



Australian Heritage Database
Places for Decision
Class : Indigenous

Identification

List:	National Heritage List
Name of Place:	Burruu Peninsula, Islands of the Dampier Archipelago and Dampier Coast
Other Names:	Dampier Archipelago (including Burruu Peninsula)
Place ID:	105727
File No:	5/08/203/0056
Nomination Date:	20/05/2004
Principal Group:	Aboriginal Art Site

Status

Legal Status:	24/05/2004 - Nominated place
Admin Status:	23/08/2006 - Assessment by AHC completed

Assessment

Assessor:	
Recommendation:	
Assessor's Comments:	
Other Assessments:	:

Location

Nearest Town:	Dampier
Distance from town (km):	
Direction from town:	
Area (ha):	87400
Address:	Karratha Dampier Rd, Dampier, WA 6713
LGA:	Roebourne Shire WA

Location/Boundaries:

About 87400ha, at Dampier, comprising those parts of the Burruu Peninsula, Islands of the Dampier Archipelago and Dampier Coast located within a boundary line commencing at the intersection of the coastline and an unnamed road at the southern tip of Burruu Peninsula (approximate MGA point 462750mE 7710090mN), then consecutively via the following MGA points: 461410mE 7710050mN, 460140mE

7709090mN, 459350mE 7708760mN, 458770mE 7707980mN, 458160mE
7707470mN, 455350mE 7707160mN, 450400mE 7704920mN, 453070mE
7701380mN, 452060mE 7700760mN, 449130mE 7703040mN, 449100mE
7713670mN, 442620mE 7720980mN, 454770mE 7736540mN, 459910mE
7739850mN, 466560mE 7739640mN, 468940mE 7731030mN, 467520mE
7724160mN, 465750mE 7718420mN, 465630mE 7717000mN, 464220mE
7716260mN, then directly to the intersection of the Low Water Mark (LWM) with
MGA easting 465309mE (approximate MGA point 465309mE 7712683mN), then
easterly via the LWM to its intersection with MGA easting 467940mE, then directly
south west to the northern side of the railway easement, then easterly via the northern
side of the railway easement to its intersection with the eastern boundary of Land
Parcel ID DEWITL 38, then north easterly via that section of boundary and its
alignment to its intersection with the eastern boundary of the railway easement at
approximate MGA point 470740mE 7714630mN, then north easterly via that
boundary to its intersection with MGA northing 7716270mN, then consecutively via
the following MGA points; 472081mE 7716799mN, 472115mE 7716820mN,
472157mE 7716779mN, 472216mE 7716802mN, 472295mE 7716763mN,
472364mE 7716661mN, 472364mE 7716595mN, 472352mE 7716545mN,
472324mE 7716527mN, 472290mE 7716447mN, 472254mE 7716424mN,
472149mE 7716291mN, 472100mE 7716379mN, 472137mE 7716428mN,
472124mE 7716590mN, 472142mE 7716671mN, 472124mE 7716748mN,
472406mE 7716998mN, 472686mE 7716955mN, 472750mE 7717325mN, then north
easterly directly to the intersection of the LWM with MGA easting 472880mE
(approximate MGA point 472880mE 7717552mN), then easterly via the LWM to its
intersection with MGA easting 474480mE, then easterly directly to the intersection of
MGA easting 475200mE with the boundary of Land Parcel ID P194584 464
(approximate MGA point 475200mE 7718295mN), then easterly via that boundary to
Burrup Road, then southerly via Burrup Road to its intersection with an unnamed road
at approximate MGA point 475810mE 7718220mN, then easterly via the unnamed
road to its intersection with MGA easting 476880mE (approximate MGA point
476880mE 7718470mN), then consecutively via the following MGA points;
476877mE 7718684mN, 477122mE 7718685mN, 477473mE 7718460mN,
477612mE 7718418mN, 477700mE 7718425mN, 477877mE 7718469mN, then north
easterly to the intersection of MGA northing 7718570mN with the boundary of Land
Parcel ID P028526 594 (approximate MGA point 478107mE 7718570mN), then
northerly via that boundary to its intersection with the southern boundary of Land
Parcel ID P028526 600, then westerly and south westerly via the southern boundary
of Land Parcel ID P028526 600 to its southern most point, then continuing south
westerly via the north western boundary of Land Parcel ID P194276 398 to its most
southern point, then southerly and westerly via the eastern and southern boundary of
Land Parcel P194067 377 to its south west corner, then continuing westerly via Land
parcel boundary P028526 594 to its intersection with MGA easting 477570mE, then
directly south to an unnamed road, then via the following MGA points consecutively;
477477mE 7719877mN, 477479mE 7719809mN, 477453mE 7719722mN,
477472mE 7719580mN, 477404mE 7719464mN, 477391mE 7719407mN,
476943mE 7719206mN, 476777mE 7719134mN, 476526mE 7718986mN,
476259mE 7718890mN, 476189mE 7718897mN, 476117mE 7718939mN,
476003mE 7718977mN, then westerly directly to the intersection of MGA northing
7718970mN with the western boundary of Land Parcel ID P028526 598 (approximate
MGA point 475950mE 7718970mN), then northerly via that boundary to its

