usage of the term refers to landscapes influenced by Western culture, rather than indigenous culture, while recognising that landscapes influenced by indigenous people may have strong cultural values.

Grinde and Kopf (1986, p.312) define cultural landscape as 'The attachment of a particular culture or historical value to a familiar local landscape.' Lewis (1975, p.12) says that cultural landscapes are 'nearly everything that we can see when we go outdoors.' According to this definition, cultural landscapes include all landscapes altered by humans. Lewis says that another way of looking at the matter is to say that all human landscapes have cultural meaning. While this definition outlines a useful overall concept, it is too broad to be of practical use here. If we view all landscape as part of the cultural landscape, then there is, in the practical and management sense, no capacity to designate anything as special.

The term 'cultural landscape' is internationally recognised. The U.S. National Park Service defines it as follows:

A geographic area, including both cultural and natural resources, including the wildlife and domestic animals therein, that has been influenced by or reflects human activity or
The U.S. National Parks Service recognises five types of cultural landscape which need not be mutually exclusive. They are historic scene, historic site, historic designed landscape, historic vernacular landscape and historic ethnographic landscape.

Aboriginal land management
The areas used and modified by Aboriginal occupation are often teeming with wildlife which provides a rich food source. The Aboriginal people regard firing as rubbish removal. It clears the land of dead wood and facilitates new growth. The new growth then encourages the wildlife and focuses the food source into particular areas. Another benefit of fire management is that it creates mosaics across the land resulting in an ecologically rich environment. Aborigines are very proficient users of fire and use different types of fire for different purposes. For example a cool burn will restrict itself to ground cover and not damage the canopies of trees. The fires occur on a regular basis which stops ground fuel from building up and minimises the risk of a damaging bushfire occurring. Thus the fire regimes used by the Aboriginal people to manage the land have provided rich ecosystems with much diversity, contrasting dramatically with the monospecific agrarian cultures of the European settler (Jones, 1969, pp.224-8).

The CSIRO (Commonwealth Scientific and Industrial Research Organisation) has carried out research on continuous burning in the Kakadu region. Its view is that it is now better not to tamper with the established fire regimes, as the pattern has been in place so long that no-one is prepared to predict what would happen to the environment if the fire regimes were changed (National Trust of Australia, 1990, Heritage and Conservation: the challenges in the Asia Pacific Rim conference at Darwin and Kakadu, Discussion).

Another way in which the Aboriginal people managed the land, and which resulted in landscape modification, was digging-stick farming. This involved digging for roots, tubers and other foods, and in the process...
loosening up the soil surface and keeping it friable. Soft-footed animals such as the kangaroo did not compact the soil as do hoofed animals, and the soil was more friable and tillable prior to European settlement (Gott, B., Monash University, c 1987, pers. comm.).
Appendix 3: EVALUATION OF RESEARCH METHODS FOR INVESTIGATING CRITERIA

A3.1 General yardsticks for research (refer Section 5.2)

Reliability
Reliability is a primary requirement of any research method, and is a measure of the agreement or consistency in results obtained from successive applications of the method (Daniel & Vining, 1983, p.40,). Reliability is an indicator of the ability to replicate the experiment and offers measurement stability over time, both long-term and short-term. Reliability implies that the research method used must be relatively objective in the sense that the results do not depend on who applies the method. Reliability must also apply to the data so that it is possible to replicate the experiment given the data being used.

Sensitivity
Sensitivity indicates the range of measurements and is related to selecting a scale that is appropriate for the experiment. The measurement method must be sensitive to changes in the properties which are being measured (Daniel & Vining, 1983, p.40). Daniel and Vining make the point that in their experience there will be the need for a trade-off between sensitivity and reliability. Felleman (1986 p.61) adds to this by describing sensitivity as a measure of the expected and tolerable error permitted in an experiment. Acceptable limits of error need to be established and the contribution of various factors to the error estimated. The experiment must then be controlled to keep the error within limits. Sensitivity is more of a concern for quantitative than qualitative research, but even if the research is essentially qualitative, sensitivity means that the method used must be fine-grained enough to pick up the variations sought. It also means that the data source must also contain information at a useful level of resolution.
Validity
As well as satisfying the above, the measures must reflect changes in the property that the system purports to measure (Daniel & Vining 1983, p.40). Are you measuring what you intend to measure? Is the data source going to provide the kind of information that is sought? It is often very difficult to test the validity of a measurement method, especially when the property being measured is not clearly defined. This is the case with landscape heritage, where views differ on the meaning of heritage, as well as on how heritage applies to landscapes. In situations such as this, validation is usually approached by comparing different results provided by independent applications of different methods to the same objects. If two or more independent assessments of landscape quality agree, each gains some support for its validity, or there is converging validity. Validation of a landscape quality assessment method is a continuous process and no single test can confirm or disprove a method’s validity. Daniel and Vining (1983, p.40) suggest that the best acceptance a method can achieve is the consensus of researchers and practitioners that the method measures ‘landscape quality’. Hull (pers. comm. 1985) discusses what he terms ‘face validity’, whether the results seem intuitively right to the investigator. Although it is clearly unsafe to use this approach as the sole measure of validity, it may be applied in conjunction with other methods of validation, and is a sensible procedure to apply in any investigative work.

Utility
Any research method should be useful and useable. Utility of a method is usually gauged in terms of efficiency and generality (Daniel & Vining, 1983, p.40). Efficient methods are those which provide precise and reliable measures for relatively low cost in terms of time, materials, equipment, and personnel. As used by Daniel and Vining, utility refers to the extent to which a method can be applied successfully and with only minor modifications to a range of landscape quality assessment problems. Utility is a practical as well as a theoretical concern, and relates to the manageability of a technique. Is it useful, efficient, practicable and precise enough for the task in hand?

An important aspect of utility is the extent to which landscape quality
measures can be integrated with other environmental quality measures, such as physical, biological and social parameters, so that accurate predictions of the implications of environmental change can be made. (Arthur et al., 1977).

A3.2 Potential sources of information on criteria for landscape heritage assessment (refer Section 5.3)

Current opinion as expressed in the literature
Disciplines which may incorporate material on landscape heritage include archaeology, architecture, botany, ecology, engineering, geology, geography, geomorphology, history, psychology, science, recreation and tourism. These disciplines are represented in books and in journals from anywhere in the Western world.

In archaeology there are classic texts such as Daniel (1971, 1976) which outline the development of archaeology as a science and include reading the landscape for evidence of the past. There are archaeological texts relating to particular cultural groups; for instance Aboriginal archaeology represents an important sector of the archaeological literature in Australia. Authors such as Flood (1983, 1990), Mulvaney (1989), Cowan and Beard (1991), Presland (1985) and Wiencke (1984) all explore material relating to the Australian landscape and how it was perceived, utilised and transformed by its earliest inhabitants.

Industrial archaeology and industrial history may overlap landscape heritage, and provide explanations and interpretations of certain heritage landscapes, particularly mining landscapes and rural industrial landscapes (Birmingham, Jack and Jeans, 1983).

Archaeology merges into history with texts on contact and post-settlement history and the resultant changes to the landscape, for instance in Seeing the first Australians by Donaldson and Donaldson (1985) or The Squatters by Geoffrey Dutton (1989). History texts may be general and deal with themes which affected most of Australia, such as pioneering, the discovery of gold, and land clearance (Blainey, 1968, 1991, 1982; Moloney,
1988), or may be very specific such as the history and development of a particular area, for instance the town of Walhalla (James and Lee, 1975) or a particular property. Architectural history merges with social history and the story of the evolving landscape. This occurs at the general level and at the site specific level. Incorporated into some of this material are general criteria for setting aside both landscapes and buildings as heritage. These criteria may be implicit or explicit and may express similar or the same ideas in a number of ways, the concept being the important thing.

Once landscapes and buildings are found to have a significant history, they may be set aside as heritage, when texts and articles with a different emphasis emerge. Volumes such as Historic Places (Australian Council of National Trusts, 1982), Historic Homesteads (Australian Council of National Trusts, 1982), Historic Houses (Australian Council of National Trusts, 1982), Historic Gardens of Victoria (Watts, 1983) and Australian Historical Landscapes (Jeans, 1984) among others, deal with landscapes recognised for their heritage value, and incorporate some of the reasons why they are recognised and the criteria upon which they were judged to be of heritage value. In addition to books, journals such as Heritage Australia deal with, among other heritage matters, the recording of individual places of heritage significance, many of which are landscapes or have a landscape component. International journals such as the U.S. journals, Landscape Architecture and Landscape Journal, also have editions which incorporate or concentrate on landscape heritage.

Natural places such as wilderness areas give rise to another rich source of literature. Again this may be specific to sites or areas, such as the range of material available on Kakadu (Neidjie, 1986, 1989; Davis, 1989; Breeden and Wright, 1989, Ovington, 1986 among others), or it may be more general, such as Parks: Victoria's National and State Parks (Calder, 1990). It may focus on different aspects of heritage, concentrating on landform, ecology, wildlife or scientific 'wonders'.

Natural and cultural heritage may merge in a conservation sense, and give rise to more general texts and articles dealing with all types of heritage places, such as The National Estate: Australia's Heritage (Lloyd, 1983), Australia's World Heritage Sites (Serventy, 1986) and more formal listings such as the illustrated National Trust Register (National Trust of
Australia (Victoria), 1985) and *The Heritage of Victoria: The Illustrated Register of the National Estate* (Australian Heritage Commission, 1983).

At a more theoretical level, there are texts and articles dealing with the theory of heritage, whether it be the symbolism of landscape, the psychology of place or the need for continuity with time (Lowenthal, 1986; Lowenthal and Binney, 1981; Cosgrove, 1984; Fitch, 1990; Stokes et al., 1989; Hough, 1990; Davison and McConville, 1991; and others). This material starts to overlap with educational, recreational and tourism literature.

Obviously the field is rich and the scope is enormous.

### A3.3 Detailed consideration of potential research methods (refer Section 5.5)

#### Classic literature review

The classic literature review and analysis, where a written source is carefully read, and its meaning understood and analysed, is a useful tool for investigating criteria embedded in writings. It can be flexible, open-ended, leads can be followed when they occur, and analysis can be carried out in a careful investigative manner. A literature review is a very appropriate research method for extracting information on criteria from written sources on landscape heritage.

#### Questionnaires

Questionnaires were considered as tools for investigating criteria (Moser, 1969, pp.175-184; Nachmias & Nachmias, 1976, pp.107-109; Sellitz et al., 1959, pp.235-243).

The advantages of a questionnaire were that it could be administered from one place, that this could be done by post, that results would be able to be quantified, and therefore there would be graphs and charts as convincing evidence. Questionnaires would have high utility, would be very time, effort and cost efficient, and could generate convincing statistics.

But what questions would one ask if there was little to guide one on
criteria? Of whom would one ask the questions? How would one validly choose a balance between professionals and the public? Which professionals would one choose from the broad range that deal with landscape heritage: archaeologists, historians, landscape architects, architects and the like? How would one balance that choice? How would one make a questionnaire open-ended enough to pick up new information, particularly when one suspects that new information or newly-formatted information will be important in advancing the field? Because of these doubts, questionnaires were rejected as a research tool.

Interviews

The interview can be regarded as a face-to-face situation in which an interviewer asks respondents questions designed to obtain answers pertinent to the research hypothesis. Berg says 'interviewing is usually defined simply as a conversation with a purpose' (Berg, 1989, p13). The questions, their wording, and their sequence define the extent to which the interview is structured (Nachmias & Nachmias, 1976, p100). Nachmias and Nachmias describe three main types of face-to-face interview, as distinct from telephone interviews. These are the schedule-structured interview, the focussed or nonschedule-structured interview, and the nonstructured or non-directive interview.

In what Nachmias & Nachmias (1976, p.100) call the schedule-structured interview and what Berg calls the standardized interview (1989, pp.15-16) the questions, their wording and their sequence are identical for every respondent. The rationale is to offer each respondent the same stimulus, so that responses may be comparable. However, in the present investigation, not all organisations are dealing with the same issues, and this method is not good at handling these differences. Using identical questions in each case implies that the meaning of each question is the same for each respondent, that little, if any, clarification or expansion is permissible, and that open-ended approaches to following up leads cannot be explored (Nachmias & Nachmias, 1976, p.100). There is a built-in assumption in this type of method that the researcher has a relatively fixed and comprehensive idea of what is relevant. This would be presumptuous in the present research. This technique has many of the limitations of the questionnaire, as it is really a questionnaire applied in
person, and as such was not considered useful here.

The focussed interview (Zeisel, 1981, pp.137-139), or the semistandardized interview (Berg, 1989, pp.17-18), proceeds on the basis of an interview guide which specifies topics and areas related to the hypothesis. Although the interview is structured and a framework for comparison is incorporated, there is flexibility to explore leads and follow new or tangential lines of thought. The interview is flexible but controlled. The interviewer must have a good knowledge of the field, so that decisions can be made regarding the value of pursuing certain leads (Nachmias & Nachmias, 1976, pp.100-101). This type of interview could prove to be useful in exploring how staff of heritage organisations understand, interpret and use criteria, and could form a useful triangulation method when used in conjunction with other research methods.

Nonstructured, non-directive (Nachmias & Nachmias, 1976, p.101) or unstandardized (Berg, 1989, pp.16017) interviews have no specified questions or schedule, and respondents are asked to relate experiences with little or no direction from the interviewer. Interviewers must develop questions and generate probes as the situation arises. This technique is less useful than the focussed interview, as there is too much freedom and no framework to contain the area, a risk when the field is not well-defined, and when meanings may vary from one user to another.

Of the three interview techniques, the focussed interview offered the most potential, providing a flexible framework but permitting some structure.

Delphi technique

The Delphi process is a systematic, iterative survey technique, based on the independent contributions of a group of experts. It is an anonymous written series of questionnaires in which a summary of initial responses is fed back to the respondents, with the extreme respondents being asked to justify their position. The process is repeated for several cycles, and in most cases the individual answers are found to converge after feedback. It is frequently used in areas of business forecasting, and has been used in environmental work to some extent (Ervin & Meyers, 1973; Le Grew et al.,
1980, p. 27; Leitch & Leistritz, 1984, pp.32-40). It is harder to apply to wide-ranging and indeterminate areas, such as environmental decision-making, than to business forecasting (Levine, 1976, pp. 176-178).

The Delphi process consists of four major steps: defining the problem, selecting the respondents or panel, exploring the questions, and reaching a consensus view (Le Grew et al., 1980, p.28). This process was initially considered to be a useful tool for determining criteria for assessing landscape heritage. Its application to this problem was considered in some detail, even to the point of trialling one round of questions, and examining its performance and ability to extract data from a group. After the trial it was discarded for the reasons given below.

The Delphi technique has many of the limitations of the questionnaire. It is a written response which confines the respondent to answering only the questions asked, and which limits the ability to follow new leads.

The technique also contains the problem of definition of terms. What one term means to one expert is not always clear to another, particularly when dealing across disciplinary boundaries. Much time was spent in the trialling process explaining to various different professionals, the exact meaning of certain terms. This is partly due to the fact that the field of landscape heritage is embryonic and the theory is rapidly evolving, and partly to different emphases in usage amongst different professionals. This problem distracted respondents from the task of obtaining converging opinions, and the impression was gained that the situation was too fluid, and basic theory needed attention before consensus could be sought. This meant reliability and validity would be poor. This particular trial was salutory, as it sent the researcher back to the data sources and the research techniques available, to seek more reliable methods.

The Delphi process relies on the opinion of a group of experts. There is an assumption built in to the process that the experts legitimately represent the community. This may be valid when one can define which experts represent which community. The communities for which a place represents heritage may be diverse, as are the professions of the experts who assess heritage value. There are, therefore, two sets of variables, community and expert, both of which may be hard to select with any
validity. How do we choose who are to be the representative experts? From what professions should they be drawn and in what proportion? Selection of respondents must be explained and justified (Leitch and Leistratz, 1984, p.33). Leitch and Leistratz also claim that the process reinforces unaccountability of respondents, and discourages the contribution which potentially could result from adversarial or exploratory processes. The Delphi process was considered to lack reliability and to be hard to justify and validate for the present research, and was therefore rejected as a potential research tool.

Factor analysis
Factor analysis is a statistically-based form of multivariate analysis which examines multivariate data along all dimensions, and which calculates combinations of factors which effectively describe the situation being investigated (Wyatt, 1989, p.37).

This type of analysis requires numerical data, that is, words must be converted to numbers. Reservations about this conversion, and about losing information in the process, have been voiced earlier and remained one of the major reasons for not taking a numerical approach such as this. The question arose, what factors can be analysed? Until there is a clear understanding of the concepts and criteria that are being examined they cannot be factor analysed. Therefore this research technique was rejected for the present work.

Cluster analysis
Cluster analysis was also considered. This is a technique for aggregating similar entities into groups, thus revealing patterns of association within the data (Wyatt, 1989, pp.42-44). Edgington demonstrated its usefulness in analysing community information services (Edgington, 1984). Cluster analysis requires numerical data, and therefore has some of the fundamental limitations expressed for factor analysis, in that there must be a conversion from words to numbers during which information is lost. The idea of aggregating similar entities into clusters had some validity, and it is possible to use this technique in conjunction with other methods such as content analysis, to refine information. It was not rejected out-of-
hand as a tool, but it was recognised that it would probably be most useful in addition to some other method.

**Comparative analysis**

Comparative analysis involves the systematic choice and study of several comparative groups (Glaser & Strauss, 1979 p.9). Given our general lack of understanding regarding criteria, how would we be able to make a valid selection of what to compare with what? This technique narrows the field too early, permitting only a relatively small number of comparisons to be made, hence it was rejected for the present work.

**Content analysis**

Content analysis involves the interpretation of text, or hermeneutics, and provides a way of analysing information contained in documents and texts. Content analysis is a research technique used to systematically and quantitatively transform communication content, in this case writings on landscape heritage, into data that can be summarised and compared (Weber (1990, p.9).

Content analysis can preserve the written word and deal with ideas and concepts, as well as words and phrases. It can manage the underlying or 'latent' meaning in the document, as well as the obvious or 'manifest' meaning. It can cope with blended 'latent' and 'manifest' meanings (Holsti, 1969, pp.12-14). It can maintain the written word while allowing some numerical comparisons to be made (Holst, 1969, pp.5-12). Specific design of the content analysis process can provide a research method that is reliable, repeatable, valid and useful. These issues are dealt with in detail in Holsti, 1969, Chapter 2, pp.24-41, & Chapter 6, pp.127-149; and Weber, Chapter 2, pp.15-40.

Content analysis of the statements of significance can extract the criteria required, and can cope with sites of varying sizes and levels of significance. An example of its use in the landscape field is the work of Barrios et al. (1985, pp.2-8). Content analysis therefore appeared to be a very useful and defensible tool for investigating the statements of significance.
Appendix 4: HERITAGE ORGANISATIONS IN AUSTRALIA & THEIR CRITERIA FOR EVALUATING LANDSCAPE HERITAGE

The following framework was used when investigating organisations (via focussed interviews with staff), and analysing documents relating to criteria for evaluating landscapes as heritage. A common framework of questions was used to keep information in a comparable format. Particular emphasis was placed on whether the organisations had statements of significance. The questions asked are listed below. Immediately after each question the rationale for asking it is given in italics.

A4.1 Questions and rationale
1. Full name/details of organisation.
   Administration/tracking information.

2. Name/position of respondent.
   Administration/tracking information.

   To establish credibility and experience in dealing with landscapes.

4. Do you have 'statements of significance' or 'listings'? (those without were not pursued, although general information and perspective was gained and used in developing the theory outlined in Chapters 2 and 3). Name of 'listing', e.g 'statement of significance','citation', 'listing' etc.
   To decide whether the organisation was suitable for statement of significance analysis, and to determine their terminology with respect to listings.

5. Are landscape listings separate from other listings? Are they accessible?
   To determine whether statements of significance could be systematically and reliably sampled. This generally meant that the landscape listings needed to be able to be separated from other types of listings, such as buildings, either by the data being on computer or in...
separate landscape registers. This was important, as data is held in different states and required a visit of one or two days to sample, even when accessible.

6. Do you deal with all types of landscape heritage? If not, with which do you work? In particular ask about cultural landscapes, Aboriginal landscapes.