intersection with MGA northing 7719520mN, then westerly to the intersection of two unnamed roads, then westerly via the unnamed road to its intersection with the southerly alignment of the eastern boundary of Land Parcel P220595 471, then northerly via that alignment and boundary to the north east corner of Land Parcel P220595 471, then westerly via the northern boundary and alignment of Land Parcel P220595 471 to its intersection with an unnamed road, then westerly via the unnamed road to its intersection with MGA northing 7719500mN, then south westerly directly to the south east corner of Land Parcel ID P194124 385, then westerly directly to the south west corner of Land Parcel ID P219624 337, then north westerly directly to the western most point of Land Parcel ID P219624 336, then north westerly via the boundary of Land Parcel ID P220595 472 to its intersection with MGA easting 474060mE (approximate MGA point 474060mE 7719800mN), then north easterly directly to the point of intersection of Mof Road with MGA 474500mE (approximate MGA point 474500mE 7720340mN), then westerly via Mof Road to its intersection with the boundary of Land Parcel ID P220595 472, then north easterly and north westerly via that boundary to the northern most point of Land Parcel ID P220595 472, then northerly via the LWM to its intersection with the north westerly alignment of the south western boundary of Land Parcel ID P220146 379, then south easterly via that alignment and boundary to its intersection with an unnamed road (approximate MGA point 475550mE 7721200mN), then northerly and easterly via the unnamed road to its intersection with MGA easting 476120mE (approximate MGA point 476120mE 7721840mN), then via the following MGA points consecutively; 476140mE 7721765mN, 476188mE 7721757mN, 476219mE 7721627mN, 476120mE 7721608mN, 476108mE 7721399mN, 476391mE 7721013mN, then easterly to a point of intersection of MGA northing 7721000mN with an Burrup Road (approximate MGA point 476826mE 7721000mN), then northerly via that road to its intersection with an unnamed road (approximate MGA point 476874mE 7721423mN), then north easterly via the unnamed road to its intersection with MGA northing 7721625mN (approximate MGA point 477108mE 7721625mN), then via the following MGA points consecutively; 476893mE 7721857mN, 476981mE 7722095mN, 477003mE 7722191mN, 477337mE 7722447mN, then northerly to a point of intersection of the LWM with MGA easting 477340mE (approximate MGA point 477340mE 7723470mN), then westerly and northerly via the LWM to the northern most point of the peninsula (approximate MGA point 477240mE 7724010mN), then via the following MGA points consecutively; 476110mE 7724010mN, 476110mE 7729230mN, 478270mE 7735580mN, 477910mE 7737540mN, 478790mE 7746720mN, 481090mE 7748230mN, 488530mE 7743340mN, 489200mE 7735260mN, 479500mE 7717420mN, 478180mE 7715915mN, then directly to a point where the eastern coastline of Burrup Peninsula intersects with MGA easting 478170mE (approximate MGA point 478170mE 7715930mN), then south westerly via the coastline to its intersection with MGA easting 466110mE (approximate MGA point 466110mE 7710500mN), then via the following MGA points consecutively; 466090mE 7710570mN, 465920mE 7710685mN, 465710mE 7710755mN, then directly to a point where the coastline is intersected by MGA easting 465560mE (approximate MGA point 465560mE 7710460mN), then south westerly via the coastline to the point of commencement. The following areas are excluded:

1. An area commencing at MGA point 472754mE 7714122mN, then via the following MGA points consecutively: 472926mE 7713806mN, 473208mE

- 7713959mN, 473365mE 7713658mN, 472799mE 7713350mN, 472465mE 7713965mN, then directly to the point of commencement.
2. An area commencing at MGA point 471393mE 7716097mN, then via the following MGA points consecutively: 471356mE 7716019mN, 471347mE 7715928mN, 471303mE 7715932mN, 471275mE 7716018mN, 471291mE 7716116mN, 471352mE 7716197mN, 471396mE 7716225mN, 471548mE 7716222mN, 471539mE 7716168mN, 471403mE 7716187mN, 471371mE 7716168mN, 471365mE 7716117mN, then directly to the point of commencement.
 3. An area commencing at MGA point 471638mE 7716012mN, then via the following MGA points consecutively: 471703mE 7715991mN, 471688mE 7715943mN, 471630mE 7715916mN, 471587mE 7715960mN, then directly to the point of commencement.
 4. An area commencing at MGA 472051mE 7715906mN, then via the following MGA points consecutively: 472191mE 7715752mN, 472117mE 7715694mN, 471890mE 7715852mN, 471967mE 7715982mN, 472084mE 7716074mN, 472104mE 7716123mN, 472148mE 7716145mN, 472190mE 7716119mN, then directly to the point of commencement.

Assessor's Summary of Significance:

The Dampier Archipelago (including the Burrup Peninsula) contains one of the densest concentrations of rock engravings in Australia with some sites containing thousands or tens of thousands of images. The rock engravings comprise images of avian, marine and terrestrial fauna, schematised human figures, figures with mixed human and animal characteristics and geometric designs. At a national level it has an exceptionally diverse and dynamic range of schematised human figures some of which are arranged in complex scenes. The fine execution and dynamic nature of the engravings, particularly some of the composite panels, exhibit a degree of creativity that is unusual in Australian rock engravings.

The range of human images found in the Dampier Archipelago include forms characteristic of all the major style provinces in the Pilbara, an area that has been described as the richest and most exciting region of rock engravings in Australia. The different degrees of weathering and the large number of super-positioned engravings provide an outstanding opportunity to establish a relative chronology for motifs characteristic of the major style provinces in the Pilbara. The combination of archaeological sites and high densities of engraved images provides an outstanding opportunity to develop a scientific understanding of the social functions of motifs.

The different degrees of weathering of particular types of faunal engravings on the Dampier Archipelago provide, in the national context, an unusual and outstanding visual record of the Aboriginal responses to the rise of sea levels at the end of the last Ice Age. The different degrees of weathering of some complex scenes provide exceptional visual evidence for the antiquity of depictions of complex scenes of human activity. The deeply weathered 'archaic faces' are an exceptional demonstration of the long history of contact and shared visual narratives between Aboriginal societies in the nominated place and inland arid Australia.

There is a high density of stone arrangements within part of the nominated area, the Burrup Peninsula. They include standing stones, stone pits and more complex circular

stone arrangements. Standing stones in the Dampier Archipelago range from single monoliths through to extensive alignments comprising at least three or four hundred standing stones. Some of these standing stones are associated with increase ceremonies, *thalu*, others were used to mark particular places with scarce resources, such as seasonal rock pools, and were also used to mark sites of traditional significance. The overall density of stone arrangements on the Burrup Peninsula, and the wide range of types of stone features found in the Dampier Archipelago, are exceptional by Australian standards.

Draft Values:

<i>Criterion</i>	<i>Values</i>	<i>Rating</i>
A Events, Processes	The engravings on the Dampier Archipelago include finely executed images of a wide range of terrestrial, avian and marine fauna many of which can be identified to genus or species level (Vinnicome 2002; McDonald and Veth 2005). Most of the engravings, particularly the images of marine fauna, are slightly or moderately weathered and were produced following the rise of sea levels about 8,000 years ago. There are a number of deeply weathered images of terrestrial fauna, particularly kangaroo, which date to the time when the sea was much lower (Lorblanchet 1992). The different degrees of weathering of particular types of faunal engravings on the Dampier Archipelago provide an outstanding visual record of the course of Australia's cultural history through the Aboriginal responses to the rise of sea levels at the end of the last Ice Age.	AT
A Events, Processes	There are a large number of deeply weathered, engraved 'Archaic Faces' in the Dampier Archipelago including some images that are unique to the area (McDonald and Veth 2005). 'Archaic faces' are widely distributed through arid Australia and are found in the Calvert ranges, the Cleland Hills, the Victoria River District, South Australia and Queensland (McDonald and Veth 2005). , The 'Archaic Faces' on the Dampier Archipelago demonstrate the long history of contact and shared visual narratives between Aboriginal societies in the Dampier Archipelago and inland arid Australia and are exceptional in the course of Australia's cultural history.	AT
B Rarity	The Pilbara has been described as '... without doubt the richest and most exciting region of rock engravings in Australia' McCarthy (1968: vi). It is the diversity of representations of the human form (anthropomorphs), many of which are in dynamic attitudes, and the way in which they are sometimes arranged in complex scenes that makes the Aboriginal engravings in the Pilbara exceptional. Although there are a number of distinct regional engraving styles in the Pilbara (Wright 1968), the greatest diversity in depictions of the human form, which also include representatives of anthropomorphs characteristic of the other Pilbara style provinces, occurs in the Dampier Archipelago (McDonald	AT