To identify any known bias in the organisation's sampling and recording techniques. This is particularly important with Aboriginal landscapes as some organisations may steer away from dealing with them as classification may be felt to encourage land rights disputes and because there may be a reticence in attempting to understand cultures outside the Western tradition.

7. Do you have criteria for evaluating landscape heritage? Overall criteria? Criteria specific to landscape type? Get copy!!

To establish the values and criteria upon which the organisation, in theory, evaluates landscape as heritage. To establish if these criteria are general or specific, firstly to landscape, and secondly to a particular type of landscape. To get personal explanations and copies of any relevant documents relating to values and criteria.

8. Do you own any heritage landscapes? If so, do they have studies or masterplans attached?

When organisations own and manage heritage landscapes they frequently study and understand them in detail, determining carefully the reasons for retaining them. This assists their assessment of landscape as heritage in general. It also assists in understanding the portfolio of the organisation.

9. Do you work on or carry out studies on properties you do not own?

Organisations may gain the additional perspective highlighted in Question 8, even if they do not own properties. This also assists in understanding the portfolio of the organisation.

10. Do you covenant land for conservation? If so, how does this work?

Covenanting is an agreement between owner and organisation to maintain heritage value. Covenanting requires assessment of
heritage value. In undertaking covenants, organisations develop criteria for establishing heritage value.

11. What other major landscape heritage organisations do you know of in your state? To identify any organisations not previously known about.

12. Special issues and general comments, e.g. brief synopsis of focus and cover, identification of special issues such as Aboriginal landscapes, bush regeneration, treatment of geological sites or individual trees. To pick up particular emphases of organisations and any issues they either deal with very well or with which they have difficulty.

A4.2 Summary of focussed interviews and investigation of the organisation's documents regarding criteria for assessing landscape as heritage

The organisations are dealt with, firstly by state or territory, then at the federal or national level.

States and territories
A4.2.1 Northern Territory
The main (some would say only) heritage organisation in the Northern Territory is the National Trust.

1. National Trust of Australia (N. T.)
G.P.O. Box 3520 Ph. (089) 81 2848
Darwin April, 1991
Northern Territory, 0801

2. Director: Mrs. Penny Cook

3. The National Trust of Australia (N.T.) is a voluntary organisation incorporated by an Act of Parliament in 1976, to maintain heritage buildings, landscapes and sites. It owns and manages a number of places, mostly buildings, across the Territory, an area of about one fifth
of Australia. There are six branches across the Territory, supported by a small administrative and volunteer staff. Landscape is dealt with by staff and expert committees as part of the Trust's overall responsibilities for all types of heritage in the Territory. The Director is closely in touch with the landscape work.

4. Have 'listings', also called 'statements of significance'.

5. Landscape listings are accessible and can be separated from other listings. The register operates as a single register, whereas most other states have separate registers for buildings and landscapes. Listings are prepared by expert committees within the National Trust of the Northern Territory, including the Natural Heritage Committee and the Cultural Heritage Committee. The landscape listings were separated out from other types of listings by the Director for use in this study.

6. Deals with all types of landscape heritage, including historic sites, gardens, Aboriginal and natural landscapes; therefore has a representative portfolio.

Because Darwin only had 'Scheme Water' (reticulated water) from the 1940s, it may seem that the gardens on the Register are relatively late developments compared with those in other states - for instance, the gardens of Giese House (from 1954), part of the complex at Myilly Point, and that of Admiralty House (garden developed from the early 1950s). Prior to the late 1940s, water was seasonally a very scarce resource. This led to gardens frequently being a banana palm or some similarly hardy plant being planted in a cut-down 44 gallon drum. Gardens on the Register are frequently attached to buildings and not necessarily listed separately.

Aboriginal landscapes are well understood, as the Territory has a large indigenous population and culture. Industrial landscapes may need further work, and cultural landscapes take on a different form in the Territory, as they are less like the settled landscapes of southern Australia and are more likely to be huge cattle stations. Distances are large and settlements sparse in much of the Territory, so a cultural landscape may be a few buildings on a relatively flat red plain.
7. General criteria for assessing all types of heritage places have been adopted, and there are none specific to landscape type. There is a standard Assessment Form on which basic information regarding name, location, area, owner, use, condition, description and Statement of Significance are recorded. A list of criteria is also provided and those relevant to the particular place being assessed are circled. The list is as follows:

1. presence of endangered species (specify on form)
2. scientific importance
3. educational importance
4. social importance
5. aesthetic importance
6. historic importance
7. recreational and tourist importance
8. diversity of species and/or communities
9. 'naturalness'
10. rarity
11. fragility
12. 'representativeness'
13. position in an ecological/geographic unit

8. The National Trust of Australia (N.T.) owns and manages a number of places across the Territory, mostly buildings.

9. Studies could be carried out on properties not owned, depending on the case in question.

10. No mention was made of covenanting.

11. Apart from the national listings for heritage provided by the Australian Heritage Commission (sampled separately), it appears that the only listings for the Territory are provided by the National Trust of Australia (N.T.) Register. The Federal National Parks Act deals with landscapes in the Territory but does not have listings. The presence of large World Heritage Sites explains the closer involvement of Federal agencies such as the National Parks Service. The Conservation Commission, with a head office in Darwin and a large regional office in
Alice Springs, protects large areas of natural bush. It has a list of places but no statements of significance. A heritage Act which would eventually incorporate a listing process was proposed at the time of sampling (April 1991) but has not yet prepared listings. The National Trust of Australia (N.T.) forwards nominations to the Australian Heritage Commission.

12. The National Trust of Australia (N.T.) has a strong focus on Aboriginal and natural landscapes, listing in an integrated manner places of Aboriginal natural and historical significance. Natural landscapes are also well documented, but gardens and cultural landscapes are less well addressed, for the reasons given above. Landscape work in the Northern Territory requires a new interpretation of the term 'cultural landscape', as this may be as simple as a flat plain with a few buildings.

The Director of the Trust in the Northern Territory regards the level of their landscape work at the present as being relatively unsophisticated. Bearing in mind the brief history of the Trust in the Territory (1976), the huge distances involved, and the small number of professional staff and volunteers available, this is not surprising. What we are in fact, seeing, are exciting pioneering days in an organisation dealing with unusual and spectacular heritage landscapes. This organisation is suitable for a detailed listings analysis. 100% of landscape statements of significance were sampled for the next stage of the study.

A4.2.2 Western Australia

Western Australia, a state covering nearly half the continent of Australia and ranging from the tropics to the southern coast, has had very little protection for its landscape heritage. The National Trust is the major organisation dealing with all types of heritage places in Western Australia. It is the only organisation with statements of significance.

1. The National Trust of Australia (Western Australia)
The Old Observatory Ph. (09) 321 6088
4 Havelock Street Fax. (09) 324 1571
West Perth, Western Australia, 6005 February 25, 1991
2. Chief Executive Officer: Mr. Tom Perrigo  
   Coordinator - Heritage Conservation: Martin Gibbs

3. The Chief Executive Officer has an overall responsibility for heritage, including landscape, and the Coordinator - Heritage Conservation deals with the detail of assessing landscapes in conjunction with expert committees.

4. The National Trust (W.A.) has listings, called 'statements of significance' or 'citations'.

5. Landscapes are listed on a separate register to buildings, called the Register of Classified and Recorded Landscapes (National Trust of Australia (W.A.), 1990). Both the register and the individual statements of significance were made freely available for this study and were photocopied for detailed analysis. Two levels of identification of heritage landscapes are recognised. The more important are 'classified', and those of lesser significance are 'recorded'. By far the bulk of the entries are 'classified', those that are 'recorded' being all individual trees and therefore not the subject of this work. After 1979, 'recorded' was dropped and only 'classified' was used.

6. The Trust deals with all types of landscapes except Aboriginal landscapes. In Western Australia this is a sensitive issue and is not handled by the Trust because of land rights issues and Acts of Parliament dealing specifically with Aboriginal matters. The National Trust of Australia (W.A.) carries out its classification work via expert committees, including the Landscape and Conservation Committee, which deals with landscapes and areas of natural significance. Until recently there was a Historic Gardens 'committee', consisting of one person; however this has now been disbanded. Historic garden classifications are included in the Trust's Register of Classified and Recorded Landscapes.

The Trust has attached certain geological monument citations to the landscape register. These have a purely geological basis, are assessed on their mineralogical and scientific interest, and have no landscape or
visual component. These geological monuments have been omitted from the sample taken for this study as they are represented as scientific phenomena and not as landscapes. Other landscapes which have primarily a geological bias have a different style of statement of significance, and have been included in the sample. This anomaly is an issue only in W.A.

7. Landscapes have their own criteria. In fact they have two sets of criteria, those known as the 'Old Code' and those known as the 'New Code', there being representatives of both in the Register with a gradual transition to the new code being implemented. The Built Environment has similar criteria with a more architectural bias.

<table>
<thead>
<tr>
<th>Old Code</th>
<th>New Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. environmental importance</td>
<td>0. presence of endangered species</td>
</tr>
<tr>
<td>2. social/community asset</td>
<td>1. scientific importance</td>
</tr>
<tr>
<td>3. historical significance</td>
<td>2. educational importance</td>
</tr>
<tr>
<td>4. associations: prominent events, persons, eras</td>
<td>3. social importance</td>
</tr>
<tr>
<td>5. scientific importance</td>
<td>4. aesthetic importance</td>
</tr>
<tr>
<td>6. archaeological importance</td>
<td>5. historic importance</td>
</tr>
<tr>
<td></td>
<td>6. recreational &amp; tourist importance</td>
</tr>
<tr>
<td></td>
<td>7. diversity of species/communities</td>
</tr>
<tr>
<td></td>
<td>8. 'naturalness'</td>
</tr>
<tr>
<td></td>
<td>9. rarity</td>
</tr>
<tr>
<td></td>
<td>10. fragility</td>
</tr>
<tr>
<td></td>
<td>11. (absent)</td>
</tr>
<tr>
<td></td>
<td>12. position in ecological/geographic unit</td>
</tr>
</tbody>
</table>

Note that the new code is identical to criteria adopted by the Trust in the Northern Territory, and that on this basis the absence of number 11 is probably a typographical error and the list may include 'representative'. Note also that archaeological importance is being dropped.

8. The Trust owns a number of properties which include landscapes or landscape elements. Conservation plans for individual properties owned by the Trust have been instigated. However, to date there is
only one landscape conservation plan - for Tranby House grounds, Maylands Peninsula (Richards & Richards, 1990). Other Trust properties, while recognised and managed for their landscape heritage value, have not yet been fully documented with respect to landscape.

9. Good general landscape studies have been carried out on places not owned by the Trust, notably Gardens and Trees in the Kimberley, Western Australia (Richards & Richards, 1983) and The National Trust of Australia (W.A.) Historic Gardens Study (Richards & Richards, 1980). Gardens and landscapes identified in these studies as significant have been classified and incorporated in the register.

10. Over 30 properties have been covenanted for historical reasons. There are some difficulties with certain covenants, as they were done before sufficient research had been carried out. They are usually houses with surrounding gardens and grounds.

11. Provisions of the Australian Heritage Commission Act 1975 apply to places on the Register of the National Estate, as they do to all states. Most of the National Estate listings for W.A. have come from the National Trust in W.A., and are a result of their close cooperation with the Australian Heritage Commission.

In Western Australia, three government departments deal with landscapes from different perspectives. The Department of Conservation and Land Management (CALM) administers state parks and deals with state forests and forest products. They have no mechanism for assessing or protecting the heritage value of landscapes. The Environment Protection Authority deals with monitoring air and water quality and carries out environmental assessments for proposed developments, but otherwise has little to do with land management and is not involved with heritage landscapes. There is also legislation to deal with Aboriginal lands and protection of aboriginal sites, but much of this focusses on discussion of ownership and management, and the rights of Aboriginal communities. No summary statements of significance are held by government departments in W.A. for landscapes, and landscape heritage is not addressed in any comprehensive way within the statutory framework of the state.
In 1991 a heritage bill was passed in the State Parliament of W. A. which has been primarily designed to protect the built environment of the State. It does not deal with landscapes or natural areas, having no landscape component. It contains the requirement to set up a register but this is for buildings only, and does not address landscapes of any type. The Minister for Heritage has expressed concern that landscapes were not included in the legislation.

12. The Trust’s Register of Classified and Recorded Landscapes is the key document for heritage landscapes in Western Australia. It covers a wide range of landscape types but excludes Aboriginal landscapes. Some of these are picked up in the sample from the Australian Heritage Commission. Geological monuments provided an anomaly, as those described as scientific phenomenon were not included, while those described as landscapes were included. The trend now is to move towards broader regional landscape assessment, such as the Swan River Valley landscape, and to do less of the individual property citations. Note also that archaeological importance has been dropped as a criterion.

Documenting landscape heritage in Western Australia is a difficult task, given that the State covers nearly half the continent, is sparsely populated and huge distances must be contended with. The Trust has ably addressed that task. 100% of the classified landscape citations, excluding the 'scientific phenomenon' geological listings and individual trees, were sampled for the next stage of the study, bearing in mind that the sample contained no Aboriginal landscapes.

A4.2.3 Queensland

The National Trust of Queensland is the major heritage organisation in that state. Although Government is making an effort to come to terms with landscape heritage, it does not yet have a comprehensive register of heritage places, particularly landscapes.
2. Director: Leon Misfield. Listings Secretary: Maureen Guyomar: Responsible for the National Trust List, including landscape entries.

3. The National Trust of Queensland has been listing heritage places since 1965 in an area of land about one quarter of Australia. There is no specific focus on landscape and there is no landscape committee. A number of national parks are listed, as are a few gardens. A new project has been launched on city parks. Most gardens are listed as part of the house citation. They also have a Register of Significant Trees.

4. The Trust has 'listings' or 'citations'.

5. Landscape listings are not separated from all other types of listings. They are all included in a large manual filing system which takes up one large wall. To extract landscape entries would take weeks. Even then coverage within the state would be scant.

6. Coverage of the different types of landscape heritage appeared patchy.

7. Burra Charter criteria are used. In addition, The National Trust of Queensland has trialled a rapid selection and appraisal process for natural sites. Criteria used for their selection include biological, physical and environmental diversity, 'key and endangered areas', adequate size and shape for the maintenance of an adequate gene pool, and ecological sustainability.

8/9. Little detailed work has been done on individual landscapes.

10. No mention was made of covenanting.

11. The Department of Environment and Heritage in Queensland administers a heritage Act which deals only with buildings and has a
12. It was concluded that the data base could not be sampled for this study as it was patchy and sparse, and the task would prove to be extremely difficult, if not impossible.

A4.2.4 New South Wales
There are a number of organisations dealing with landscape heritage in New South Wales. These are discussed below.

Heritage Council of New South Wales
Department of Planning - Heritage Branch
175 Liverpool Street, Sydney, 2000 Ph. (02) 391 2000
April, 1991

2. Deputy Manager: Mark Robinson No landscape officer at present.

3. The Heritage Council of N.S.W. is a 12-member council which advises the Minister for Planning in N.S.W. It is serviced by the Heritage Branch of the Department of Planning, and the heritage work of the two organisations is interlinked. Natural and cultural landscapes are dealt with under the N.S.W. Heritage Act 1977, although there are relatively few landscapes protected, particularly cultural landscapes. Orders can be made to protect landscapes and only in this sense is there a listing process. This list is not published and there are no citations. The State Heritage Inventory Program (SHIP) will have criteria built into it when it is further developed. This will be accessible to the public but was still being prepared at the time of discussion. Some general draft criteria are available but these are being tested. Proposed criteria are: Historic, aesthetic, social, scientific, 'other', rare, representative and associative. Use of 'educational' was discussed, but apparently was not proceeded with. The Heritage System Review Discussion Paper (Department of Planning, p.17, 1992) confirms the SHIP criteria. In further documentation (Department of Planning (N.S.W.), 1990) other criteria are mentioned under the heading of 'investigating the range of heritage values'. These are 'historic, scientific, cultural, social, archaeological, architectural, aesthetic,
natural and Aboriginal significance'. There is no indication of how or whether these are used.

It was concluded that this organisation was unsuitable for sampling, as its criteria were not clear, it had no statements of significance, and any list that it has is not comprehensive, systematic or publicly available.

Historic Houses Trust
Premier's Department, N.S.W.
'Lindhurst'
61 Dargham Street, Glebe, N.S.W.
Ph. (02) 692 8366, (02) 223 8922 (Hyde Park Barracks)
April, 1991, plus subsequent contact.

2. Helen Temple

3. The Historic houses Trust deals with houses, and only with landscapes as they are relevant to the houses in question. It has seven houses and a total of eleven properties in its portfolio. These are important heritage places but do not represent landscape heritage in the state. The Trust is primarily concerned with architectural matters and is not suitable for sampling for this study.

National Parks and Wildlife Service, N.S.W.
43 Bridge Street, Hurstville Ph. (02) 585 6444
Janine Williams April, 1991.

The files of this organisation are not accessible. Even if they were, they have no statements of significance, no listing process and do not cover the spectrum of landscape heritage. Therefore this organisation is not suitable for sampling for this study.

The National Trust of Australia (N.S.W.)
Observatory Hill Ph. (02) 258 0123
Sydney, N.S.W., 2000 Fax. (02) 251 1110
Meeting held in April, 1991, plus subsequent contact.

2. Conservation Officer - Natural Environment: Graeme Quint

3. The National Trust of Australia (N.S.W.) was established in 1945, and incorporated by an Act of the New South Wales Parliament in 1960. It is the oldest Trust in Australia. It has a wide portfolio of interests, and deals with all types of landscape heritage, including Aboriginal landscapes. A landscape committee assesses landscapes for inclusion on the Register. Landscapes have been classified since the mid-1970s.

4. The Trust has 'listings, 'statements of significance' or 'citations' which are accessible.

5. These listings are compiled into a single Register, the details of which fill one very long wall of filing cabinets. Fortunately the Conservation Officer responsible for landscapes has extracted the landscape files from the system. The landscape list did not appear to cover gardens of rural properties, but the Conservation Officer - Built Environment, explained that these were attached to the buildings files, and he extracted a sample for use in this study.

6. The N.S.W. Trust deals with all types of landscapes, including Aboriginal landscapes, but has focussed on bushland and natural areas. The N.S.W. Trust arguably leads Australia in bushland regeneration and management work. This tends to leave cultural landscapes a little undervalued, particularly as N.S.W. is the heart of the European settlement of mainland Australia. Attempts to fill the gaps have been made by the commissioning of a Survey of Developed Urban Parks (included in the sample), and a study of remnant communities (also included in sample).

7. Criteria used by the Trust are those of the Australian Heritage Commission Act, 1975 (aesthetic, historic, scientific, social significance or other special value). To these have been added 'archaeological significance' and 'architectural significance' under the provisions of the N.S.W. Heritage Act, 1977. The Act goes on to say that more
precise categories of criteria may be developed, as understanding of a particular place increases, thus recognising the overly general nature of the criteria given. Kerr says that while these criteria are comprehensive, they are not helpful.

The categories are so interdependent and overlapping that they do not ordinarily provide a practical basis for the assessment of significance. They were a 'catch-all' included by the drafters of the acts to ensure that anything that might be considered significant to the National Estate could legally be included.

(Kerr, 1990, p.8)

Kerr (1990, p.8) indicates that additional criteria, such as 'ability to demonstrate', 'associational links' and 'formal or aesthetic qualities' can also be used to establish cultural significance.

The Landscape Assessment Manual of Practice (National Trust of Australia (N.S.W.), 1989, pp.9-13) expands the above criteria, under the heading 'Attributes of the landscape with possible heritage value'. Historic value has been subdivided into European historical values and Aboriginal historical values. Cultural values have been added as an interpretation of social value, and an explanation of aesthetic value has been provided.

The document Cemeteries: A National Trust Policy Paper (National Trust of Australia (N.S.W.), 1987, p.7) contains additional criteria for cemeteries only. These are 'artistic significance', 'religious significance', 'genealogical significance', 'creative/technological accomplishments', 'setting', 'landscape design', 'botanical' and 'representativeness'. In summary, criteria for assessing landscape heritage value are, according to the Conservation Officer, 'very fluid'.