	and Veth 2005: section 4.6). There are a number of complex panels showing groups of people engaged in both mundane and sacred activities, including hunting scenes, ceremonial activity and images of anthropomorphs climbing or hanging from lines. At a national level, the Dampier Archipelago is outstanding for its diversity of engraved human forms and the antiquity of depictions of complex scenes showing human activity, which are rare at the national level.	
B Rarity	There is a very high density of rock engraving sites on the Dampier Archipelago. Although the majority of these sites contain relatively few engravings (Vinnicombe 1987a; Veth <i>et al</i> 1993;) there are some sites with hundreds (Virili 1977; Vinnicombe 1987a: Fig 6; Veth <i>et al</i> 1993: Fig 7.1), thousands (Dix 1977; Virili 1977; Vinnicombe 1987a) or tens of thousands of engravings (Lorblanchet 1992; Veth <i>et al</i> 1993). An analysis of site locations demonstrates that large concentrations of engravings in the Dampier Archipelago are found on inland plateaus, steep valley inclines bordering watercourses and on rock platforms next to the ocean (Vinnicombe 2002; McDonald and Veth 2005). The Dampier Archipelago contains concentrations of rock engravings, which when compared with other similar sites in Australia are rare (McNickel 1985; Wright 1968; Stanbury and Clegg 1990).	AT
B Rarity	There is a high density of standing stones, stone pits and circular stone arrangements on the Burrup Peninsula (Veth <i>et al</i> 1993). The stone pits on the Burrup Peninsula have been interpreted as hunting hides and the standing stones may be either ceremonial sites (<i>thalu</i> sites), or markers for resources such as potable water. There is also a high diversity in the standing stones and stone arrangements across the Dampier Archipelago, including some with unusual components (Vinnicombe 1987a). The density of standing stones, stone pits and circular stone arrangements on the Burrup Peninsula, and the diversity of these stone features across the Dampier Archipelago are rare at the national level (Vinnicombe 1987a).	AT
C Research	The Dampier Archipelago contains engravings of human figures characteristic of most of the major art provinces in the Pilbara as well as a number of forms unique to the area (McDonald and Veth 2005). It has the potential to become a key site for establishing the sequence of engraved motifs in the Pilbara, an area described as without doubt the richest and most exciting region of rock engravings in Australia (McCarthy 1968: vi). The different degrees of weathering and the large number of super-positioned engravings provides an outstanding opportunity to establish a relative chronology for motifs characteristic of the major style provinces in the Pilbara (Lorblanchet 1992; Vinnicombe 2002; McDonald and	AT