8. The Trust in N.S.W. owns about 40 properties and has conservation studies to go with many of them.

9. Studies are carried out on many areas not owned by the Trust. In particular, many reports have been completed regarding management of areas of bushland. It has also carried out a number of tree studies which do not concern us here.
10. The Trust does not covenant properties except for their own at the point of disposal.

11. The Trust liaises closely with the Australian Heritage Commission and the other N.S.W. heritage organisations indicated above.

12. The National Trust of Australia (N.S.W.) has a broad and relatively representative collection of landscapes and is suitable for sampling statements of significance. It has focussed on bush regeneration and management, at which it excels. It has some gaps in cultural landscapes, particularly pioneer landscapes and those of early settlement. Aboriginal landscapes are dealt with, but are not a major focus. Cemeteries, urban landscapes and industrial sites are dealt with by committees other than the Landscape Committee, but samples of citations (statements of significance) were obtained. 100% of landscape citations, plus the additional relevant citations mentioned above, were sampled for the next stage of the study.

A4.2.5 Australian Capital Territory
The Australian Capital Territory has several organisations which deal with landscape heritage. As they are Canberra-based, they can call directly on the expertise and support of the Australian Heritage Commission. This facilitates their operations considerably.

The National Trust of Australia (A.C.T.)
P.O. Box 3173, Manuka
A.C.T. 2603 Ph. (062) 81 0711
Offices: 6 Giells Court April, 1991
Deakin, A.C.T.

   Project Officer: Danielle Heinz, who deals with landscape work.

3. The Trust in the A.C.T. deals with heritage places in the Australian Capital Territory, that is in and around Canberra.

4. As in other Trusts in Australia, this Trust has 'listings' or 'statements
of significance'.

5. There is one combined list of heritage places, the National Trust of Australia (A.C.T.) Register of Classified Places (National Trust of Australia (A.C.T.), 1982). As the list was not as long as those in other states, and as the filing system was accessible and the staff cooperative, it was possible to separate the landscape listings from other listings.

6. The A.C.T. Trust deals with all types of landscape heritage. These include Aboriginal, rural and cultural landscapes. They also list significant trees but these were not included here.

7. The A.C.T. Trust uses the Burra Charter criteria for assessing landscapes, that is aesthetic, historic, scientific and social value.

8. The A.C.T. Trust does not own any properties, neither do they manage any, as all land in the A.C.T. is leased from the Commonwealth Government.

9. They do some research work on properties, usually not to the detailed level required for management.

10. The A.C.T. Trust does not covenant properties, as all land is leased from the Commonwealth, and therefore this method for conservation is not applicable.

11. The Trust liaises closely with the Australian Heritage Commission which is based in Canberra, and with the A.C.T. Heritage Committee, which is closely linked to Government.

12. The National Trust of Australia (A.C.T.), while dealing with a much smaller area than all other Trusts, has a varied and balanced collection of heritage landscapes on its register. 100% of their landscape statements of significance were sampled for the next stage of the study.
The A.C.T. Heritage Committee

This committee advises government on heritage matters and liaises with the National Trust. The A.C.T. Trust mentioned its existence and provided a copy of its criteria, which apply to all types of heritage places. While there are 11 criteria listed, they are expressed in a relatively convoluted manner. They can be summarised as technical &/or creative achievement, symbol or focus of way of life, spiritual associations, educational significance, social significance, unique, rare, intact, representative, association with important people, events or culture, important natural or cultural landscape, important habitat and scientific significance. These criteria are confusing and difficult to use, with many different aspects mixed together under the one heading. Nevertheless it is possible to pick out a few criteria not often mentioned by other organisations, notably symbolic and spiritual significance, including religious significance. The A.C.T. Heritage Committee is not suitable for further sampling, as it does not have appropriate listing processes.

A4.2.6 Victoria

There are a number of organisations dealing with landscape heritage in Victoria. The Heritage Services Branch of the Department of Aboriginal Affairs deals with Aboriginal archaeological sites but does not deal with landscapes as such. The Land Conservation Council is a statutory organisation dealing with allocation and use of public land in Victoria in the best interest and needs of the people of Victoria. It deals with the planning and management of natural landscapes, wilderness areas, forests, national parks and the like, and allocates land for activities such as conservation, recreation, water supply and forest production. It does not address landscape heritage as such. Similarly the Department of Conservation and Natural Resources deals with the planning and management of natural landscapes in the public domain. It also has a small Historic Places Branch to plan and manage historic sites on land owned by, or administered by the Government. These organisations do not fit the purpose of this study as they have no comprehensive listing mechanisms and do not deal with the full range of landscape heritage. Local government organisations also deal with heritage, but not in a sufficiently broad manner to be useful here. They liaise closely with, and are advised by, the Department of Planning and Developement.
There have also been several attempts to address criteria from a theoretical standpoint. This applies particularly to garden assessment, and the work of Murphy (1986) should be noted. Murphy suggested a set of criteria for assessing historic gardens, based on the work of Watts (1980, 1983) and the Countryside Commission for Scotland (1983). Murphy used the Burra Charter's basic criteria (aesthetic, historic, scientific and social) and then added subsets to these. Her criteria were proposals only, and were never tested by any organisation. The following organisations are closely concerned with landscape heritage in Victoria:

Department of Planning and Development (since late 1992, formerly the Ministry for Planning and Environment and the Department of Planning and Housing)
Heritage Branch
Olderfleet Buildings Ph: 628 5466
470 Collins Street, Melbourne, 3000

2. Senior Historian: Mary Sheehan

3. The Heritage Branch of the Department of Planning and Development is the major State Government agency dealing with Victoria's post-contact heritage. In Victoria there is a close relationship between planning and heritage management via the Planning and Environment Act 1987, which is the legislative basis for all the planning schemes in Victoria. The Heritage Branch assists government departments, local councils and the broader community to deal with heritage issues within the planning framework. It administers several heritage programs, notably the Historic Towns Program, the Central Goldfields Restoration Fund, and the Historic Gardens Conservation Fund. The Heritage Branch provides administrative support and expert advice to the Historic Buildings Council, and their offices are situated in the same building.

The 1984 discussion paper on the Victoria Heritage Plan (Ministry for Planning and Environment, 1984) expanded on the National Estate criteria, that is, 'aesthetic, scientific, historic, social significance or other special value for future generations as well as for the present
community' (Section 4(1) of the Australian Heritage Commission Act 1975) to include Aboriginal sacred and traditional sites, including archaeological relics, and to specify 'historic' as including sites of significant historical activities or events. They also mentioned the use of typologies, that is, classifying places into types, so that like can be compared with like, and the development of themes.

The Ministry commissioned a cemeteries study, prepared by L.P. Planning (undated), at about this time. This does not specify criteria for assessing landscape heritage value, but does define themes for cemeteries in Victoria. The Ministry also published a document on historic gardens, (Looker & Patrick, 1987) which describes ways of understanding and looking after historic gardens, but which does not say on what basis they are recognised, that is, what criteria are used to decide if a garden is historic. Following the booklet on historic gardens, the Heritage Branch published an inventory of Victorian gardens. This mentions that the 'heritage value of a garden or park is not simple, but usually includes consideration of the age of the garden, the type of plants in cultivation, its design and layout of plantings, the arrangement and intactness of garden features' (Johnston, 1988, p.6). It goes on to say:

Gardens may be valued as outstanding or as representative (or typical) examples of a garden type, designer, style, plant collection, and may also have important historical associations with individuals and communities.

(Johnston, 1988, p.6).

This study is very much an inventory, and does not attempt to go into criteria for selection in detail. Rather it concentrates on establishing a typology of gardens in Victoria, based on function, size and location. While very useful for setting up comparisons of like with like, it does not tell us the basis for the comparison.

In a more general approach to evaluating heritage places, the Department of Planning and Housing developed Local Government Heritage Guidelines (1991). This addresses regional heritage studies and therefore covers all types of places, including landscapes. Reasons for valuing heritage places are clearly stated under the main headings.
of aesthetic, historic, scientific, social and architectural significance. They do not attempt to deal with natural significance. They are listed below:

Aesthetic value - Aesthetic value takes into account the community's perception of the form, scale, colour, texture and material, smells and sounds of a place and its use. Places of aesthetic value would:

- demonstrate a high degree of creative or technical accomplishment;
- demonstrate important design or visual qualities.

Historic value - Historic value encompasses the history of aesthetics, science and society and to a large extent underlies all of the other values set out in this section. A place may have historic value because:

- it is important for its association with events, developments or cultural phases which have had a significant role in the occupation and evolution of the community;
- it illustrates part of the evolution or pattern of the cultural heritage;
- it is an example of rare, endangered or uncommon aspects of the cultural heritage;
- it has a strong association with the life or work of a person or group of people of significance to the cultural heritage;
- it is an important representative of the range of places which make up the cultural heritage of a community;
- it has been influenced by an historic figure, event, phase or activity;
- it may have historic value as the site of an important event.

Scientific value - Scientific value relates to the importance of a place to yield information that will contribute to an understanding of our cultural history. A place may have scientific value because:

- it illustrates some technological, creative, technical or scientific processes or advances;
- it is of importance for information contributing to an understanding of the history of human occupation and the cultural history of an area.

Social value - Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group. A place may have social value because:
• it is highly valued by a community for reasons of religious, spiritual, cultural, educational or social associations;
• it is recognised by the community as having public value or is held in high esteem for its associations with the whole or part of the community whose history or culture is interwoven with the history of the place;
• it forms a particular and significant component of the heritage of a local area;
• it demonstrates a distinctive way of life or custom that is no longer in use or is in danger of being lost or is of exceptional interest.

Architectural value - Architectural value relates to particular stylistic innovations or innovations of construction details or materials present in a building. A place may have architectural value because:

• it represents a particular stylistic or design innovation;
• it is extremely old or rare, or represents a style of building that was characteristic of a specific area;
• it was designed or built by a noted architect or builder;
• it utilises materials in a rare or unusual manner.

(Department of Planning and Housing, 1991, pp.4-6)

In addition to criteria, the Local Government Heritage Guidelines contains a copy of the Burra Charter and Guidelines. This is one of the few places where these documents are easily accessible.

Evolving from the criteria developed by the Heritage Branch are those being used for a heritage study of the Macedon Ranges. This work is not yet complete, but criteria for assessing landscape heritage have been developed by the consultants in conjunction with the steering committee. Members of the steering committee include local representatives, the Senior Historian from the Heritage Branch, and a representative of The University of Melbourne (this researcher). An approach combining the use of themes and criteria has been taken, the themes representing aspects of historical evolution of the region and the criteria representing values attached to aspects of the themes. Therefore, for each theme, certain criteria may apply. Papers relating to this material are held at the Shire of Gisborne Offices and in the private collection of the author.
Macedon Ranges Cultural Heritage and Landscape Study.

Themes:
1. Culture/Contact
2. Pastoral/Agricultural
3. Transport/Travel
4. Towns/Hamlets
5. Forests/Forest industry
6. Tourism/Retreats
7. Gardens/public/private

Criteria:
1. Antiquity or relative age for type/area
2. Interpretive elements, integrity, existence of documentation of site
3. Integrity
4. Context
5. Representation of persons, events, life patterns
6. Rarity
7. Landmark quality
8. Community identification
9. Technical accomplishment
10. Aesthetic recognition/quality
11. Architectural interest, quality
12. Scientific contribution, natural sciences
13. Habitat quality
14. Historical milestone

These themes and criteria, while still evolving, offer a very practical and useful set for assessing all types of landscape heritage but have a bias towards cultural landscapes, as this is the emphasis of the Macedon study. This will be an important study, as new approaches to assessing the landscape heritage of regional areas are being trialled.

The Heritage Branch maintains files on many heritage places, assists others in carrying out heritage studies and has a clear and relatively detailed set of criteria for places of cultural significance. It does not have a systematic register or listing of heritage landscapes, and therefore cannot be sampled further for this study.

Historic Buildings Council
Olderfleet Buildings
470 Collins Street, Melbourne, 3000
Ph: 628 5466

2. Director: Ray Tonkin
3. The Historic Buildings Council was established as a statutory
authoritory in 1974, when it was known as the Historic Buildings
Preservation Council. The Council operates under the provision of the
*Historic Buildings Act 1981*, and is concerned with preserving
architecturally or historically significant buildings and structures. It
operates a register of historic buildings. The only factors considered in
listing a building are its architectural and historical importance. The
Council has a number of criteria for assessing architectural and
historical importance which are similar to those developed in the
*Local Government Heritage Guidelines* but which are specific to
buildings. There has been pressure in recent times to amend the Act to
include protection of cultural areas and significant precincts. However
at this time the Council does not deal with landscapes, although there
are several on the register as settings for buildings. The Historic
Buildings Council it therefore unsuitable for further sampling.

**Victorian Conservation Trust**

49 Spring Street Ph: 651 4040
Melbourne, Vic., 3000

2. Director: Warwick Forge
   Covenants Manager: Rod Safstrom; Trustee: Jan Schapper

3. The Victorian Conservation Trust was set up by the *Victoria
Conservation Trust Act 1972*, to conserve the natural heritage of
Victoria. It is empowered to accept gifts and bequests and to hold and
manage land or monies in trust for conservation purposes. The Trust
has the power to covenant land to preserve its conservation value. A
covenant is an agreement between a landholder and the Trust to
protect the land and its natural values. The Victorian Conservation
Trust has developed detailed criteria for assessment of the
conservation value of land (Schapper and Safstrom, 1992). The V.C.T.
holds detailed records of each property covenanted but does not have
summary statements of significance; rather it has detailed assessment
reports. While the criteria are useful for evaluating natural landscapes,
the organisation is not suitable for further sampling and analysis, as
there are no summary statements of significance.
National Trust of Australia (Victoria)
Tasma Terrace
4 Parliament Place
East Melbourne, Vic., 3002

Ph: 654 4711

2. Chairman: Simon Molesworth
General Manager: Peter Sweeney
Landscape Project Officer: Richard Aitken

3. The National Trust of Australia (Victoria) was incorporated as a company in 1956, and started landscape work in the 1970s. It is an independent organisation which owns and manages heritage properties of all kinds, and seeks to educate the community on heritage issues. It has been extremely successful and influential in heritage matters in Victoria. It has a number of expert committees, including buildings, landscape, gardens, industrial history, urban conservation (in recess) and significant trees, among others.

4. The Trust in Victoria has listings, known as 'statements of significance' or 'citations'.

5. Landscapes are listed on the Register of Classified and Recorded Landscapes of the National Trust of Australia (Victoria). This is separate from the buildings register, and both the register and the citations are accessible. An illustrated version of the Trust register was published in 1985 (National Trust of Australia (Victoria), 1985).

6. The Trust deals with all types of landscape heritage but does not have many Aboriginal landscapes on its list. It has been increasingly dealing with larger and more complex regional landscapes, where there are different types of landscape elements within a large area. It has also been successfully working in bushland regeneration through a scheme known as 'Save the Bush'.

7. In general terms, the Trust's criteria for evaluating all types of heritage, including landscapes, are based on the Burra Charter, that is, aesthetic, historic, scientific and social value. However, there are a number of
more detailed documents relating to different types of heritage. These are discussed below.

The Trust in Victoria was one of the first heritage organisations to take on a diverse portfolio of landscape work, and it has influenced the development of both State Government and the Australian Heritage Commission approaches to landscape heritage. Early work of the Landscape Committee of the Trust in Victoria focussed primarily on natural landscapes and scenic quality on the one hand, and historic gardens on the other.

In 1980 the *Historic Gardens Study* (Watts, 1980) was completed for the Trust and the Garden State Committee of Victoria. This was subsequently expanded into the book *Historic Gardens of Victoria: A Reconnaissance* (Watts, 1983). Watts devised a set of eight criteria, of which the first four were graded using numerical scores.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Numerical score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original form:</td>
<td></td>
</tr>
<tr>
<td>Intact</td>
<td>4</td>
</tr>
<tr>
<td>Substantially intact</td>
<td>3</td>
</tr>
<tr>
<td>Recognizable</td>
<td>2</td>
</tr>
<tr>
<td>Recognizable with minor alterations</td>
<td>1</td>
</tr>
</tbody>
</table>

| Original planting:                      |                 |
| Characteristic                          | 4               |
| Substantially characteristic            | 3               |
| Recognizable period or designer         | 2               |
| Recognizable but in poor condition      | 1               |

Atmosphere: This was a matter of the garden's general design, relationship with buildings, setting etc.; a degree of emotional response was allowed for here.

<table>
<thead>
<tr>
<th>Condition</th>
<th></th>
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<tbody>
<tr>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>Fair</td>
<td>2</td>
</tr>
<tr>
<td>Retrievable</td>
<td>1</td>
</tr>
</tbody>
</table>
This gave a total out of 16. A further mark was given for each of the following points of interest:

- The garden was planned by a notable designer
- It was representative of a characteristic style
- It contained an outstanding plant collection
- It was associated with an important historic building

(Watts, 1983, p16)

Note that Watts is ascribing numerical value with little justification or background work, that he is considering only historic gardens, and that his method of scoring produces what is essentially an inventory.

The Landscape Committee of the Trust has also carried out work on regional landscapes, such as the Landscape Resources: Upper Yarra Valley and Dandenong Ranges study (1982). This lists the criteria of cultural, scientific and aesthetic value as comprising landscape heritage. At the same time as this work was proceeding, policy and principles for the operation of the landscape committee were being formalised in the Landscape Committee Procedural Manual, Volumes 1 and 2 (1982). In this document, the criteria mentioned in the study cited above were expanded. The Landscape Committee has not claimed that these criteria are comprehensive.

The following features may be described: visual quality, scientific interest and cultural interest (inc. historical, educational and recreational etc.).

Some examples of the matters that could be included are listed below:

Landscape character and visual quality:
- Landform - slope/relative relief, spatial diversity, contrast etc.
- Land cover - land-use compatibility, naturalness, variety, contrast etc.
- Features - panoramic vistas, ephemeral effects.

Scientific interest:
- rarity/uniqueness
- integrity
- diversity of species and/or communities.
- presence of endangered species and/or communities.

Cultural interest:
- historical aspects
- educational aspects
Comparison with other representative examples of landscapes of a similar character may also be appropriate.

(National Trust of Australia (Victoria), Landscape Committee, 1982, Vol 2, Appendix 6, Format for landscape citations)

In 1987 the Victorian Trust published *Assessing Gardens: Review and Recommendations on Methods of Assessing the Cultural Significance of Gardens* (Johnston, 1987). In this publication, very detailed subsets of the basic criteria aesthetic, historic, scientific and social were developed. To these were added 'romantic' (Johnston, 1987, pp.65-67). As they cover several pages and are not considered to be seminal, they are not reproduced here; it will suffice to indicate an example of the type of confusion they incorporate. For instance, under 'Historic' - 'places which are important representatives of the range of Australia’s natural, prehistoric and historic places' (Johnston, 1987, p.66). These criteria are very detailed and yet jump across natural and cultural values, so that they become confusing and it is difficult to use them. In this they presage some of the difficulties and confusions of the criteria of the Australian Heritage Commission. Along with work on assessment, an inventory system and typology for gardens similar to that of Watts (1983) was developed by the Trust.

In recent work on cultural landscapes, the Trust has carried out a regional study of the cultural landscape of the Castlemaine-Chewton Goldfields, using as a basis the *Burra Charter* criteria (McCann, 1990). This study demonstrates the trend to regional assessments.

The Trust has also issued a book, the *National Trust Research Manual* (Sagazio, 1992) which indicates how to go about researching heritage places, but does not indicate why one might consider a place worthy of research.

8. The Trust owns about 60 heritage properties, many of which have landscape elements. Many of these properties have conservation studies attached.
9. The National Trust of Australia (Vic.) will, when appropriate, carry out studies on properties it does not own.

10. The Trust has covenanted several properties, usually at the point of disposal.

11. The Trust liaises closely with other heritage organisations, including the Australian Heritage Commission.

12. From the above material, it can be seen that the National Trust of Australia (Victoria) has been very active in landscape heritage over the last decade or so. It has listings on an accessible register, and is very suitable for further sampling. 100% of its landscape citations were sampled for the next stage of the study.

A4.2.7 South Australia
While it was not possible to study organisations in South Australia, as travel to Adelaide was beyond the budget of the study, some information about criteria used for assessing historic gardens was available. Whitehill, (1986, p.19) in a survey on historic gardens, used the criteria aesthetic, historic, scientific and 'romantic'. 'Romantic' includes sentiment in all its forms (Whitehill, 1986, p.19).