C Research	<p>Veth 2005).</p> <p>The distribution of engraved motifs across the Dampier Archipelago reflects economic and cultural variability (Green 1982; Vinnicombe 2002; Veth <i>et al.</i> 1993). Previous work on the Dampier Archipelago provides an outstanding demonstration of the way in which a detailed analysis of archaeological remains (middens, grinding patches, quarries) and associated rock engravings can contribute to an understanding of the cultural and economic meaning of the rock engravings (Lorblanchet 1992). The analysis demonstrated a close association between animal motifs and midden contents in one area of Skew Valley and the way in which some motifs (tracks) are placed in inconspicuous positions while other motifs (anthropomorphs) are publicly displayed. This work demonstrates that on the Dampier Archipelago, areas where archaeological remains are associated with large numbers of engravings have outstanding potential to yield information that will contribute to an understanding of the nation's cultural history.</p>	AT
C Research	<p>'Archaic faces' occur on the Dampier Archipelago and are found in many parts of arid Australia (McDonald and Veth 2005; Dix 1977). The distribution of these engravings indicates there were shared representations across the area in the deep past. There is evidence that at the time of European contact Western Desert peoples were actively moving towards the coast (Tindale 1987). The place has outstanding potential to yield information contributing to an understanding of the long history of connections between the coast and the Western Desert.</p>	AT
D Principal a class of places	<p>The rock engravings on the Dampier Archipelago include an extraordinarily diverse range of animal and human figures which are characteristic of regional styles that occur elsewhere in the Pilbara. Images of terrestrial and marine animals and birds in the Dampier Archipelago are similar to the range of images found at other coastal sites in the Pilbara such as Depuch Island and Port Hedland while the range of land animals is similar to those depicted in inland areas (cf Wright 1968; Ride <i>et al</i> 1964). A slightly simpler version of <i>Kurangara</i> figures, characteristic of the Upper Yule, is found in the Dampier Archipelago, only differing in the exaggeration of genitalia and intricacy of headdresses (McDonald and Veth 2005: Section 4.6). Similarly, a type of <i>Minjiburu</i> figure characteristic of Port Hedland also occurs in the Dampier Archipelago. Large birds or macropods with spears in their backs, images of turtles and hunting scenes characteristic of Sherlock Station and Depuch Island are found in the Dampier Archipelago, as are examples of stylised figures with exaggerated hands and feet, stylised</p>	AT

stick figures with small anthropomorphs positioned under both arms. There are a number of images central to the style found on the Dampier Archipelago (McDonald and Veth 2005). They include: solid-bodied anthropomorphs with disconnected circular infilled heads and sinuous arm positions; profile figures with solid bodies and thin arms (often with an erect penis), occasionally positioned in rows; profile figures with the disconnected heads, grouped with each other or around a central line (as if climbing); groups of figures positioned beneath lines, as if hanging; the use of infilled circles to indicate joints (elbows, knees) or body parts (genitalia, stomachs, hands, feet); and therianthropes with various mixed human and animal characteristics, particularly lizard and bird. The Dampier Archipelago is outstanding as a place where engravings of human forms representative of all of the style provinces in the Pilbara, the richest and most exciting region of rock engravings in Australia, are found (McDonald and Veth 2005: Section 4; McCarthy 1968: vi).

D Principal characteristics of a class of places	Standing stones on the Dampier Archipelago range from single monoliths through to extensive alignments comprising at least three or four hundred standing stones (Vinnicombe 2002). They are outstanding in a national context because they are known to have served a number of purposes. While some standing stones are associated with increase ceremonies, <i>thalu</i> , others were used to mark particular places with scarce resources, such as seasonal rock pools, and were also used to mark sites of traditional significance.	AT
F Creative or technical achievement	The rock engravings in the Dampier Archipelago show exceptional creative diversity when compared with the other art provinces in the Pilbara or rock engravings elsewhere in Australia (McDonald and Veth 2005: Section 4.6). They include examples of the types of human figures characteristic of the other art provinces in the Pilbara as well as having unique human forms. The engravings on the Dampier Archipelago include detailed and finely executed examples of water birds, crabs, crayfish, kangaroos, turtles and fish, some of which, because of their detail, can be identified to species level. The diversity of human representations and panels of engravings showing scenes of human activity exhibit a high degree of creativity, particularly during the Holocene, that is unusual in Australian rock engravings.	AT

Historic Themes:

Nominator's Summary of Significance:

There are three nominations for the area with two separate boundaries.

Nomination 1

Dampier Rock Art Precinct comprises the largest concentration of petroglyphs (rock

carvings) in the world and the largest number of megaliths (stone arrangements) known in Australia.

Estimates of the number of rock art motifs range from 300,000 to well over 1,000,000 images. They are thought to be at least up to 10,000 years old and the place constitutes the greatest cultural site in Australia.

The Archipelago is also a site of great aesthetic attributes visual and non-visual, being the place where the magnificent mountains of the Pilbara meet the Indian Ocean. It has considerable value as a geological showcase and it is home to three endangered animal species and 39 endangered or endemic plant species. It has impressive marine life (dugong, turtle beaches) and wetland areas.

But its significance as Australia's largest monument to Indigenous culture completely overshadows all its other qualities. Its importance to Australia is apparent by the fact that it easily meets all nine criteria listed below. Petroglyphs are numerous in many other parts of Australia, but nowhere do they even remotely approach those of Dampier in terms of sheer number or quality. The rock art of the Archipelago remains an important cultural focus for Aboriginal people in the region, comprising as it does thousands of sacred images and ceremonial sites (e.g. thalu increase sites).

It thus remains an utterly sacred place, and should be so not only to the local Indigenous communities, but also to all Australians and, indeed, all people. This quintessentially Australian and entirely unique cultural property needs to be included on the National Heritage List. It is a place of unparalleled artistic, cultural, religious and historical significance, as well as a place of magnificent natural beauty.

Nomination 2

The Dampier Rock Art Precinct has significance for the entire nation of Australia because it is the largest Indigenous cultural heritage property within Australia.

It comprises the largest concentration of petroglyphs in the world, and the largest collection of standing stones and other stone arrangements in Australia. While other places with similar characteristics exist across Australia and the world, when viewed collectively the Dampier Rock Art Precinct emerges as the most extensive collection.

The place exhibits an example of creative and technical achievement as, when viewed collectively, it is the largest 'art gallery' in the world, and as such is utterly unique.

The place has the potential to reveal extensive information about the daily life of the inhabitants during the entire timeframe of human existence in the Pilbara region, which has been dated as far back as 18,000 years b.p. This may include details about the connections between multiple tribes or family groups, networks of trade across the landscape, the context of connection between people and the landscape, and the application of technology. This information may have important research or teaching value for the nation in both the short and long term future.

The place has intangible heritage values relating to its function as an important sacred space for the present and in the past.

The place has strong social, historical, cultural and spiritual importance for specific cultural groups, in particular the traditional land owners; but also environmentalist, heritage, rock art specialists and other groups who collectively seek the protection of the precinct.

The place is a link to the distant past of Australia, having survived intact for over 10,000 years; however it is a link to the recent past and present as well, as debate is still underway regarding its future.

The place was a site of important events that helped define the history of the region, which represent the broader course of Australian history. The Flying Foam Massacre of 1868 had a massive impact on the indigenous inhabitants of Murujuga, and the renaming of Murujuga (to "Burrup Peninsula" in 1979) represents the lack of respect for indigenous place names despite their historical precedence. The history of resolving issues relating to the protection of rock art in the Dampier Archipelago dates back to the 1960s and represents the important national story about the on-going struggle for the recognition of traditional land ownership rights of Indigenous people.

The heritage value of the place is clearly threatened by ongoing industrial development. The rock art in this area is nationally unique and entirely irreplaceable, not only in terms of the size of the collection, but for its significance to specific cultural groups. Currently, these significant aspects of Australia's cultural history are endangered but if managed correctly, the place has the potential to set a positive example of industrial development, government policy and heritage conservation working together for a desirable outcome.

Nomination 3

The Burrup Peninsula and associated islands and coastal strip comprise a unique landscape of granite and granitoid rocks with the world's largest and prolific collection of Aboriginal engravings and artefacts.

Archaeological evidence including middens and artifacts found throughout the landscape provide some clues as to the period Aboriginal occupation. While dates from the middens are 4000 years old or more recent, the weathering of the rock engravings indicates the area was occupied tens of thousands of years ago. The combination of Aboriginal tradition and archaeological evidence for the antiquity of occupation is nationally significant.

Aboriginal people from this region identify themselves as Ngarda-Ngarli. Ngarda-Ngarli have lived in this area since time immemorial with the last known tribe known as Yaburara (North Ngarluma). As a consequence of the contact with western society and a massacre sustained over a short period in 1886, the Yaburara people and law were extinguished. Only tenuous links can now be claimed for descendants of families that lived within the land on and near the Burrup Peninsula.

Features in the landscape relate to traditional Aboriginal land management. These include the many increase sites (Thalu) throughout the nominated area. Thalu were important sites for Ngarda-Ngarli because they were used to maintain the abundance of a range of plant and animal species that the original inhabitants depended on. These species included: whales, fish, turtles, snakes, kangaroos and echidna. The landscape

was formed by ancestral beings in the Dreamtime and their spirit and other spirits such as Ngkurr, Bardi, and Gardi continue to live in the area.

The images carved into the rocks of the area serve a variety of purposes. Some are part of the increase sites for particular species. Other images relate to Aboriginal ancestral creation beings, spirit figures, ceremonies and rites of passage. Some of the ceremonial and rites of passage places are specifically for men or women, while others are open to all. Although many of the engravings have spiritual significance, others were produced as representations of everyday life or events.