A4.2.8 Tasmania
It was not possible to study heritage organisations in Tasmania as travel to Hobart was beyond the budget of the study. While recognising the important comparative work of Russell (1988), which has been used in Chapter 3, and case studies, such as work on the Tasman Peninsula, heritage organisations in this state were not studied further because of practical limitations.
A4.2.9 National Heritage Organisations and listings

There are several major organisations which deal with landscape heritage at the federal level. These are the Australian Heritage Commission, the Australian Council of National Trusts, and the Australian Garden History Society. Certain government departments have responsibility for managing various types of landscape heritage, but heritage is not their primary concern. They do not have listings or registers and must refer all heritage matters to the Australian Heritage Commission. The Australian Committee of the International Council on Monuments and Sites (ICOMOS) deals with the theory of conservation and has developed the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)* (Australia ICOMOS, 1988a), which is discussed in detail in Sub-section 2.5.3. However Australia ICOMOS does not deal with specific heritage places except as they assist in developing principles and theory.

In addition to federal heritage organisations, there are two groups of organisations which have not yet been addressed. At the highest level of recognition of heritage places are the World Heritage Sites which will be dealt with following the section on the Australian Heritage Commission. At the most local level is local government and its diverse means of dealing with heritage. As the local government heritage measures are diverse, relatively unsystematic and rarely involved listings, they were not pursued for the present work.

Australian Garden History Society

The Australian Garden History Society has prepared a list of historic gardens on a national basis. This commenced with the publishing of the *Preliminary Nominations for Inclusion on the List of Significant Historic Gardens* (Australian Garden History Society, 1986, pp.7-8). In a letter briefing the consultant, the Convenor of the study, Peter Watts, says:

I am loathe to set down very rigid criteria for inclusion on a list... I am tempted to almost adopt the Australian Heritage Commission's definition of the National Estate i.e. 'things we want to keep'.
Instead of criteria I suggest that in compiling your list you consider the following:

- and he goes on to list (in summary), gardens must be obviously important and not marginal, use expert opinion to establish significance, eliminate notions of beauty and 'good taste', most will be 30-50 years old.

In addition to the list, the A.G.H.S. has prepared *Historic Gardens in Australia: Guidelines for the preparation of conservation plans* (1983, p.3). This uses the *Burra Charter* criteria of aesthetic, historic, scientific and social. The list format uses a typology, and has a section called 'brief reason why you consider garden is significant'. The list was not used for further sampling as there were no definite criteria in place in the organisation, the listing was of unratified nominations going forward to the Society, it did not appear that the list had been kept up-to-date, and most importantly, it dealt only with gardens and not a full range of landscape heritage.

**Australian Council of National Trusts**

P.O. Box 1002, Civic Square
Canberra, A.C.T., 2601
Offices: Suite GF6, National Association Centre
71 Constitution Avenue, Campbell, A.C.T.
April, 1991

2. General Secretary: Duncan Marshall

3. The Australian Council of National Trusts is a federation of the National Trust organisations in each state. As such, it is an administrative organisation and does not deal with detail such as Registers, which are dealt with at the state level. This organisation coordinates Trust activity and offers support to each state, but has no material suitable for sampling for the present study.

**Australian Heritage Commission**

G.P.O. Box 1567
Canberra, A.C.T. 2601
2. Director: Sharon Sullivan  
   Staff dealing with landscape: Mike O'Brien, Sandy Blair, Juliet Ramsay  
   (among others).

3. The Australian Heritage Commission is the Federal statutory authority responsible for heritage places in Australia. Its task is to help all Australians appreciate and care for the National Estate (see Sub-section 2.5.3 for detail on the A.H.C.). The Commission identifies the National Estate and advises the Commonwealth Government on how to protect it. It compiles and maintains a Register of the National Estate, advises the Commonwealth Minister responsible for the environment on all matters pertaining to the National Estate, advises on the impacts of Commonwealth Government proposals on the National Estate, develops policies and programs for information, education, professional training and research, and coordinates the National Estate Grants Program. Its budget in 1992/93 is $13.43 million (Australian Heritage Commission, May 1991, pp.2-12, Australian Heritage Commission, September 1992, p.1).

   The A.H.C. has a Chairman and up to six Commissioners. It is supported by a technical, administrative and information/education staff located in Canberra, led by a Director.

4. The A.H.C. compiles and maintains the Register of the National Estate. This is computer-based, has approximately 18,000 entries, about 10,000 of which are 'registered', that is, accepted as being on the Register of the National Estate. Summary 'statements of significance' or 'listings' are available for each registered place.

5. Landscape listings are not separate from other listings but are accessible using appropriate codes, if one can access the mainframe computer. If this can be done, printouts of summary statements can be obtained with the cooperation of the staff.
6. The A.H.C. deals with all types of heritage places, including all types of landscape heritage.

7. The A.H.C. has detailed criteria at several levels. Firstly, built into the Act, are the criteria 'aesthetic, scientific, historic, social significance or other special value for future generations as well as for the present community' (Australian Heritage Commission Act 1975, Section 4(1)).

The Commission carried out major revisions of the criteria in 1985 and in 1988, identifying main themes and sub-themes... Further minor changes were made in 1989 following a review of the Commission, which resulted in a decision to list the main theme criteria in the Australian Heritage Commission Act. This resulted in a re-ordering and slight re-wording of the 1988 criteria, rather than a major change. The Act has now been amended to include these.

(Australian Heritage Commission, April 1990a)

These criteria have subsets which in turn have un-numbered subsets. This complex set of criteria are then interpreted for the particular type of place in question. As natural, Aboriginal and historic environments are dealt with by different sections of the Commission, different interpretations of the criteria are possible. An example of the difficulties relating to the layers of subsets is given below:

Criterion A: 'Importance in the evolution and pattern of Australia's natural and cultural history.'

Subset - Criterion A1: 'Importance in the evolution of Australian flora, fauna, landscapes or climate' (Australian Heritage Commission, April 1990b). The scope of this criterion covers climate, geology, landform, soils, biological and ecological values. Under 'biological/ecological' alone there are seven subsets, some of which contain more than one criterion. These are:

- Relic species or communities;
- Disjunct (or outlying) populations;
- Refugia;
- Atypical locations, substrates, climatic niches;
Sympatric or parapatric relationships;
Limit of range of species or communities;
Species with Gondwanic or Indo-Malay affinities.

(Australian Heritage Commission, April 1990b, p.1)

These in turn become more specific when applied to a particular type of heritage place, for instance, forests (Australian Heritage Commission, July 1991, p.1). Similarly detailed assessment methods have been devised for 'natural environment places' (Australian Heritage Commission, April 1990d), landscapes (O'Brien, 1987) and for parks, gardens and special trees (Ramsay, 1991). If all types of garden and park type, style and period are to be represented, there would be over one thousand possibilities (Schapper, 1992, pp.10-11). In addition to addressing assessment of different types of heritage places, future directions in assessment in general have been discussed ((Australian Heritage Commission, April 1990e).

In addition to these very detailed criteria, the A.H.C. has type profiles (typologies), and thresholds. Type profiles have also been developed in detail, for instance for various types of terrace housing. Type profiles are useful for typical places, but not for unusual or unique places, and therefore have some limitations. Type profiles are based on hierarchical subsets of the three basic environmental types - natural, Aboriginal and historic environments. The system of type profiles contains many of the problems of the criteria system, e.g. a proliferation of unusable hierarchical subsets.

Thresholds are much talked about by the A.H.C. (interviews, and Australian Heritage Commission, April 1990c, pp.19-20; also see Sub-section 3.7.5), but it is the contention of the present author that their use is not understood. When questioned, staff at the Commission were reluctant to even define thresholds. The conclusion drawn by the present author was that thresholds are cut-off points above which a place is significant and below which it is not. If they exist for the particular type of place in question, thresholds appear to be established using expert opinion, in conjunction with the detailed criteria and type profiles. The combination of complex criteria, type profiles, and thresholds makes for an incredibly complex and practically unusable
assessment system. The A.H.C. has been puzzled as to why the community is not submitting places for assessment. It is the contention of this author that the assessment nomination process is too daunting, inaccessible and confused, for all but the most persistent. Diagrams (see below) prepared by the A.H.C. illustrate the problem (Australian Heritage Commission, April 1990c, pp.17-20).

Figure A4.1 : Environmental Typology of the Australian Heritage commission, illustrating the complexity of typologies proposed.
(Australian Heritage Commission, April 1990c, pp.17,19).

Each of the major divisions (Natural, Aboriginal, Historic) are to be subdivided thematically or regionally, perhaps to several levels, to arrive at a relatively homogenous class of places. The resulting typology 'tree' can be represented as in the diagram below.

1. General Criteria applying to all National Estate places.
2. Subdivision to general criteria statements more particular to natural and cultural values.
3. Type Profiles which tailor the general criteria to the attributes and population characteristics of various 'Types' of place.
4. Environmental Typology of places for defining and locating Types.
Figure A4.2: Thresholds proposed by the Australian Heritage Commission, illustrating some potential distributions and cut-off points. N.B. No reason is given for location of thresholds on curves (Australian Heritage Commission, April 1990c, p.20).

8/9. The A.H.C. does not own any landscapes, but will carry out, or fund studies related to landscapes.

10. As they own no landscapes, covenanting is not relevant.

11. The A.H.C. interacts with all other heritage organisations.

12. The Australian Heritage Commission is the central heritage organisation in Australia. It deals with all types of heritage places. Its focus in recent years seems to have moved from registering places to supporting other heritage work, including the development of very detailed assessment methods. These have a good general basis in the Burra Charter criteria, but the expansion of these basic criteria is confused, lacks intellectual rigor, and the system is unworkable. This is demonstrated in the reduced number of listings in recent years. In the last ten years, less then one thousand places have been added to the register, while prior to that about 8000 places were registered between 1975 and the early 1980s. As the expanded criteria are confused, methods derived from them are confused. Because the Australian Heritage Commission is the premier heritage organisation in Australia, this situation has a great influence over theory and practice Australia-wide. Criteria need to be clarified and revised. It was, in part,
a growing awareness of this situation which prompted the present research. The Australian Heritage Commission has suitable listings and is very suitable for further investigation; in fact, they welcome assistance on the matter of criteria, and cooperated willingly in this research.

A4.2.10 International Heritage Organisations

World Heritage Committee

The World Heritage List, prepared by the World Heritage Committee, is the only source of listings in Australia related to places of international heritage significance. These listings explain many different aspects of the heritage of the place concerned, incorporate natural and cultural criteria and have summary sections called 'Justification for inclusion on the World Heritage List' which give the reasons for significance.

The World Heritage Committee, a committee of UNESCO, selects areas for the World Heritage List on criteria which are divided into two categories, those for natural property and those for cultural property, under Articles 1 and 2 of the Convention Concerning the Protection of the World Cultural and Natural Heritage (1972). These are detailed below:

CULTURAL HERITAGE:
Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding value from the point of view of history, art or science;

sites: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view.

NATURAL HERITAGE:
Natural features consisting of physical and biological formations or groups of such
To be listed on the World Heritage List, properties must comply with the criteria of integrity for 'natural property', and 'authenticity' and 'state of preservation' for 'cultural property'.

Further work on cultural landscapes is being carried out by the World Heritage Committee with a view to revising criteria for cultural properties. These revisions promise to clarify some of the difficulties but are not yet ratified (pers. comm., Lucas, P.H.C., Chair, IUCN Commission on National Parks and Protected Areas, 1 December, 1992).

The World Heritage List for Australia is as follows:
- Australian East Coast Temperate and Subtropical Rainforest Parks.
- Kakadu National Park
- Lord Howe Island Group
- Uluru National Park
- The Tasmanian Wilderness
- Wet Tropics of Queensland
- The Willandra Lakes Region
- Great Barrier Reef

Since the present research was commenced, several sites have been added to the World Heritage list; Shark Bay, Western Australia (late 1991), Fraser Island (1992), and extensions to Kakadu National Park. There are, as yet, no predominantly cultural places in Australia on the list. This is possibly because we have not yet learned to value our cultural places. Sites such as Sydney Harbour, the place of first European settlement, and Port Arthur,
an important penal colony, may be proposed in the future. Even though there are relatively few listings compared with other heritage organisations, their importance and the nature of the section 'justification for inclusion on the World Heritage List' make them suitable for further study.

The above organisations and the criteria they use are summarised in Table A4.1, included at the end of Appendix 4.

A4.3 Some key international developments in landscape heritage assessment
It is not intended to review international organisations or their methods here, but rather to note some key developments and the organisations which fostered them, to provide a context for the Australian situation.

Britain
The Countryside Commissions for England and Scotland have played a major role in assessing landscape heritage. A Study of Gardens and Designed landscapes in Scotland (1983) outlined a method for classifying, comparing and ranking a wide variety of sites from formal gardens to parkland and woodland. The sites were assessed according to six criteria: value as a work of art, historical value, horticultural value, arboricultural or sylvicultural value, architectural value, scenic value and nature conservation value (Countryside Commission for Scotland, 1983; Murphy, 1986, p.43), these were rated for high, moderate and low value and combined to give an estimate of value. The importance of this method was that it was used for a wide variety of site types, that it was tested in practice and found to be practical, and that it provided sensible outcomes in terms of assessing heritage value.

The National Trusts in England and Scotland have played an important historical role in the assessment and conservation of many different types of landscape heritage (see Section 2.3.4). These organisations were pioneers in landscape heritage conservation and its methods, and they greatly influenced the work of the National Trusts in Australia.
Canada
Environment Canada, Parks Service (Parks Canada), and the Heritage Canada Foundation have all played important roles in preserving landscape heritage in Canada. Parks Service has delineated policy and management plans for a wide variety of both natural and cultural heritage landscapes (Parks Canada; 1982, Environment Canada, 1990). In addition, organisations such as the Ontario Heritage Foundation have archaeological, architectural, historical and natural heritage programs and use heritage easements for conservation (Collins, J., 1991, pers. comm., 26 June). These organisations have advanced the assessment and preservation of landscape heritage in Canada, and some of their work has had a significant influence on heritage organisations in Australia.

United States
The background history of some key landscape heritage organisations is outlined in Russell (1988, pp.7-33) and will not be repeated in detail here. Suffice to note that organisations such as the National Parks Service, The Nature Conservancy and land trusts, represented by the Land Trust Alliance, have been conserving landscape heritage in the U.S. over many years.


The National Trust for Historic Preservation also conserves historic landscapes, for instance through its Rural Conservation Project (National Trust for Historic Preservation, 1988).

The Nature Conservancy protects natural heritage across the U.S. and is starting to reach out into other countries, particularly South America. The Nature Conservancy uses biological criteria to assess factors such as rare and threatened species and biodiversity. It is a very large organisation
with a large team of scientists, and runs a huge data base to coordinate sites and criteria. Because it is so large and so computer-based, it is less useful as a model than some of the smaller organisations (Murray, W. 1991, pers. comm., 1 July; Williams, N., 1993, pers. comm. 23 March; The Nature Conservancy, 1990). The Nature Conservancy has, in particular, influenced the work of the Victorian Conservation Trust.

Land trusts, such as the Trust for Public Land, also assess and protect land for its heritage value. Their protection mechanisms are diverse, but land purchase and easements are two important mechanisms. Many land trusts are affiliated under the banner of the Land Trust Alliance. This organisation coordinates information and assists trusts to carry out their tasks. The importance of criteria is recognised and assistance is offered on how to develop them for particular applications (Diehl and Barrett, 1988, pp.11-36; National Trust for Historic Preservation and the Land Trust Alliance, 1990). Much of the work in the U.S. was instigated by President Carter's environmental protection message to Congress, in 1977, when he highlighted the need to preserve those places of natural, historic, cultural, and scientific value that give the nation continuity (University of North Carolina, 1978). The organisations mentioned above have advanced the issues raised by President Carter and are among the most effective in the world at preserving landscape heritage.

Other organisations in many countries have played their role in the development of landscape heritage conservation; those briefly outlined above are considered to have an important role in influencing Australian Heritage organisations.
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<tr>
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<td>Scientific</td>
<td>Educational</td>
<td>Recreational/tourism</td>
<td>Historic</td>
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Appendix 5: CONTENT AND CLUSTER ANALYSES OF LISTINGS

A5.1 Characteristics of content analyses

Advantages of content analysis
Content analysis can be sensitive enough to pick up both the criteria and the nuances between different expressions of these. Content analysis retains the information contained in the statements of significance, by retaining the words and flavour of the writings. It can extract and record the precise form and expression of information. It can manage the underlying or 'latent' meaning in the text, as well as the obvious or 'manifest' meaning, and can cope with blended 'latent' and 'manifest' meanings (the distinction between this is discussed in Section A5.3).

Weber (1990, p.10) sees the advantages of content analysis being as follows:

- text is central to human communication and content analysis operates directly upon it;
- content analysis combines qualitative and quantitative operations usually considered to be antithetical;
- it is a method which can draw on and utilise reliable data;
- it is unobtrusive in that it does not have an effect on the data itself.

Holsti (1969, pp.12-14) sees advantages in content analysis maintaining the written word while allowing some numerical comparisons. Mostyn (1985, pp. 117-118) describes content analysis as the diagnostic tool of qualitative researchers. He says of content analysis:

The analyst takes this raw material and subjects it to scrutiny to see if any regularities occur in terms of single words, themes, or concepts. He/she then attempts to set up conceptual categories; this process then leads to hypothesis testing or reformulation due to the discovery of new relationships among the data.

(Mostyn, 1985, p.118)
Qualitative and quantitative approaches to content analysis

Holsti (1969, p.5) says that the requirement for quantitative data has been espoused by those who view the technique of content analysis as more scientific than other means of documentary analysis. In most cases the measuring system relates to frequency of occurrence of words or themes. Underlying this measurement system is the assumption that frequency is the only valid index of concern. Holsti states that 'often this may in fact be a valid premise'. 'Contingency analysis' in which the coding of material depends on the absence or presence of the attribute, rather than on its frequency of occurrence, provides another method of scoring. The method of scoring in the present work provide both frequency and 'contingency analysis' approaches.

Mostyn (1985, pp.118-123) discusses quantitative versus qualitative content analysis in terms of reliability and validity. She says that it is on the reliability issue that researchers are most critical of qualitative research, because there tends to be a lower level of comparability than with quantitative work. There are also problems of validating qualitative content analysis. She says in summary that there is a need for both. Where possible, the best attributes of both should be used.

Quantitative data allows conclusions to be drawn with a degree of precision not possible using only qualitative information, and statistical methods can be applied to improve interpretation.

Qualitative data tends to hold the flavour of the original work through the analysis phase. Berg (1989, p.1) discusses the process of analysis which may in fact be as informative to the researcher as the data itself. If the advantages of both qualitative and quantitative approaches can be retained and combined in the analysis, so much the better.

A5.2 Sampling the Australian Heritage Commission data base for landscape heritage listings

Problems arise in sampling the Australian Heritage Commission database as it has 18,000 entries of heritage places, including landscapes, 9000 of which are on the Register of the National Estate (as at April, 1991). After discussing the problem with The University of Melbourne's Statistical
Consulting Service, the decision was made to sample it in the following manner.

Firstly, only entries on the actual Register were sampled (i.e. samples were taken from the 9000 entries). This was consistent with the situation in other organisations, where only listings actually formally accepted by the organisation were used for the analysis.

The Australian Heritage Commission data is organised into a series of 'groups'. They also use a system of 'categories', but although these are more detailed, they proved less useful for sampling the database than the Group system at the time of sampling. There are 37 Groups, with the possibility of a relatively small percentage of places being entered into more than one Group. These Groups were examined and only 16 were considered to be classed as landscapes. The groups discarded had no significant landscape component and were principally buildings or industrial heritage. The 21 Groups discarded, in alphabetical order, were:

Air transport, bridges (as seen from an industrial history perspective), commercial buildings, communications sites, community service structures, educational buildings, financial structures, government buildings, hotels motels inns etc., judicial constabulary and penal structures, lighthouses, military sites, ports piers etc., post offices, railway buildings and structures, religious buildings, road transport, scientific facilities, shipwrecks, towns, 'to be assigned by technical officer'.

(Database, Australian Heritage Commission, 1991)

The groups remaining are listed in Table A.5.1

Based on advice from the Statistical Consulting Service, University of Melbourne, the following sampling techniques were used to select listings from the individual remaining groups. Where the database for a particular group was very large, i.e. some hundreds of entries, random sampling was used. Where the sample was smaller, i.e. approximately 100 entries or less, regular sampling was used, on the assumption the listings were in no particular order with respect to criteria. Regular sampling involved taking samples at predetermined intervals delineated by the percentage representation required. A system of sampling 20% of a group
very relevant to landscape and 10% of a group moderately relevant to landscape was considered appropriate. For instance in 100 entries, every 5th entry was taken to obtain a 20% sample, and every 10th entry to obtain a 10% sample.

One of the difficulties with the group system in the Commission's data base is that there are many groups representing historical entries, while there is only one group for Aboriginal listings (Group 40 - Aboriginal environment) and one group for natural environment (Group 53 - Natural environment). As a result, these groups are very large and difficult to sample. Nonetheless random samples of these were taken and detailed content analyses carried out.

Samples for these two groups were, of necessity, small, as sampling was carried out by staff of the Heritage Commission, their good offices had already been imposed upon and further sampling of these groups would have unduly taxed the system. 2% 'Aboriginal environment' was sampled while 1% of 'Natural environment' was sampled. It was recognised that this situation was not ideal but it was all that was possible. For a summary of the Australian Heritage Commission 'groups' and the percentage sampled, see Table A.5.1. The Australian Heritage Commission is gradually moving to a new means of organising its listings using new categories, and many of the problems evident at the time of sampling may be overcome in the future.
**Appendix 5, Table A5.1 Method for Sampling the Australian Heritage Commission Database**

<table>
<thead>
<tr>
<th>Group No.</th>
<th>Name</th>
<th>No. on Reg</th>
<th>No. sampled</th>
<th>% sample</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Aboriginal environment</td>
<td>623</td>
<td>10 random</td>
<td>2%</td>
<td>very relevant.</td>
</tr>
<tr>
<td>10</td>
<td>Cemeteries/graveyards</td>
<td>54</td>
<td>6 regular</td>
<td>10%</td>
<td>moderately relevant.</td>
</tr>
<tr>
<td>24</td>
<td>Urban conservation areas</td>
<td>206</td>
<td>5 random</td>
<td>2%</td>
<td>little relevance, hence few sampled.</td>
</tr>
<tr>
<td>54</td>
<td>Historic landscapes</td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td>very relevant, only one entry.</td>
</tr>
<tr>
<td>18</td>
<td>Historic sites</td>
<td>38</td>
<td>8 regular</td>
<td>20%</td>
<td>very relevant.</td>
</tr>
<tr>
<td>13</td>
<td>Indust sites &amp; buildings</td>
<td>77</td>
<td></td>
<td></td>
<td>list examined, not relevant for landscape, not sampled.</td>
</tr>
<tr>
<td>54</td>
<td>Landscape sites</td>
<td>1</td>
<td></td>
<td></td>
<td>(power stations, lime kilns, etc.).</td>
</tr>
<tr>
<td>29</td>
<td>Mining sites</td>
<td>50</td>
<td>5</td>
<td>10%</td>
<td>same as 'historic landscapes, hence not repeated.</td>
</tr>
<tr>
<td>26</td>
<td>Monuments &amp; memorials</td>
<td></td>
<td></td>
<td></td>
<td>moderately relevant.</td>
</tr>
<tr>
<td>53</td>
<td>Natural environment</td>
<td>1336</td>
<td>10 random</td>
<td>1%</td>
<td>List examined, not sampled - buildings and structures.</td>
</tr>
<tr>
<td>21</td>
<td>Parks &amp; gardens</td>
<td>100</td>
<td>20</td>
<td>20%</td>
<td>Represents by far the largest group - sample indicative only very relevant.</td>
</tr>
<tr>
<td>05</td>
<td>Places of recreation</td>
<td></td>
<td></td>
<td></td>
<td>List examined, not sampled - contains, halls, buildings etc.</td>
</tr>
<tr>
<td>07</td>
<td>Precincts &amp; urban spaces</td>
<td>72</td>
<td>7</td>
<td>10%</td>
<td>moderately relevant.</td>
</tr>
<tr>
<td>02</td>
<td>Primary industry</td>
<td>100</td>
<td></td>
<td></td>
<td>List examined, - same as parks &amp; gardens, not repeated.</td>
</tr>
<tr>
<td>01</td>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
<td>List examined, not sampled, buildings, no landscapes.</td>
</tr>
</tbody>
</table>

**Total** | 72 |
A5.3 Contents analysis method

Defining the recording units
Weber (1990, p.21) regards definition of the basic unit of text to be classified as one of the most fundamental decisions in content analysis. He lists words, word sense, sentence, theme, paragraph and whole text as the basic coding units. In this research 'word sense' was considered the most appropriate unit. 'Word sense' are words and phrases which constitute a semantic unit. Berg (1989, p.2) and Mostyn (1985, p.118) describe similar recording levels. This was thought the most useful, as single words do not always capture the meaning. Sentences were not needed, as criteria are expressed as words or phrases, and all longer coding units were inappropriate. So for this work the coding unit was word sense, expressed as words or phrases. Because of the diversity of expression of all criteria, and the goal of retaining as much information as possible, the words themselves were retained.

Manifest and latent content
Discussion exists amongst those using content analysis as to whether it should be limited to 'manifest' content, that is, the surface meaning of the text, or should also allow for 'latent' content, the deeper layers of meaning embedded in the text (Berg, 1989, p.1; Holsti, 1969, pp.12-14). Those suggesting that analysis be limited to manifest content use only those symbols actually appearing in the text, and reserve 'reading between the lines' for the interpretation stage. This view represents a relatively narrow perspective on content analysis. However the trend now is to a broader view in which both manifest and latent content are represented, when the latter is defensible (Holsti, 1969, pp.12-14; Nettleton, B., 1993, pers. comm., May 4). Berg (1989, p.1) supports this view, saying 'Perhaps the best resolution of whether to use manifest or latent content is to use both wherever possible.'
Table A5.2: Examples of statements of significance

<table>
<thead>
<tr>
<th>SIGNIFICANCE</th>
<th>Lisdale House gardens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and gardens</td>
<td>Lisdale House Gardens are an outstanding example of the later work of Paul Sorensen and reflect the personality of the industrialist who commissioned the landscaping work. The Gardens also have a strong historical theme centred on the World War II memorial to Fl. Lt. Neubeck. The quality of the workmanship evident in the sandstone wall, path and step construction and the restoration work undertaken by the present owner enhance and feature the Sorensen plantings which have now grown to maturity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNIFICANCE</th>
<th>FINDA SPRINGS SITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal landscape</td>
<td>FINDA SPRINGS REPRESENTS A TYPICAL CAMP-SITE AREA FOUND ON CREEK FLATS IN THE FLINDERS RANGES. IT IS A SOURCE OF PERMANENT WATER. NUMEROUS HEARTS AND CURVES AND FLAKES ARE SCATTERED IN THE WOODED AREA. THE SITE STILL HAS IMPORTANT HISTORICAL SIGNIFICANCE TO THE ADNAMATHANHA.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATEMENT OF SIGNIFICANCE:</th>
<th>YARRALUMLA WOOLSHED &amp; OUTBUILDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pastoral landscape</td>
<td>ONE OF THE MOST OUTSTANDING VERNACULAR BUILDINGS IN CANBERRA, THIS LARGE, REFINED EXAMPLE OF A TRADITIONAL AUSTRALIAN WOOLSHED IS SYMPTOMS OF THE NATIONAL CAPITAL'S PASTORAL HERITAGE. THE WOOLSHED AND ITS OUTBUILDINGS ARE WELL SITED ABOVE YARRALUMLA CREEK AND CONTRIBUTE TO THE SEMI-RURAL LANDSCAPE SOUTH OF GOVERNMENT HOUSE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNIFICANCE</th>
<th>MCDONALD PARK NATIONAL PARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological landscape</td>
<td>MCDONALD PARK NATIONAL PARK TOGETHER WITH THE OTHER NATIONAL PARKS ON TAMBUINE MOUNTAIN OFFERS VALUABLE SCENIC AND RECREATIONAL OPPORTUNITIES, AND SOME PROTECTION FOR THE VANISHING RAINFOREST HABITAT IN SOUTH EAST QUEENSLAND.</td>
</tr>
</tbody>
</table>
Defining the categories

Category breadth was delimited by the concepts which emerged in Chapters 3 and 5 regarding the meaning of the criteria. Breadth of category is related to rules of selection which are outlined below. For instance the category 'ecological' may contain 'rare species', biodiversity', 'wildlife habitat' and so on, so that many expressions of the concept of ecological significance can be represented in this category. This is what is meant by breadth.

Berg (1989, p.2) associates category development with the process of building grounded theory, pointing out that in this fundamental step of analysis the ability to see new insights can be set up. Glaser and Strauss (1979, p.3) suggest an initial discovery of the categories by examination of the information, in this case outlined in Chapters 3 and 5 and by initial examination of the statements of significance.

A number of appropriate criteria for the framework of the content analysis emerged. Criteria grouped under 'measures of value' warranted investigation. Included in these were 'integrity' and 'authenticity'. 'State of preservation', 'level of intactness' and 'condition' were considered to be essentially the same concept which could be represented by 'state of preservation'. The fact that 'unique' did not emerge from the document analysis and focussed interviews was considered worthy of examination. The concepts of 'rarity', 'representativeness' and 'example of...' also needed exploration. 'Ability to demonstrate' was considered to be a variation on 'example of...', and was not used as a separate category.

In the group 'aspects of value', the basic Barra Charter criteria were essential, but possibly to need subsets to be useful in the analysis and in practice.

Aesthetic value was taken to incorporate 'landscape character' and 'romantic', although it does not describe these aspects of landscape adequately. Architectural value could quite logically be included under 'aesthetic', or possibly 'historic' depending on the context.

'Symbolism' warranted attention and could be taken to include symbolic,
spiritual or religious value.

'Scientific' was a very general criterion, needing further subsets to be useful. After examination of the results in Chapter 5 and a preliminary scan of the listings it became evident that several criteria were repeatedly used in this broad category. These related to general scientific value (including value for research and horticulture), value as geology and landform, and ecological value. Value related to waterbodies was found to be such a recurring theme that it was given a separate column.

Archaeological value was not one of the Burra Charter criteria, but was mentioned by several organisations. It was thought that by including this criterion its relevance could be tested.

'Social' is a basic Burra Charter criterion and from the document analysis and focussed interviews was seen to include educational and recreational value. The inclusion of 'tourism' in 'social' was considered here, but was better dealt with under the 'economic' or 'other' categories, depending on the context.

'Historic' is a basic Burra Charter criterion whose subsets are relatively well understood. They relate to sites of historic events, association with historic figures and similar associations.

The category 'economic' was used to test the theory that it is relatively unimportant for assessing landscape heritage value.

A category 'other' was thought useful to catch any criteria which did not fit the categories listed. Because wilderness value and closeness to nature were not evident at all in the test coding pilot exercise, they were incorporated into 'other'.

It was anticipated that the criteria outlined above, set up across a spreadsheet, would cope with any criteria needed in the content analysis. Rules of selection (see below) explain in detail how data was allocated to categories.
A5.4 Rules of Selection
In order to carry out a reliable and valid content analysis, rules must be devised for placing entries into the various categories available. These rules fall into general rules, and rules for particular criteria.

General rules
Exclusivity of categories
An entry can go into only one category i.e. appear in only one column.

Locational categories
In all cases there is an entry in Column A (name of landscape). This is an identifying category and not part of the criteria analysis. The same applies to Columns B, C and D (location, state, and organisation respectively). Column E (Date of listing) may not necessarily contain an entry but if listing preparation date is known it is entered here. These five columns represent the locational data which assists in tracking information.

Rules specific to criteria
Columns F to M inclusive are used for different expressions of measures of value (except for symbolism which is an aspect of value but slipped in as Column I). Columns N to W are used for different expressions of aspects of value. These categories are discussed in detail below. It is in these columns that the details of the information relating to the actual content analysis are recorded.

Integrity (Column F)
'Integrity' is taken to mean wholeness or completeness and refers to the degree to which a place retains its original characteristics. It is usually referred to using the word 'integrity' and there are few possible substitutes for this word, although some may become evident during the analysis. 'Intactness' may be one possible substitute.

State of preservation (Column G)
Includes 'state of preservation', 'condition' and comments about condition such as 'poor condition', 'excellent condition' and the like. It refers to the material state of the fabric of a place.
Authenticity (Column H)
Describes the need for things and places to be what they claim to be, to be 'real' or 'true'. It is usually represented by the word 'authentic', but other like words may emerge from the analysis.

Symbolism (Column I)
Refers to the capacity of a thing or place to represent, cause recall, or typify something. ‘Symbolism’ may include value attached to monuments, landmarks, sacred places and places with spiritual meaning or religious meaning. In Australia this includes Aboriginal Dreaming places and Dreamtime legends. There may be many expressions of this criterion but all would fit the concepts described here.

Uniqueness (Column J)
‘Uniqueness’ implies that there is only one of its kind or that it is unequalled. It is usually represented by the word 'unique' although other words such as 'unrivalled' or 'unequalled' can also represent the concept of uniqueness.

Rarity (Column K)
‘Rarity’ implies that there are very few of a kind, or that the type of place is very uncommon. Closely related to rarity and included in this category are 'uncommon', 'unusual' and qualified versions of these such as 'very unusual' and the like.

Representative of... (Column L)
Representative refers to a place being typical. This requires that there is some concept of a type. In addition to the term 'representative', the concept can be expressed by terms such as 'typical of...'. This concept relies on identification of commonalities.

Example of... (Column M)
This is very close to the concept of representativeness but is taken to be more exemplary in nature. Thus 'example of...'; 'ability to demonstrate' and related concepts come into this category.
Aesthetic (Column N)
'Aesthetic' is a broad category incorporating criteria ranging from formal aesthetic criteria such as form, scale, colour, texture, to elusive attributes such as sensory and evocative aspects of landscape. It includes senses other than the visual such as smell and sounds. It may refer to characteristics of the foreground, middle ground and background. It may include qualities of a place such as 'lush pasture', 'pleasant mosaic of patterns', 'unity', 'diversity', 'variety', 'harmony'. It may simply talk about 'outstanding beauty' or 'high scenic quality'. It includes concepts such as 'landscape character'. Architectural value when related to aesthetic value or architectural style is also included. All these are taken to be variations on 'aesthetic value'.

Scientific
The category 'scientific' needs subsets to be useful. The pilot testing of the categories indicated that the most useful subsets were as follows:

General scientific (Column Q)
Includes the concepts of general scientific value, significance or importance, botanical value, horticultural value, scientific reference, importance for research, potential to illustrate evolution, and related concepts.

Geology/landform (Column P)
This category included all references to geology and landforms. It did not include waterbodies, but did include the landforms generated by water, for instance features such as 'significant river terraces'.

Water (Column Q)
Included references to all types of waterbodies. Significant rivers, creeks, lagoons and wetlands, permanent water and related concepts.

Ecological (Column R)
Refers to all criteria related to biological systems except for the general references to horticultural value and botanical value and the like which are included under the category 'general scientific'. Criteria such as species diversity, the presence of rare or threatened species or communities and plant and animal associations. All references to plants and animals were
included in this category, unless they had an aesthetic context (for instance 'mysterious forest'). 'Rare species', 'endangered species' or 'threatened species' were included here instead of in the 'rare' column, as here the concept of rarity was clearly always linked to species.

Archaeological (Column S)
Refers to archaeological material of significance such as middens, stone scatters, campsites, rock art and other evidence of Aboriginal habitation. This category is primarily the category for criteria related to Aboriginal culture, but does not include dreaming legends as these were seen to be more closely related to 'symbolism' and thus to belong in that category. It may also include reference to post-settlement or 'historical' archaeological value.

Social (Column T)
The category 'social' refers to present-day community values relating to a place. Recreational value was included here, but it was decided to put 'educational value' into the 'other category' because it related to so many of the attributes of a place, and not just to social value.

Economic (Column U)
'Economic' refers to any attributes contributing to the economy, for instance 'intensive agriculture', 'contributes to the Aboriginal economy', and 'tourism' if the criterion is related to the income generating capacity of tourism.

Historic (Column V)
Association with historic events, figures, places, historic record, eras of settlement and development, and all concepts related to historical associations.

'Other' (Column W)
This category was included to pick up anything not contained in the previous categories. Its potential content could not be anticipated except for the presence of criteria related to educational value, as described above. As wilderness value and closeness to nature had not shown up in the pilot analysis, they were included here.
Table A5.3: Content analysis categories (columns) in spreadsheet

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Location</td>
<td>State</td>
<td>Organisation</td>
<td>Date</td>
<td>Integrity</td>
<td>State of Preservation</td>
<td>Aesthetic</td>
<td>Scientific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
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<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>I</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authenticity</td>
<td>Stability</td>
<td>Uniqueness</td>
<td>Rarity</td>
<td>Representative</td>
<td>Example</td>
<td>Aesthetic</td>
<td>General Scientific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geology/Landform</td>
<td>Water</td>
<td>Ecology</td>
<td>Archaeol.</td>
<td>Social</td>
<td>Economic</td>
<td>Historic</td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A5.5 Results of content and cluster analyses of listings

The following landscape types were used for the analysis.

<table>
<thead>
<tr>
<th>Landscape type</th>
<th>Primary criterion</th>
<th>Number in database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural landscapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographical/landform landscapes</td>
<td>Geology/landform</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>(scientific)</td>
<td></td>
</tr>
<tr>
<td>Waterbodies e.g. rivers, wetlands</td>
<td>Water (scientific)</td>
<td>31</td>
</tr>
<tr>
<td>Ecological landscapes</td>
<td>Ecology (scientific)</td>
<td>107</td>
</tr>
<tr>
<td>Aesthetic landscapes</td>
<td>Aesthetic</td>
<td>49</td>
</tr>
<tr>
<td>Aboriginal landscapes</td>
<td>Archaeological</td>
<td>20</td>
</tr>
<tr>
<td>Historic landscapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cemeteries</td>
<td>Historic</td>
<td>9</td>
</tr>
<tr>
<td>Historic places</td>
<td>Historic</td>
<td>13</td>
</tr>
<tr>
<td>Parks and gardens</td>
<td>Historic</td>
<td>72</td>
</tr>
<tr>
<td>Pastoral landscapes</td>
<td>Historic</td>
<td>34</td>
</tr>
<tr>
<td>Urban landscapes</td>
<td>Historic</td>
<td>20</td>
</tr>
<tr>
<td>Non-urban industrial landscapes</td>
<td>Historic</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

Results are dealt with under the headings of 'natural landscapes' (Sub-section A5.5.1), 'Aboriginal landscapes' (Sub-section A5.5.2), 'aesthetic landscapes' (Sub-section A5.5.3) and 'historic landscapes' (Sub-section A5.5.4), and 'total entries' (Sub-section A5.5.5). Content analysis, then cluster analysis were used to examine each landscape type. Results of these are given, and discussed below.

Content analysis results are shown on histograms which are graphic expressions of the spreadsheets prepared for each landscape type.
Contingency is represented by the solid bars, frequency by the clear bars. After discussions with statisticians in the School of Environmental Planning, it was decided to interpret the histograms in terms of criteria being of high, medium or low occurrence, and to provide the actual percentages of occurrence of criteria where it was useful to do so. 'High', 'medium' and 'low' were preferred to cut-off scores, as cut-off scores cannot be determined until there is a better understanding of criteria (which is the task undertaken here). The significance of criteria occurrences obtained was interpreted using knowledge of what might be expected from the theory and from Chapter 6.

Cluster analysis results are also represented graphically using cluster histograms. On the histograms, 1.0 on the vertical axis represents an average occurrence of the criterion, above 1.0 means above average and below 1.0 means below average occurrence of the criterion. The primary criterion is, by definition, represented as 1.0. While all criteria were graphed, only those significantly above or below average were discussed. Whether a criterion was significantly above or below the mean was judged individually for each cluster, because the scale of values was very variable.