Standing stones placed in the landscape by Ngarda-Ngarli were used to indicate the existence of fresh water, other natural resources and camping sites.

Occupation, use and management of the area and resources changed rapidly and markedly with the arrival of the early white settlers. The traditional way of life was disrupted forever as new industries, such as pearling and whaling, were established in the area. The series of massacres (Flying Foam Massacre) were the most dramatic manifestation of the uneasy relationship between Aboriginal people and the new settlers.

The disruption of the Ngarda-Ngarli way of life and appropriation of the land and land management responsibilities continued throughout the 20th century with the use of the Peninsula for pastoral purposes and then the onset of industrial development. Despite this disruption the Aboriginal communities have continued to press for recognition of their cultural responsibilities for this country.

Following recent negotiations in which the State of Western Australia recognised the deep cultural and spiritual associations of Ngarda-Ngarli with this country, Government and industry has started to take account of their views and have engaged with the Ngarda-Ngarli in decision making processes and the management of a substantial part of the nominated area.

This is reflected in the signing of the Burrup and Maitland Industrial Estates Implementation Deed Additional Agreement with three Indigenous groups: the Yaburara Mardudhunera, the Ngarluma Yindjibarndi and the Wong-Goo-Tt-Oo.

These agreements provide a framework for extinguishing Native Title and the granting of provisions for involvement in planning processes, heritage protection, compensation, shared benefits from industry development, transfer of freehold title and joint management of part of the land.

The history of conflict over natural resources and development in the nominated area and the trend towards increasing recognition over the last twenty five years is an exemplary case of national significance of the changing nature of Aboriginal and non-Aboriginal relationships and the survival of Aboriginal culture and its values.

The age, density and extraordinary abundance of the engravings and other cultural features in themselves make this area nationally significant. When coupled with the living Aboriginal culture including Aboriginal land management and the development of mutually beneficial relationships between industry, Government and the Ngarda-

Ngarli the heritage values of the Burrup Peninsula, islands of the Dampier Archipelago and Dampier Coast presents as a very credible and deserving candidate for nomination for National Heritage Listing.

Standing stones placed in the landscape by Ngarda-Ngarli were used to indicate the existence of fresh water, other natural resources and camping sites.

Occupation, use and management of the area and resources changed rapidly and markedly with the arrival of the early white settlers. The traditional way of life was disrupted forever as new industries, such as pearling and whaling, were established in the area. The series of massacres (Flying Foam Massacre) were the most dramatic manifestation of the uneasy relationship between Aboriginal people and the new settlers.

The disruption of the Ngarda-Ngarli way of life and appropriation of the land and land management responsibilities continued throughout the 20th century with the use of the Peninsula for pastoral purposes and then the onset of industrial development. Despite this disruption the Aboriginal communities have continued to press for recognition of their cultural responsibilities for this country.

Following recent negotiations in which the State of Western Australia recognised the deep cultural and spiritual associations of Ngarda-Ngarli with this country, Government and industry has started to take account of their views and have engaged with the Ngarda-Ngarli in decision making processes and the management of a substantial part of the nominated area.

This is reflected in the signing of the Burrup and Maitland Industrial Estates Implementation Deed Additional Agreement with three Indigenous groups: the Yaburara Mardudhunera, the Ngarluma Yindjibarndi and the Wong-Goo-Tt-Oo.

These agreements provide a framework for extinguishing Native Title and the granting of provisions for involvement in planning processes, heritage protection, compensation, shared benefits from industry development, transfer of freehold title and joint management of part of the land.

The history of conflict over natural resources and development in the nominated area and the trend towards increasing recognition over the last twenty five years is an exemplary case of national significance of the changing nature of Aboriginal and non-Aboriginal relationships and the survival of Aboriginal culture and its values.

The age, density and extraordinary abundance of the engravings and other cultural features in themselves make this area nationally significant. When coupled with the living Aboriginal culture including Aboriginal land management and the development of mutually beneficial relationships between industry, Government and the Ngarda-Ngarli the heritage values of the Burrup Peninsula, islands of the Dampier Archipelago and Dampier Coast presents as a very credible and deserving candidate for nomination for National Heritage Listing.