A5.5.1 Natural landscapes
The group 'Natural landscapes' made up by far the largest percentage of heritage landscapes analysed, the percentage representation being 46%, almost half of the total analysed. It will be recalled that the sample of natural landscapes taken from the Australian Heritage Commission was very small and did not represent the proportion on the Register. If this is taken into account the percentage would be even higher. It is evident that these landscapes make up a very important component of landscape heritage. In addition, nearly all landscapes set aside for purely aesthetic value are natural landscapes, increasing the percentage of natural landscapes to over 56%.

Natural landscapes comprised three landscape types: geological/landform landscapes, waterbodies and ecological landscapes. As the combined number was greater than anticipated and was beyond the spreadsheet capacity, and as the group separated clearly into these three subsets, they were used for the analysis.
Geology/landform landscapes

Geology/landform listings are those primarily set aside for their important geological or landform characteristics and they have a physical environment focus. They represented 14% of the listings analysed (59 in total), and were considered to be a significant proportion of the total listings (see Figure A5.1: Geology/landform histograms).

The primary criterion 'geology/landform' was represented by general statements about the interpretation of geology such as 'extremely useful geological record', or by more specific or technical statements about the geology, such as 'dissected peneplain of granite'. Also included were more commonplace references to coastal dunes, gorges and the like.

Apart from the obvious occurrence of the primary criterion 'geology/landform' there was a high occurrence of many of the other components of value. 'Aesthetic' was represented in 63% of the listings, and mentioned 105 times in 59 listings. Also of high occurrence was 'ecological' (present in 56% of listings) and, to a lesser extent 'historic' (in 31% of listings). One would expect 'ecological' to be high because of the links between geology, landform and ecology. Historic value indicates a wide range of criteria. Association of a place with people of historical significance. Explorers such as Captain Cook, early settlers and notorious bushrangers (Ned Kelly) are all mentioned. Material evidence of early settlement may confer historic value on a place. In some cases historic value relates to the history of technology, for instance, industrial relics, the history of agricultural technology or goldmining history.

The categories 'general scientific' (present in 15% of listings), 'water' (also in 15% of listings), 'archaeological' (9% of listings), 'social' (12% of listings) and 'symbolism' (9% of listings) were less well represented than the three discussed above. 'General scientific' usually referred to unspecified scientific importance or significance, but in several cases it referred to a geological reference area or a 'type locality' for a particular formation. 'Social' predominantly indicated recreational value. 'Symbolism' referred to the landmark nature of geological formations, usually as wayfinders for explorers, early settlers or the present inhabitants, particularly in remote areas. It also referred to Aboriginal significance, typically as sacred sites, one site being important for both of the above reasons.
Figure A5.1: Content analysis histogram for Geology/landform landscape type
GEOLOGICAL/LANDFORMS

- Contingency - presence of the criterion
- Frequency - number of occurrences of criterion

Figure A5.2: Histogram for Cluster 1, Geology/landform landscape type

Figure A5.3: Histogram for Cluster 2, Geology/landform landscape type
The other criteria had low or very low occurrences. There were sufficient
dates of listing preparation given to indicate that the earlier listings tended
to focus on aesthetic value as well as landform and geological
characteristics, while later listings tended to concentrate on the scientific
value and the usefulness of the place as a teaching resource or as a type
locality.

The category 'other' was represented in 37% of the geology/landform
listings. The entry most recorded in this category was that of educational
value in various forms. This could be expressed as 'educational value',
'teaching locality', 'interpreting local geology', sometimes with reference
to its accessibility. Wilderness value is commented on in two listings.

Measures of value were notable for their absence; 'integrity' and
'authenticity' were not used at all. This is not remarkable as geological
exposures are hard to fake and one does not normally comment on the
integrity of a geological formation. 'Rarity' was used only once in the
geology/landform listings and referred to a fossil assemblage which was
'rare globally'. 'Uniqueness' was a criterion used in only two of the
grate/landform listings and referred to topography that was regionally
or nationally unique. 'State of preservation' was mentioned in 4 of the
grate/landform listings (7%), usually to comment on the excellent
nature of a particular rock exposure. The category 'representative of...' was
used only twice and certain geological features were simply referred to as
being representative, with no further explanation. In contrast 'example
of...' was used in 7 listings (12%) and usually implied that something was a
fine example of a feature or process. For instance, Mount Sugarloaf is
considered to be the best example of a scoria cone in the Western District
and Lake Tarli Karng is considered to provide examples of natural
processes.

Economic value is represented in 7% of the geology/landform listings and
indicates agricultural potential and tourism value.

Geological/landform landscapes separated into five clusters, two large
clusters of 38 and 18 listings, and three individuals, making the total of 59,
consistent with the content analysis. Clusters of one member were not
taken into account.

The larger cluster, Cluster 1 (see Figure A5.2), contained listings of large areas of land primarily set aside for their geological value but also containing important ecological, historical, archaeological and other values. These areas were characteristically national parks containing geological monuments of note, mountain ranges, large areas of stratigraphy, gorges with associated natural and cultural features and the like. Cluster 1 showed relatively even representation of a number of criteria of above average significance, notably 'symbolism', 'uniqueness', 'representative' (all x1.6 average), and 'aesthetic', 'water', 'ecological' and 'historic' (all x1.4 average). Significantly below average were the criteria 'example' (x0.4), 'general scientific' (x0.3), and 'other' (x0.3). 'Archaeological', 'social' and 'economic were not considered significant and the remaining criteria, 'integrity', preservation', 'authenticity' and 'rarity' were not used at all.

Cluster 2 (see Figure A5.3) represented an entirely different type of geological site. These were much smaller, localised sites whose main interest was their geology, and which demonstrated few other criteria. Sites such as road cuttings displaying anticlines, fossil occurrences, meteorite craters and the like. This cluster demonstrated the use of relatively few criteria. 'Preservation' (x1.6), 'example' (x1.9), 'general scientific' (x1.8), and 'other' (x2.5) were significantly above average. 'Aesthetic' (x0.2), 'ecological' (x0.1), and 'historic' (x0.2) were significantly below average. The occurrences of 'archaeological' 'social', 'economic' were not considered significant and the rest of the criteria were not used at all. This cluster relates to geology as a scientific and educational tool, many of the 'other' entries referring to educational importance and accessibility. This type of site is overly represented in the Canberra area and is close to two large teaching universities. One is led to suspect that there is the possibility of staff using heritage controls to protect their outdoor laboratories from the ravages of activities such as road widening.
Water

The ‘water’ landscape type included rivers, creeks, lagoons, wetlands, estuaries and the like. Waterbodies represented 7% of the total listings analysed (31 entries) and 16% of natural landscapes. They are therefore not a particularly large landscape type but are rather specific in their nature and in the features associated with them. It was this specific nature which prompted the decision to separate them from geology/landform landscapes. The validity of this decision was reflected in the criteria profiles, as ‘waterbodies’ proved to have a criteria profile closer to ‘ecological landscapes’ than to ‘geological/landform landscapes’, which has a higher representation of aesthetic value and lower representation of ecological value than the other two. This reflected an underlying focus on living things in the first two cases and non-living physical environment in the last.

The primary criterion ‘water’ was represented by simple comments as to the nature of the waterbody, such as ‘river’, ‘lagoon’, or by more descriptive comments such as ‘permanent freshwater pool’, ‘deep harbour’ or ‘connecting pools’, which gave some insight into the natural or cultural importance of the waterbody.

The criterion ‘ecological’ dominates this landscape type, occurring in 81% of the listings and being represented 101 times in 31 listings (frequency) within these. Most of these entries refer to water as habitat, or waterbody as generator of habitat in the immediate vicinity. Thus comments like ‘important wetland habitat’, ‘platypus habitat’, ‘reeds, rushes’ and ‘variety of wildlife’ demonstrate the kind of entries found in this category.

Other important criteria in this landscape type are ‘aesthetic’ (in 71% of listings), ‘social’ (in 52% of listings), and ‘geology/landform’ (in 48% of listings). Aesthetic value refers to ‘distant water views’, ‘glimpse of lake’, ‘birds readily viewed’, ‘spectacular waterfalls’ and similar concepts. Social value frequently refers to general social or cultural value, recreational value, the possibility of access to the waterbody, or the importance of the waterbody to the location of towns or cities. Access to water seems to fulfil several needs including the need to observe nature at close quarters, and the desire to get out onto the water in boats for fishing or recreational purposes.
Figure A5.4: Content analysis histogram for Water landscape type

- Contingency - presence of the criterion
- Frequency - number of occurrences of criterion

Figure A5.5: Histogram for Cluster 7, Water landscape type

Figure A5.6: Histogram for Cluster 10, Water landscape type

Figure A5.7: Histogram for Cluster 31, Water landscape type
The categories 'historic' and 'general scientific' are less well represented (in 32% and 26% of listings respectively). 'Historic' often refers to early settlement in the vicinity of the waterbody. 'Symbolism' was represented in 16% of entries (5) and usually referred to landmark quality or Aboriginal dreaming significance. 'Archaeological' had only one entry. The category 'other' had 6 entries (19%) mostly relating to potential for tourism.

Some categories are not used at all. These are predominantly among 'measures of value' and include 'integrity' and 'authenticity'. 'State of preservation' has only one entry, 'representative of...' has 2 entries and 'example of...' has 3. All these were regarded as of low significance, whereas 'rarity' was regarded as a significant category with a 16% occurrence (5 entries).

Economic value was not mentioned at all.

Waterbodies separated into 5 clusters, comprising two individuals, two clusters of 2, and one large cluster of 25 listings, making a total of 31, consistent with the content analysis. The two individuals were notable for their symbolic value, although representation of other criteria varied. They were not considered further.

Cluster 7 (see Figure A5.5) contained two listings both of which were rivers with their associated ecology and which were considered fine examples of a number of attributes and processes. These showed very high representation of 'preservation' (x16 average), 'representative' (x8 average), and 'example' (x10 average). These did not occur in great numbers in the total landscape type, rather they were clustered together here and therefore appeared large in the cluster histogram. It also showed a higher than average representation of 'geology' (x2.0). 'Aesthetic' was below average, which is interesting, as water is normally considered to add to landscape value.

Cluster 10 (see Figure A5.6) also contained two listings which were large lake and river systems. This cluster contained the only mentions of uniqueness for the whole type, so 'uniqueness' reads extremely high on
the chart (x16 average). 'Symbolism' is also well represented (x3 average). Other criteria are a little above average occurrence: 'general scientific' (x2.0), 'geology' (x2.2), and 'social' (x2.0).

Cluster 31 (see Figure A5.7) was a much larger cluster containing 25 of the 31 listings for the type. They represented wetlands, lagoons, rivers, estuaries, all relatively diverse and rich, and representing a wide range of criteria. These landscapes represented water-based state or national park landscapes. 'Rarity' (x1.2), and 'archaeological' (x1.2) were a little above average. 'Symbolism' (x0.5) and 'example' (x0.4) were very low.

Ecological landscapes
Ecological landscapes are those landscapes primarily set aside for their biological and ecological characteristics, and the primary criterion is 'ecological' (see Figure A5.8). Typically these landscapes are forests and woodlands, nature reserves, national parks and wilderness areas. They range from alpine areas to deserts, and from small local conservation areas set aside to protect one or two species, to World Heritage sites of great size. Ecological landscapes were the largest single landscape type, being 25% of the total listings (107 entries), and were highly significant in the total profile of landscapes. This number would been higher if a more representative sample from the Australian Heritage commission had been possible. It will be recalled that the samples for 'natural environment' were provided by staff of the Heritage Commission and did not numerically represent their holdings, although they were typical in content.

The primary criterion 'ecological' encapsulated a number of ecological and biological concepts including biodiversity; rare; endangered or threatened species, both plant and animal, habitat, unusual occurrences of species or communities, unusual associations and the like. Richness, diversity and habitat are strong recurring themes, and are expressed by phrases such as 'considerable vegetation diversity', 'diversity of plant communities', 'genetic diversity', 'rich and diverse birdlife', 'range of wildflowers'. Species or communities whose range had become limited were described in terms such as 'restricted distribution' or 'remnant population'.
Figure A5.8: Content analysis histogram for Ecological landscape type

ECOLOGICAL

- Contingency - presence of the criterion
- Frequency - number of occurrences of criterion

Figure A5.9: Histogram for Cluster 9, Ecological landscape type

ECOLOGICAL: Cluster 9

Figure A5.10: Histogram for Cluster 107, Ecological landscape type

ECOLOGICAL: Cluster 107
Rare or threatened species were named, for instance 'freshwater crocodile', 'Carpentaria grass wren', 'rare orchid'. Sometimes the naturalness of the area was commented on: for instance, 'high degree of naturalness'. At other times comments about floral or faunal evolution were made: 'major centre for evolution of rainforest flora', or 'roots of evolutionary continuum'. All these expressions of the criterion 'ecological' are terms familiar to the biologist or ecologist and are an expression of one type of scientific value. These expressions are very rich and generate so much meaning that they warrant further research and analysis. Amongst the 107 listings, the criterion 'ecological' was mentioned 527 times, implying that landscapes often had many ecologically significant attributes.

Other important criteria in this landscape type are 'aesthetic', occurring in 54% of the listings and indicating a close association between natural and aesthetic values, and 'geology landform', occurring in 48% of the listings, indicating the link between the physical and biological environments.

Surprisingly high were 'social' (in 36% of listings) and 'historic' (in 28% of listings). 'Social' frequently represented the recreational opportunities of natural areas, for instance 'recreation potential', or more specifically 'bush walking' or 'walk trails'. Also represented were many expressions about getting away from city life, for instance 'retreat from urban life', 'isolation', 'inaccessible', 'breathing space'. Curiously, while many wilderness characteristics were highlighted, very few mentions of 'wilderness' per se were made, 8 in 107 entries. These were recorded in the 'other' column. 'Historic' represented historical associations within natural areas, often to do with the use of a natural resource, for instance, historic association with sandalwood trade', early grazing and timbergetting', 'remnants of old mining days'.

The use of the criterion 'general scientific' is also relatively high (31%) and frequently expresses general ideas such as 'scientific significance' or 'biological significance', and includes the general expression of botanical, zoological and palaeobotanical significance and the like. This significance is usually expanded and made more specific under the 'ecological' criterion. 'Archaeological' is also quite high at 20% and generally indicates Aboriginal sites within rich and diverse natural areas. 'Other' is also quite
high (25%) and primarily represents tourism and educational value.

Amongst 'mesures of value' 'rarity' (in 26% of listings) and, to a lesser extent 'example' (in 15% of listings) are also significant criteria. 'Rarity' is interesting as this means general statements about rarity and does not include the 'rare and endangered species' concept which was included, using the rules, under the 'ecological' category. It is interesting to note the almost total absence of the use of 'integrity', 'state of preservation' and 'authenticity', even though these list represent huge areas of Australia's natural heritage.

'Economic' is mentioned in just one of 107 listings.

The cluster analysis of this landscape type was not particularly useful. The three individuals were highly specialised listings, one being The Great Barrier Reef, another a military reserve with high ecological and historical values, the third being a remote range on the northern tip of Australia. These were not considered further.

Cluster 9 (see Figure A5.9), had two listings which were World Heritage wilderness areas and therefore were highly valued for many criteria, including 'uniqueness' (x10), rarity (x2), 'representative' (x5), 'example' (x7), 'aesthetic' (x2), general scientific (x3.5), 'geology' (x2), 'water' (x3.5) 'archaeological' (x5), 'social' (x1.5) and 'other' (x2). 'Integrity' was particularly notable here (x18 average), and is one of the World Heritage assessment criteria for 'natural property'. 'Preservation', 'authenticity', 'symbolism', 'economic' and 'historic' were absent.

Cluster 107 (see Figure A5.10) had 102 listings. It showed approximately average levels of almost all criteria (normal for clusters which contain most of the listings), only two criteria falling outside 0.7 and 1.0. These were 'integrity' and 'preservation' which are half the average. 'Authenticity' is the only criterion absent, and authenticity is not normally a characteristic of natural environments. Little further could be inferred from the 'ecological landscapes' cluster analysis.
A5.5.2 Aesthetic landscapes

The group of landscapes referred to here as 'aesthetic landscapes' represents landscapes set aside primarily for their aesthetic value. This group came as somewhat of a surprise, as it became evident during the analysis that a distinct category of landscapes (11% of the total landscapes, 49 entries) had been set aside primarily for their aesthetic value. These landscapes are rural and natural areas which are considered to be beautiful. The listings often are toward the older end of the range of listings, that is, from the early 1970s to the mid-1980s.

The primary criterion 'aesthetic' is represented by comments such as 'alps glisten in distance', 'view is one of tranquility', 'encircling blue mountain ranges', 'rugged escarpment', and many of the expressions of the criterion are couched in very romantic terms. 'Aesthetic' occurred 171 times in 49 listings, implying that there were generally several expressions of aesthetic value for each listing (see Figure A5.11).

Not surprisingly the major secondary criteria are 'geology/landform' (present in 51% of the listings), 'water' (in 33% of the listings), 'ecological' (in 59% of the listings), all representing various aspects of the natural environment. More surprising was the relatively high occurrence of 'social' (in 49% of the listings) and 'historic' (in 35% of the listings). 'Social' frequently represented recreational opportunities or commented on accessibility, either that it was easy or not, conferring values on the place by either. 'Historic' referred to historic sites in natural areas, frequently sites of early settlements or rural industries. 'Symbolism' was significant at 16% and referred to landscape character as a feeling, the landmark or monumental quality of landscape, sense of place or Aboriginal symbolism.

'Measures of value' are notable for their absence or extremely low occurrence: 'integrity', 'state of preservation', 'authenticity', 'rarity', 'representative' and 'example'.

'Economic', at 12% referred to the rural or economic wealth of agricultural areas within the natural settings.
Figure A5.11: Content analysis histogram for Aesthetic landscape type

Criteria

Contingency - presence of the criterion
Frequency - number of occurrences of criterion

Figure A5.12: Histogram for Cluster 6, Aesthetic landscape type

Figure A5.13: Histogram for Cluster 13, Aesthetic landscape type

Figure A5.14: Histogram for Cluster 49, Aesthetic landscape type

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Aesthetic landscapes clustered into two clusters of one member each, two clusters of 2, and one cluster of 43, making a total of 49. The two individual listings were a lookout and a prominent hill, both of which were used to view from (rather than having views of), or which represented a landmark. They were not considered further.

Cluster 6 (see Figure A5.12) contains two landscapes, Sydney Harbour and The Black Spur Range, both large and highly significant. In these, the three criteria 'general scientific' (x5), 'archaeological' (x8) and 'other' (x5.5) are well above average. 'Social' and 'historic' were above average (x2 and x3 respectively). 'Ecological' was about average and the remaining criteria were absent.

Cluster 13 (see Figure A5.13) contains two listings, represented picturesque agricultural districts, expressed by the criteria 'uniqueness' (x5), 'social' (x2) and 'economic' (x8) because of their agricultural productivity. The rest of the criteria were not used.

Cluster 49 (see Figure A5.14) represented the bulk of the listings with 43 members. These landscapes were mostly scenic natural or rural areas set aside for their visual values. The situation was somewhat analogous to that which occurred with the cluster analysis of ecological landscapes, in that the cluster analysis is not very useful here. However several things can be inferred. No criteria were significantly above average, most were of average occurrence because of the relatively large cluster, and only two were notably below average. These were 'uniqueness' and 'general scientific' (both x0.7). 'Preservation', 'authenticity', 'rarity' and 'representative' were not used at all.

A5.5.3 Aboriginal landscapes
Aboriginal landscapes are those landscapes primarily set aside for their Aboriginal significance. It must be noted here that these landscapes have been assessed by methods with a predominantly western cultural basis, and there has been little input from the Aboriginal community except at the Australian Heritage Commission and at the World Heritage List level. Typically these landscapes are natural areas which demonstrate Aboriginal
cultural influence as rock art, archaeological remains, or dreamtime legends attached to sites. Because of the way these sites have been assessed in the past, the criterion which has dominated their assessment has been 'archaeological', and this is therefore the primary criterion for this landscape type.

Aboriginal landscapes represent 5% of the landscapes analysed (20 listings), but it must be remembered that the sample from the Australian Heritage Commission was small because of the reliance on staff to provide the information. It will be recalled also that some of the National Trusts were reluctant to list Aboriginal landscapes in case the listings could be used for political ends such as land rights claims.

Almost all World Heritage List places had a significant Aboriginal component (seven out of eight). For three it was the primary reason for conservation. For the others it was significant at the world level. Only one World Heritage place in Australia did not have a significant Aboriginal component and this was the offshore island, Lord Howe Island.

The primary criterion 'archaeological' is represented by various expressions of rock art, such as 'many major paintings' or 'rock engravings', and by evidence of ways of life such as 'middens', 'fishtraps', 'artifacts', subsistence debris' and the like. Several sites had very unusual attributes such as 'oldest cremation site in the world' (26,000 years), or 'earliest homo sapiens in Australia'. Some of the sites were so old that they could justifiably be considered geological sites (see Figure A5.15). The frequency of use of the criterion 'aesthetic' was 54 mentions in 20 listings.

All criteria were reasonably well represented in this landscape type, partly because of the relatively high percentage of World Heritage List sites in this landscape type. Dominating the secondary criteria are 'ecological' 'aesthetic' and, to a lesser extent, 'symbolism'. The high occurrence of 'ecological' (present in 35% of listings) is not surprising, as most indigenous settlements were in areas rich in wildlife and thus in potential food sources. Also the need for fresh water led the indigenous people to camp on riverbanks and beside wetlands, areas generally ecologically rich. 'Water' was an important element in 20% of listings, not surprisingly as water is essential for survival.
ABORIGINAL: Cluster 1

Contingency - presence of the criterion
Frequency - number of occurrences of the criterion

Figure A5.15: Content analysis histogram for Aboriginal landscape type

Criteria

Occurrence of criteria

0 10 20 30 40 50

Figure A5.16: Histogram for Cluster 1, Aboriginal landscape type

Figure A5.17: Histogram for Cluster 14, Aboriginal landscape type

Figure A5.18: Histogram for Cluster 20, Aboriginal landscape type

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It was expressed as waterholes, soaks and other waterbodies such as rivers and wetlands. These frequently provided oases in dry regions and marked places suitable for habitation. The presence of water similarly influences the present of wildlife and food.

'Aesthetic' is high at 50% and frequently refers to the aesthetic value of rock art rather than the scenery. 'Symbolism' present in 35% of listings, refers to dreamtime legends, mythology, sacred sites and the like.

'Geology' is relatively high (30%). The high level of representation of this criterion should come as no surprise, as the landform provided shelter and the living environment for the Aboriginal people. The Aboriginal links to the land also help explain the importance of this criterion. 'State of preservation' is also high (40%) and often refers to the state of rock art. 'Other' (25%) includes references to World Heritage.

'Social' is represented in 25% of listings sampled. Evidence for social systems may seem relatively scarce on the land but may have great social significance. An example of this situation is the presence of the network of tracks around Uluru, or Ayers Rock, which are indicative of the vital social and religious fabric of the Aborigine in this context. Other aspects of social value may also be recorded, such as the recreational value to the present generation.

'Historic' is represented in 25% of the listings sampled. Some places were important within the context of the history of civilisation, that is, history writ large. For instance, the Willandra Lakes site is amongst the earliest human settlement sites in the world. Other places may be the sites of particular historic events, such as the clash between cedar cutters and Aboriginals at Fingal Head in N.S.W. in 1844.

The major group of values known as 'measures of value' had high occurrences relative to other landscape types. 'Integrity' includes 'structural integrity' and 'stratigraphic integrity', implying that the whole of the expected sequence of the formation was mentioned. 'State of preservation', 'authenticity', 'uniqueness', 'rarity', 'representativeness' and 'example' were all relatively well-used in this landscape type, possibly
because of the presence of a number of World Heritage sites.

'Economic' was represented in 15% of the listings. It may refer to past economies, such as subsistence economies or the utilisation of local resources such as shellfish, or it may refer to some current economic value, such as the presence of millable timber.

Aboriginal landscapes separated into 5 clusters: two clusters of one member, two clusters of 2, and one cluster of 14, making a total of 20. The clusters of one were not considered further.

Cluster 1 (see Figure A5.16), contained two listings, both of which are on the World Heritage List for their Aboriginal significance and therefore display predictably high levels of many criteria. All criteria mentioned are above average, some such as 'authenticity', 'representative', 'general scientific' and 'economic', being particularly high, all having levels x6.6 average. This is one of the few very high levels of 'economic' and has to do with ecotourism potential. 'Integrity', 'preservation', 'example', 'aesthetic', 'geology', 'water', 'social' and 'other' all fall between 2.5 and 5.0. Symbolism is of average occurrence, as it is well represented across all Aboriginal landscapes. 'Uniqueness', 'rarity' and 'historic' are not used at all.

Cluster 14 (see Figure A5.17), has two listings representing landscapes rich in Aboriginal meaning and European history. Frequently they are conflict sites. They demonstrate above average levels of all criteria present. 'Uniqueness' is very high (x5), 'historic' is also high (x4), 'geology' and 'economic' follow (x3.4). 'Symbolism' and 'ecological' at x2.8, 'example' at x2.5, and 'aesthetic', 'social' and 'other' at x2 are also important.

Cluster 20 (see Figure A5.18), contains 14 listings and represents smaller sites focussed on Aboriginal artifacts, rock art and dreamtime legends. They are frequently close to water as this provided a food source and drinking water. This cluster has many criteria of approximately average occurrence. Four are notable for being significantly below average occurrence. These are 'integrity' and 'example' at x0.4, and 'geology' (x0.2) and 'other' (x0.3). 'Authenticity', 'uniqueness', 'representative', 'general scientific' 'social' and 'economic' are absent.
A5.5.4 Historic Landscapes

Several landscape types occurred which had historic value as the primary criterion but which differed sufficiently from each other to make them separate landscape types. These were cemeteries, historic sites, parks and gardens, pastoral landscapes, urban landscapes, and non-urban industrial landscapes. These are discussed below.

Cemeteries

Cemeteries and graveyards comprise a small and specific landscape type. There were only 9 (2%) in the total analysis and they were set aside primarily for their historic value. They were only separated out because they were so specific in nature. It was also noted that 6 of the 9 analysed were in the A.C.T., leading one to suspect a diligent writer of citations there. Also many National Trusts had files on cemeteries but had not transferred the information to the actual Register.

The primary criterion is represented by historical information such as 'colonial burial ground', 'graves of pioneers', 'important phase of Methodism in the A.C.T.' and the like. 'Historic' was mentioned 29 times in the nine listings (see Figure A5.19). Relatively few other criteria have been used, 'aesthetic' being the largest (55%), followed by 'social' (33%). 'General scientific', 'geology', 'water', 'symbolism' and 'archaeological' were absent.

Of measures of value, 'example' was present in 22% of listings and 'state of preservation' in 22%. 'Integrity', 'authenticity', 'uniqueness', 'rarity' were all absent.

'Economic' was mentioned in 22% of listings, a high occurrence relative to other landscape types (see below).

Cemeteries was not a large group of listings. Nevertheless a cluster analysis was done. Three individuals and two groups emerged.

Cluster 1 (see Figure A5.20) containing four members, has only two criteria represented, 'aesthetic' and 'historic' which occur at an average level.
Figure A5.19: Content analysis histogram for Cemeteries

CEMETERIES
- Contingency - presence of the criterion
- Frequency - number of occurrences of the criterion

Figure A5.20: Histogram for Cluster 1, Cemeteries

CEMETERIES: Cluster 1

Figure A5.21: Histogram for Cluster 3, Cemeteries

CEMETERIES: Cluster 3
Cluster 3 (see Figure A5.21) containing two members, has four criteria represented, 'aesthetic' (x2), 'social' (x3), 'economic' (x2) and 'historic' (x1), being the primary criterion. Economic is mentioned, in that the cemetery provides a history of the economics of the districts or families. Essentially this landscape type focusses on the criteria 'aesthetic' and 'historic', possibly with the addition of other criteria in a minor role.

Historic sites
The landscape type 'Historic sites' represents landscapes primarily set aside for their historic value and which are sites of historic events or have historic associations. They differ from pastoral landscapes or parks and gardens in that they are almost entirely set aside for history and have few other values. These sites are small in number (13 sites, 3% of total analysed), but, as with cemeteries, formed a very specific type of landscape and thus were separated out into a landscape type.

The primary criterion 'historic' clearly dominated all other criteria. ' Historic' was represented by phrases such as 'almost complete record of port', 'evidence of pastoral optimism', 'association with historic figure' and the like, and was used 65 times in the 13 listings (see Figure A5.22).

Few other criteria were used, the only secondary criterion of much significance being 'aesthetic' (38%), often reflecting scenic value or architectural value. All other criteria occurrences were considered to be of low significance.

Of measures of value, 'state of preservation', 'authenticity', 'uniqueness', 'rarity', 'representative' and 'example' were all absent.

Economic value was also absent.

Again a cluster analysis was run, bearing in mind that there were few entries. The cluster analysis produced two clusters and three individuals. The three individuals were not considered further.
Figure A5.22: Content analysis histogram for Historic sites

- Contingency - presence of the criterion
- Frequency - number of occurrences of the criterion

Figure A5.23: Histogram for Cluster 2, Historic sites

HISTORIC: Cluster 2

Figure A5.24: Histogram for Cluster 8, Historic sites

HISTORIC: Cluster 8
Cluster 2 (see Figure A5.23) containing eight members, represented historic places of some diversity, and included natural and aesthetic values, such as historic sites on bays, ruins and the like. In this cluster ‘symbolism’ is of above average significance (x1.6) and ‘aesthetic’ and ‘geology’ are a little below (x0.7 and x0.8 respectively). All other criteria except for the primary criterion ‘historic’, are absent.

Cluster 8 (see Figure A5.24) contains two historic places whose focus is archaeological (x6.5), giving them scientific interest also (‘general scientific’ x3.4). In these ‘integrity’, referring to the state of the material of archaeological interest, is also very high (x6.5).

Parks and gardens
Parks and gardens was a large landscape type, comprising parks, gardens, botanic gardens and the like. Although primarily set aside for their historic value these landscapes also have important aesthetic and horticultural values. There were 72 listings in this landscape type, 17% of the total analysed.

Typically expressions of the primary criterion ‘historic’ included ideas such as ‘layout dates from 1890’, ‘public park 1860’, ‘only 19C intact garden in town’ and ‘historic links to local government’. Historic value was mentioned 238 times in 72 listings (see Figure A5.25).

Dominating the secondary criteria is the criterion ‘aesthetic’ (in 82% of listings), demonstrating that notable parks and gardens must be visually attractive. Comments such as ‘important contribution to streetscape’, ‘pleasing contrast to industrial land’; ‘stately trees’ and ‘focal point’ all reinforce this. ‘Social’ is also important (in 40% of listings) and usually refers to recreational or cultural value or the significance of the area as open space. ‘General scientific’ (in 29% of listings) is high because it includes horticultural value. ‘Ecological’ at 18% is of some importance and generally reflects the capacity of these landscapes to act as habitat. Many components of value are either very low or absent, including ‘symbolism’, ‘geology’, ‘water’ (even though the presence of water often adds to a garden) and ‘archaeological’.
Figure A5.25: Content analysis histogram for Parks and gardens

- Contingency - presence of the criterion
- Frequency - number of occurrences of the criterion

Figure A5.26: Histogram for Cluster 26, Parks and gardens

PARKS AND GARDENS: Cluster 26

Figure A5.27: Histogram for Cluster 72, Parks and gardens

PARKS AND GARDENS: Cluster 72
Many measures of value are either very low or absent, including 'integrity', 'state of preservation', 'authenticity', 'uniqueness', 'rarity' and 'representative'. Example ' at 28% has some significance.

Parks and gardens clustered into 5 groups: 3 individuals, one small group of 3 members and one large group of 66 members, making a total of 72. The individuals were not considered further except to note that they contained very unusual landscapes, including the William Ricketts Sanctuary, a sculpture garden based on an Aboriginal theme interpreted by a European - most unusual.

Cluster 26 (see Figure A5.26) contains three listings which are all major urban parks within cities. Relatively few criteria are represented, and all represented are above average for the total. 'Economic' is the highest at x8 average, possibly due to recreational value having economic benefits. 'Ecological' and 'other' are also high at x5.5 and x5 respectively, 'other' referring to educational and tourism values. 'Example' and 'general scientific' are also quite high, with x3.5 and x2.4 respectively. In this landscape type 'general scientific' included various expressions of horticultural value.

Cluster 72, containing 66 listings (see Figure A5.27) was not particularly helpful, like the large clusters in ecological landscapes and aesthetic landscapes. In this cluster most criteria registered at between x0.7 and 1.1. The only exceptions to this were 'economic' and 'other' (both at x0.4). 'Integrity' and 'authenticity' were not used. These landscapes are the general parks and gardens with a range of values and attributes. These include historic value, aesthetic value, horticultural and social value.

Pastoral landscapes
Pastoral landscapes are rural and farming landscapes primarily set aside for their historic value but often having aesthetic and ecological value also. This landscape type contained 34 listings, 8% of the total analysed.

The primary criterion 'historic' was represented in diverse ways and included 'built by famous pioneering family', '1835 shepherd's hut', 'one
of first settled by free settlers'. Also well represented are the associations with important historical figures and events (see Figure A5.28). 'Historic' appeared 127 times in 34 listings (frequency).

'Aesthetic' dominates the secondary criteria (56%) and frequently refers to the beauty of pastoral scenes. 'Ecological' is less significant at 18% and reflects the capacity of pastoral lands to have value as habitat, remnant vegetation or stands of bush. 'Symbolism' and 'geology' are all a little lower than the above.

Of measures of value, 'state of preservation' and 'example' are the only ones of any significance.

'Economic is mentioned 5 times in 34 listings (frequency) in spite of most landscapes being economically productive units.

Pastoral landscapes clustered into 5 groups: 2 individuals, 2 groups of 2 and 3 members each, and one larger group of 27 members, making a total of 34. The two individuals were not considered further.

Cluster 1 (see Figure A5.29) containing three listings, were farm complexes with important natural features such as swamplands, native grasslands and nature reserves. They demonstrated relatively few criteria but these were all of higher than average occurrence. Natural criteria ‘geology’ and ‘ecological’ were very high, at x5.5 average, ‘archaeological’ was also high at x5, indicating Aboriginal occupation which often accompanies ecological richness. ‘Economic’ is also high at x3, indicating the economic activities of the landscapes as farms. ‘Aesthetic’ is well above average at x2, demonstrating the importance of visual quality in pastoral landscapes of heritage value.

Cluster 2 (see Figure A5.30) is the large cluster containing 27 members. In this, as in all larger clusters, the information tends to approximate the average more than it does for smaller clusters. Most criteria fell between 0.8 and 1.3 and were considered to be about average. ‘Geology’ was at 0.6. ‘Ecological’ and ‘economic’ were significantly lower than average at 0.2 and 0.3 respectively, in contrast to the previous cluster. ‘Integrity’, ‘authenticity’, ‘uniqueness’, ‘water’ and ‘archaeological’ are not used.
Figure A5.28: Content analysis histogram for Pastoral landscape type

- Contingency - presence of the criterion
- Frequency - number of occurrences of the criterion

Figure A5.29: Histogram for Cluster 1, Pastoral landscape type

Figure A5.30: Histogram for Cluster 2, Pastoral landscape type

Figure A5.31: Histogram for Cluster 11, Pastoral landscape type
Cluster 11 (see Figure A5.31) containing two listings represents very large pastoral landscapes, one an agricultural and physiographic unit, the other a large station. Very few criteria are represented. These are 'water' x17 which is very high as both places are located on major rivers, 'archaeological' (x9) for Aboriginal associations, 'social' (x7) as cultural landscapes, and 'ecological' (x3), partly because of the riparian habitat. All other criteria were absent.

Urban landscapes
These are the urban conservation zones, streetscapes, town squares and 'hard' landscapes which are not regarded as parks. There are 20 in the analysis, 5% of the total.

The primary criterion 'historic' is represented by phrases such as 'notable historic buildings', 'reflect history of development', 'connection with Vickery family' and so on. Again these tend to reflect associations with historic figures or events. Frequency of occurrence of 'historic' was 51 times in 20 listings (see Figure A5.32).

Dominating the secondary criteria is 'aesthetic', present in 85% of listings. This usually refers to the picturesque nature of the streetscape or urban space, or the collective architectural value of the buildings. In comparison with 'aesthetic', all other secondary criteria are lower, but 'symbolism' (30%), referring to contribution to distinctive character and 'social' (45%), referring to community value to the streets or towns are significant. All other criteria are either of very low significance or are absent.

Of measures of value, 'example' (25%), referring to examples of style, and 'state of preservation' have some significance.

Urban landscapes clustered into 5 groups: 3 individuals, one group of 2, and a larger group of 15, making a total of 20. The three individuals were interesting in their diversity, one being the main street of a country town, one being a tropical housing precinct in Darwin and the last being a country village designed by the noted landscape designer, Edna Walling. While noting their interest, these listings were not considered further.
Figure A5.32: Content analysis histogram for Urban conservation landscapes

URBAN CONSERVATION

- Contingency - presence of the criterion

- Frequency - number of occurrences of criterion

Figure A5.33: Histogram for Cluster 4, Urban conservation landscapes

URBAN CONSERVATION: Cluster 4

Figure A5.34: Histogram for Cluster 20, Urban conservation landscapes

URBAN CONSERVATION: Cluster 20
Cluster 4 (see Figure A5.33), with two listings, represented urban housing of different types, notable for natural features as well as their architectural focus. In this cluster 'ecological' and 'general scientific' are highly significant at x10. 'Preservation', 'example' and 'social' are also significant, falling between x2 and x3.4.

Cluster 20 (see Figure A5.34), containing most of the listings, showed five criteria other than the primary criterion 'historic'. These were 'symbolism', 'example', 'aesthetic', 'social' and 'other'. All of these fell between x0.9 and x1.3 and were considered to be approximately average. All other criteria were absent. This cluster represented the more conventional urban conservation areas such as streetscapes and areas of town.

Non-urban industrial landscapes

'Non-urban industrial landscapes' was used to describe industrial and related landscapes, for instance mines, timber mills and sawpits. These landscapes differed from pastoral, agricultural and natural landscapes in that they had a strong technological history component. They represented a small but well-defined section of the landscapes analysed being 4% of the sample. Their primary criterion 'historic' occurred 56 times in 18 listings (frequency, see Figure A5.35).

'Aesthetic' (present in 39% of listings) frequently referring to the landscape setting of the industry, and 'social' (in 22% of listings) often referring to the role of the industry in the district, were significant. Of low significance or absent were 'symbolism', 'general scientific', 'geology', 'water', 'ecological' and 'archaeological'.

Of the measures of value, 'example' (in 28% of listings) referring to being exemplary of certain technology, was significant. Of low significance or absent were 'integrity', 'state of preservation', 'authenticity', 'uniqueness', 'rarity' and 'representative'.

'Economic' occurred only once.
Figure A5.35: Content analysis histogram for Non-urban industrial landscapes

NON-URBAN INDUSTRIAL

- Contingency - presence of the criterion
- Frequency - number of occurrences of the criterion

Criteria

Figure A5.36: Histogram for Cluster 18, Non-urban industrial landscapes

NON-URBAN INDUSTRIAL: Cluster 18
Non-urban industrial landscapes clustered into 5 groups: 4 individuals and one relatively large group of 14 listings. The individuals were not considered further.

Cluster 18 (see Figure A5.36) represented a wide variety of rural industrial landscapes in which a number of criteria were evident. 'Uniqueness', 'rarity', 'representative', 'aesthetic' and 'other' were considered to have approximately average occurrences. 'Water' and 'social' were below average at x0.6, with 'example' at x0.5 and 'geology' at x0.4. The low occurrence of geology is interesting as some of these places are mining landscapes. The rest of the criteria were absent.
The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance
(The Burra Charter)

Preamble
Having regard to the International Charter for the Conservation and Renovation of Monuments and Sites (Venice 1964), and the Resolutions of 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the following Charter was adopted by Australia ICOMOS on 24th August 1979 at Burrara. Revisions were adopted on 21st February 1981 and 23 April 1988.

Definitions
Article 1. For the purpose of this Charter:
1.1 Place means site, area, building, or other work, group of buildings or other works together with associated elements and surroundings.
1.2 Cultural significance means artistic, historic, scientific or social value for past, present or future generations.
1.3 Fabric means all the physical material of the place.
1.4 Conservation means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance and any, according to circumstances, include preservation, restoration, reconstruction and adaptation and will be essentially a continuation of more than one of these.
1.5 Maintenance means the continuous protective care of the fabric, contents and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction and it should be treated accordingly.
1.6 Preservation means maintaining the fabric of a place in its existing state and involving deactivation.
1.7 Reconstruction means changing the EXISTING fabric of a place to a known earlier state by removing additions or by reconstituting existing components without the introduction of new materials.
1.8 Reconversion means reversing a place so exactly as possible to a known earlier state and is determined by the interpretation of materials present and the extent to which the place was part of a larger building or site, which cannot be reconstructed.
1.9 Adaptive reuse modifies a place to suit proposed compatible use.
1.10 Compatible use means a use which involves no change in the culturally significant fabric, changes which are inherently reversible, or changes which require minimal repair.

Explanatory Notes
These notes are only part of the Charter and may be added by Australian ICOMOS.

Appendix 6

Conservation Principles
Article 1. The aim of conservation is to retain the natural significance of a place and must include provision for its security, its amenability and its future.

Article 2. Conservation should have as its object the maintenance of the fabric and setting of the place and should not be done in a way that will adversely affect their quality or character. Restoration, if it is to be undertaken, must be done in a way that will not adversely affect their quality or character. Restoration, if it is to be undertaken, must be done in a way that will not adversely affect their quality or character.

Article 3. Conservation is based on a respect for the existing fabric and should involve the least possible physical interference. It should not destroy the evidence provided by the place.

Article 4. Conservation should make use of all the disciplines which can contribute to the study and safeguarding of a place. Techniques employed should be based on a thorough understanding of the architectural, scientific conditions and of the modern uses for which the place was designed or used and which have been supported by a body of experience.

Article 5. Conservation of a place should take into consideration all aspects of its natural significance, without concentrated emphasis on any aspect at the expense of others.

Article 6. The conservation policy appropriate to a place must first be determined by an understanding of its cultural significance.

Article 7. The conservation policy will determine which uses are compatible.

Article 8. Conservation requires the maintenance of an appropriate visual setting, e.g., form, scale, character, context and materials.

Article 9. Conservation involves the maintenance of the fabric and setting of a place, which would adversely affect the setting or character which would adversely affect the setting or character should be avoided.

Article 10. A building or work should remain in its historical location. The moving of all or part of a building or work is incompatible unless this is the only means of ensuring its survival.

Article 11. Conservation of places should be encouraged, provided it does not involve deactivation.

Article 12. Conservation of places should be encouraged, provided it does not involve deactivation.

Appendix 6

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**Conservation Processes**

**Preservation**

**Article 11.** Preservation is appropriate where the existing state of the fabric itself constitutes evidence of specific cultural significance, or where insufficient evidence is available to allow other conservation processes to be carried out.

**Article 12.** Preservation is limited to the protection, maintenance and, where necessary, the stabilization of the fabric without the deterioration of its cultural significance.

**Restoration**

**Article 13.** Restoration is appropriate only if there is sufficient evidence of an original state of the fabric and only if restoring the fabric to that state retains the cultural significance of the place.

**Article 14.** Restoration should reveal any culturally significant aspects of the place. It is based on respect for all the physical, documentary and other evidence and aims at the places where appropriate.

**Article 15.** Restoration is limited to the revealing of previously concealed or removed accessions in accordance with Article 14.

**Article 16.** The contribution of all periods to the place may be preserved. If a place includes the fabric of a number of different phases, such as a church, the removal of any one of the phases may be justified when that phase is of more cultural significance and the fabric which is to be revealed is of much greater cultural significance.

**Reconstruction**

**Article 17.** Reconstruction is appropriate only where a place is incomplete through damage or abstraction and where it is necessary for its survival, or where it retains the cultural significance of the place as a whole.

**Article 18.** Reconstruction is limited to the completion of a defunct entry and should not constitute the majority of the fabric of a place.

**Article 19.** Reconstruction is limited to the reproduction of all fabric, the form of which is known from physical and/or documentary evidence. It should be identifiable on close inspection as being new work.

**Adaptation**

**Article 20.** Adaptation is acceptable where the conservation of the place cannot otherwise be achieved, and where the adaptation does not substantially detract from its cultural significance.

**Article 21.** Adaptation may be limited to such as may be necessary for use of the place in accordance with Articles 6 and 7.

**Article 22.** Fabric of cultural significance removed in the process of adaptation must be kept safely to enable its future restoration.

**Conservation Practice**

**Article 23.** Work on a place must be preceded by professionally prepared studies of the physical, documentary and other evidence, and the existing values are recorded before any intervention is begun.

**Article 24.** Study of a place by any intervention in the place or by archaeological excavation should be undertaken where necessary to provide data essential for the proper management, conservation and understanding of the cultural significance.

**Article 25.** The inventor of the place may be identified as the place for the purpose of the place.

**Article 26.** The organization and individuals responsible for policy decisions must be named and specific responsibility limits for such decisions.

**Article 27.** Appropriate professional advice and supervision must be maintained at all stages of the work and a log book of new evidence and additional decisions recorded as in Article 25 above.

**Article 28.** The records required by Articles 23, 25, 26 and 27 should be placed in a permanent archive and made available publicly.

**Article 29.** The terms referred to in Articles 10 and 12 should be professionally catalogued and promoted.

Words in italics are defined in Article 1.
GUIDELINES TO THE BURRA CHARTER:
PROCEDURES FOR UNDERTAKING STUDIES AND REPORTS

These guidelines for the preparation of professional studies and reports were adopted by the Australian National Committee of the International Council of Museums and Sites Australia (ICOMOS) on 21 April 1988. They should be read in conjunction with the Burra Charter.

Contents
1.0 Preface
2.0 Agreement between client and practitioner
3.0 Responsibility for content of report
4.0 Draft report
5.0 Urgent action
6.0 Additional work
7.0 Recommendations for further investigation
8.0 Conservation
9.0 Adoption and review of report
10.0 Further action
11.0 Accessibility of information

1.0 Preface
These guidelines make recommendations about professional practice in the preparation of studies and reports within the terms of the Burra Charter.

2.0 Agreement between client and practitioner
Before undertaking a study or report, the client and the practitioner should agree upon:
(a) the terms of the study, for example, up to the number of weeks or periods designated in the contract for the completion of the report; and
(b) the boundaries of the place;
(c) any aspect which requires special research;
(d) the dates for the commencement of the task, submission of the draft report and submission of the final report;
(e) the fee and the basis upon which fees and disbursements will be paid;
(f) the basis for any further investigation which may be required, for example, within the terms of 3.1 of Guidelines to the Burra Charter: Conservation Policy;
(g) the relationship of the client to the project for implementing the recommendations of the report;
(h) the number of copies of the report to be supplied to each agent;
(i) copyright and confidentiality;
(j) how the authorship will be acknowledged.

2.1 Further evidence
If after the completion of the report further evidence is revealed, for example, by interventions in the fabric or information from other sources, it is desirable for this evidence to be referred to in the original practitioner so that the report may be amended if necessary.

11.0 Accessibility of information
All material relating to the cultural significance of the place should be made readily available to increase the common pool of knowledge. Publication by the client and/or practitioner should be encouraged.
GUIDELINES TO THE BURRA CHARTER: CULTURAL SIGNIFICANCE

These guidelines for the establishment of cultural significance were adopted by the Australian National Transit Authority (representing the Australian Conservation Foundation and Save Australia from Monotony in 1982). They should be read in conjunction with the Burra Charter.

Contents
1.0 Preface
1.1 Scope of problem
1.2 Approaches
1.3 Need to establish cultural significance
1.4 Skills required
1.5 Issues not considered
2.0 THE CONCEPT OF CULTURAL SIGNIFICANCE
2.1 Introduction
2.2 Ancestral value
2.3 Scientific value
2.4 Social value
2.5 Other approaches
3.0 Establishing Cultural Sovereignty
3.1 Introduction
3.2 Collection of information
3.3 The assessment of cultural significance
3.4 Statement of cultural significance
4.0 The Report
4.1 Contents
4.2 Written material
4.3 Graphic material
4.4 Sources
4.5 Exhibitions and discussion
5.0 PREFACE
5.1 Introduction of guidelines
These guidelines are intended to clarify the nature of professional work done within the terms of the Burra Charter. They recommend a methodology for assessing the cultural significance of a place, including the process of determining whether a place is of cultural significance and identifying what information is publicly available.

5.2 Applicability
The guidelines apply to any place likely to be of cultural significance regardless of its type or size.

5.3 Need to establish cultural significance
The assessment of cultural significance and the process of determining cultural significance, embodied in a report as described in section 4.4, is essential to a sensible decision about the future of a place.

5.4 Skills required
In accordance with Article 4 of the Burra Charter, the study of a place should make use of all relevant disciplines. The professional skills required for such study are not constant. It cannot be assumed that any one practitioner will have the full range of skills required to assess cultural significance in a manner appropriate to the place in question. Sometimes in the course of a task, additional practitioners with special experience may be needed.

5.5 Issues not considered

1.5 Important cultural significance and the protection and preservation of such places is of universal importance. In the absence of information recorded in writing, other methods of communication, such as traditional oral traditions, must be relied upon for the rescue and protection of such places.

2.0 THE CONCEPT OF CULTURAL SIGNIFICANCE
2.1 Introduction
In establishing the cultural significance of a place, it is necessary to assess all the information relevant to its understanding of the place and its role in the history of humankind. The concept of cultural significance may be viewed as a tool for understanding the concept of cultural significance in the context of the place.

2.2 Ancestral value
The ancestral value of a place is derived from the stories, legends, and oral traditions of the people who have inhabited the place. The ancestral value of a place is not necessarily a legal concept, but it is an essential component of the cultural significance of a place.

2.3 Scientific value
The scientific value of a place is determined by the scientific value of the place itself and the value of the data collected in the place. The data collected in the place must be relevant to the place and its role in the history of humankind.

2.4 Social value
The social value of a place is determined by the social value of the place itself and the value of the data collected in the place. The data collected in the place must be relevant to the place and its role in the history of humankind.

3.0 Establishing Cultural Sovereignty
3.1 Introduction
In establishing the cultural significance of a place, it is necessary to assess all the information relevant to its understanding of the place and its role in the history of humankind. The concept of cultural significance may be viewed as a tool for understanding the concept of cultural significance in the context of the place.

3.2 Collection of information
Information relevant to the assessment of cultural significance should be collected. Such information includes:

(a) the development of the place and its relationship to the surrounding fabric;
(b) the existing and intended uses of the place;
(c) the cultural characteristics which have affected the form and fabric of the place;
(d) the significance of the place as a part of the fabric of the place;
(e) the relationship of the place to other places, for example in terms of design, technology, use, locality, or style;
(f) any other factors relevant to an understanding of the place.

3.3 Assessment of cultural significance
The assessment of cultural significance follows the collection of information.

The validity of the guidelines will depend upon the care with which the data is collected and the reason applied to it. In assessing cultural significance, the practitioner should note conditions. Unrelated aspects should be identified.

3.4 Concept
In assessing these aspects a practitioner should record the place sufficiently to provide a basis for the necessary discussion of the facts. During such recording any obviously urgent problems regarding the place, such as instability or security, should be reported to the client.

3.5 Description of the fabric
In preparation of a report, fabric at the site should be clearly within the terms of the Burra Charter.

3.6 Hypotheses
Hypotheses, however, may be as informed, should not be presented as established facts. It is possible hypotheses should be set out, with the evidence for and against them, and the line of reasoning that has been followed. Any avenue which has been made to check the hypothesis should be recorded, so as to avoid repeating future research.

3.7 Statement of cultural significance
The practitioners should prepare a succinct statement of cultural significance, supported by, or cited, and related to, supporting graphic material to help explain the significance.

It is essential that the statements be clear and plan, expressing simply why the place is of value but retaining the physical or documentary evidence.

4.0 THE REPORT
4.1 Content
The report will comprise written and graphic material and will present an assessment of cultural significance and a statement of cultural significance. In order to avoid unnecessary bulk, only material directly relevant to the points of assessing cultural significance and creating a statement of cultural significance should be included.

See also Guidelines to the Burra Charter: 

PROTECTING NATURAL AND CULTURAL FEATURES 

4.2 Water management
The terms should be clearly set out and easy to follow. In addition to the assessment and statement of cultural significance as set out in 3.2, 3.3 and 3.4 it should include:
(a) cause of the claim;
(b) names of all the practitioners engaged in the task.
GUIDELINES TO THE BURRA CHARTER: CONSERVATION POLICY

These guidelines, which cover the development of conservation policy and strategy for implementation of that policy, were adopted by the Australian Conservation Council at the Interim Council on Matters of Conservation Policy held at the Old Parliament House in Canberra on 21 April 1988. They should be read in conjunction with the Burra Charter.

Contents
1.0 Preface
2.0 The Scope of the Conservation Policy
3.0 Conservation Policy
3.1 Definition of conservation policy
3.2 Statement of conservation policy
3.3 Implementing conservation policy
4.0 Implementation of Conservation Policy
5.0 The Report
5.1 Introduction
5.2 Written Material
5.3 Graphic Material
5.4 Sources

1.0 PREFACE
1.1 Introduction to guidelines

These guidelines are intended to clarify the nature of professional work done within the terms of the Burra Charter. They recognize a methodological procedure for development of the conservation policy for a place, for the preparation of conservation policy and for the carrying out of implementation of that policy.

1.2 Cultural significance

The establishment of cultural significance and the preparation of a statement of cultural significance are essential preconditions to the development of a conservation policy (refer to Guidelines to the Burra Charter: Cultural Significance).

1.3 Need to develop conservation policy

The development of a conservation policy, embodied in a report as defined in Section 1.8, is in practice often a prerequisite for making decisions about the future of a place.

1.4 Skills required

In accordance with the Burra Charter, the study of a place should make use of all relevant disciplines. The professional skills required for each study are not common. It cannot be assumed that any one practitioner will have all the range of skills required to develop a conservation policy and prepare the report. However, it may be necessary to consult with other practitioners and organizations.

2.0 THE SCOPE OF THE CONSERVATION POLICY

2.1 Introduction

The purpose of the conservation policy is to state how the conservation areas of the place may best be achieved in both the long and short term. It will be specific to that place.

The conservation policies will include the means listed below.

2.2 Fabric and setting

The conservation policy should identify the most appropriate way of caring for the fabric and setting of the place, without the statement of significance and other constraints. A specific combination of conservation actions should be identified. This may not be in line with the fabric.

2.3 Use

The conservation policy should identify a use or combination of uses, or conservation use, that are compatible with the essence of the cultural significance of the place and that are feasible.

2.4 Interpretation

The conservation policy should identify appropriate ways of making the significance of the place understood, consistent with the integrity of that significance. This may be a combination of the removal of the fabric, the use of the place and the use of interpretative interpretative material.

In some cases the cultural significance and other constraints may preclude the introduction of such uses and materials.

2.5 Management

The conservation policy should identify, where appropriate, management measures through which the conservation policy is capable of being implemented, and should also identify (a) the person responsible for subsequent conservation and management decisions and for the day-to-day management of the place, (b) the mechanism by which these decisions are to be made and recorded, (c) the means of providing security and regular maintenance for the place.

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2.4 Control of physical intervention in the fabric
The conservation policy should include provisions for the control of physical intervention. It may:
(a) specify unavoidable interventions;
(b) specify the degree or scale of intervention necessary to achieve its purpose;
(c) specify the degree or scale of intervention acceptable for non-conservation purposes;
(d) specify explicit research methods;
(e) specify research proposals, and the means by which they will be assessed;
(f) provide for the conservation of significant fabric and contents removed from the place;
(g) provide for the preservation of significant fabric and contents removed from the place;
(h) provide for the dissemination of the resultant information.
2.5 Approval of the conservation policy
Approval of the conservation policy is required at the time of its adoption.
2.6 Constraints on intervention
The conservation policy shall identify social, historical, legal or other cultural constraints which might limit the accessibility or invasiveness of the place.
2.7 Future development
The conservation policy shall provide guidelines for future development and for the conservation of significant fabric and contents removed from the place.
2.8 Adoption and review
The conservation policy shall contain provision for adoption and review.
3. DEVELOPMENT OF CONSERVATION POLICY
3.1 Introduction
In developing a conservation policy for the place, it is necessary to assess all the information relevant to the purposes of the place and its fabric. Control of the land is a matter of culture and society.
3.2 Information
In order to develop the conservation policy, sufficient information is required. The following should be collected:
3.2.1 Significant fabric
- Establish the nature, extent, and degree of intervention of the significant fabric, including contents (see Guidance on Buna Charters: Cultural Significance).
3.2.2 Evidence of user requirements
- Investigate user needs, aspirations, current proposals, available finance, etc., in respect of the place.
3.2.3 Other requirements and concerns
- Investigate other requirements and concerns likely to affect the future of the place and its setting including:
- the relationship between the place and its setting;
- the place and its setting;
- the relationship between the place and its setting;
- the relationship between the place and its setting.
3.2.4 Conditions of fabric
- Survey the place sufficiently to establish how its physical, social and cultural characteristics are likely to affect the future of the place and its setting.
3.2.5 Uses
- Identify the place sufficiently to establish how its physical, social and cultural characteristics are likely to affect the future of the place and its setting.
3.2.6 Comparative information
- Collect comparative information about the conservation of places of similar type (if available).
3.2.7 Unusual information
- Identify information which has been sought and is available, and which may be critical in the determination of the conservation policy or in its implementation.
3.3 Statement of information
- The information gathered should now be assessed in relation to the criteria arising from the statement of cultural significance for the purpose of developing a conservation policy.
3.4 Statement of conservation policy
- The conservation policy should be written in a manner which addresses each of the issues listed in 2.6, viz.:
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5).
3.5 Future development
The conservation policy should be written in a manner which addresses each of the issues listed in 2.6, viz.:
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5).
3.6 Adoption and review
The conservation policy should be written in a manner which addresses each of the issues listed in 2.6, viz.:
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5);
- the statement of conservation policy (see 3.4 and 3.5).
3.7 Implementation of conservation policy
Following the preparation of the conservation policy the owner shall adopt it. The conservation policy shall be prepared in consultation with the owner and other stakeholders. The conservation policy shall include the following:
(a) the financial resources to be used;
(b) the technical and other staff to be used;
(c) the sequence of events;
(d) the timing of events;
(e) the management structure.
4.0 THE REPORT
4.1 Introduction
The report is a vehicle through which the conservation policy is expressed, and upon which the conservation action is based.
4.2 Summary
See also Guidance on Buna Charters: Procedures for Undertaking Studies and Reports.
4.3 Writing
The report must include:
(a) the statement of cultural significance;
(b) the development of conservation policy;
(c) the statement of conservation policy;
(d) the implementation of conservation policy;
(e) the statement of conservation policy.
4.4 Statement of conservation policy
The conservation policy should be written in a manner which addresses each of the issues listed in 2.6, viz.:
- the statement of conservation policy (see 3.4 and 3.5);
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- the statement of conservation policy (see 3.4 and 3.5).
4.5 Adoption and review
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4.6 Implementation of conservation policy
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(a) the financial resources to be used;
(b) the technical and other staff to be used;
(c) the sequence of events;
(d) the timing of events;
(e) the management structure.
4.7 The report
The report is a vehicle through which the conservation policy is expressed, and upon which the conservation action is based.
4.8 Summary
See also Guidance on Buna Charters: Procedures for Undertaking Studies and Reports.
5.0 SOURCES
All sources used in the report must be cited with sufficient precision to enable others to locate them. All sources of information, both documentary and oral, consulted during the report should be listed, whether or not they proved fruitful.
In respect of source material privately held, the name and address of the owner should be given, but only with the owner's consent.
5.1 Establishment and adoption
The report must be established and the conservation policy adopted in accordance with Guidelines on Buna Charters: Procedures for Undertaking Studies and Reports.
Author/s:
Schapper, Janet Anne

Title:
Criteria for the evaluation of landscape as heritage

Date:
1994

Persistent Link:
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