Description:

General

The Dampier Archipelago (including the Burrup Peninsula) is on the Indian Ocean coast of the west Pilbara region in north Western Australia, approximately 1,550km north of Perth. The Archipelago comprises 42 islands, islets and rocks that range from less than 2ha to 3,290ha in size and covers an area of approximately 4,000 km². The Burrup Peninsula (which measures 27km long by 5km wide) was formerly Dampier Island - the largest in this island chain. Prior to industrial development and the building of road and rail infrastructure between Karratha and Dampier, it was separated from the mainland by tidal mudflats.

The Dampier Archipelago is located north of the Tropic of Capricorn and is one of the major features of the Pilbara Onshore marine bioregion. The place is part of an inshore zone of a relatively expansive shelf region that includes the nearby Barrow Island/Montebello Island Group that are part of the neighbouring Pilbara Offshore bioregion. The north-western Australian shelf is of significant biological interest for its suspected high diversity and the relatively high numbers of endemic taxa.

The Dampier Archipelago is a system of islands, rocky reefs, coral reefs, shoals, channels and straits. The area rises above a submarine plain and the seafloor has extensive limestone pavements and large sheets of shell gravel, sand and other sediments. The marine environment of the place is characterised by intertidal mud and sand flats associated with fringing mangals in bays and lagoons, a large tidal range, highly turbid water and the occurrence of fringing coral reefs around some of the islands.

The Dampier Archipelago contains a diverse array of Aboriginal heritage including dreaming sites, ceremonial sites, rock engravings and archaeological sites. It is of exceptional heritage interest for its diverse array of rock engravings and stone arrangements and the importance of these within the Aboriginal traditions of Ngarda-Ngarli peoples.

Formation of the Dampier Archipelago

The Ngarda-Ngarli people of this region have traditional accounts of the formation of the Dampier Archipelago. For them, ancestral beings formed the landscape of the Dampier Archipelago in the Dreamtime and the spirits of these beings and other spirits such as Ngkurr, Bardi, and Gardi continue to live in the area (Mardudhunera Yaburara *et al* 2004). The ancestral beings left their mark on the landscape as natural features such as the *Marntawarrura* ("black hills") that are said to be stained from the blood of the creative beings, and in the form of some engraved images (Robinson in McDonald and Veth 2005: 73). Ngarda-Ngarli people say they have lived in this area since time immemorial (Mardudhunera Yaburara *et al* 2004).

The islands of the Dampier Archipelago are an inundated coastal landmass that is essentially representative of the adjacent mainland. The archipelago was formed approximately 6,000 to 8,000 years ago when rising sea levels flooded what were once coastal plains. Prior to inundation the coastline ran the periphery of the area that is now the archipelago. A steep slope to the 30m contour that slopes away from the outer islands now represents the position of the palaeo-shoreline.

Although the formation of the Dampier Archipelago is a relatively recent event, the underlying rocks are amongst the oldest on earth, formed in the Archaean more than 2,400 million years ago. The majority of the larger islands in the Dampier Archipelago are different geologically from other Pilbara offshore islands as they are made up of these Archaean volcanic rocks rather than Quarternary and Tertiary limestones. The underlying geology of the area was strongly influenced by volcanic events between 3,300 and 2,400 million years ago, with the rocks that now make up the Burrup Peninsula formed at the end of this period. The landscape within these areas is characterised by steep slopes and ridges with masses of apparently haphazardly distributed boulders, which are the result of ancient *in situ* weathering. Boulders vary markedly in size, from small to extremely large, and can be either rounded or angular. This variety in morphology is explained by differential jointing within the parent rock and variations in the amount of time that particular intrusions have been exposed to weather.

There are two distinct geomorphologies represented on the islands. The first is Archaean rocks which outcrop on Dolphin, Tozer and Enderby Islands. It is these Precambrian granites that form the backbone of the Dampier Archipelago. Topographically, they resemble the adjacent mainland and the Burrup Peninsula. The second geomorphology is found on Legendre Island and other flatter islands and islets in the north of the archipelago. The outer islands consist primarily of younger Pleistocene or Holocene limestone and have fringing intertidal platforms and coral reefs, low elevations, lack the rock piles characteristic of the other islands and feature superficial sand dunes and beaches. These islands are the remnants of consolidated limestone ridges formed along the previous coastline.

The terrestrial environment

The terrestrial areas of the Dampier Archipelago support a diversity of flora from the Pilbara region. Approximately 32% of the flowering plant species known from the Pilbara region occurs on the islands. More than 288 plant species from 60 families have been recorded from the islands of the Dampier Archipelago. The Poaceae and Papilionaceae are particularly well represented. A total of 393 species of vascular plants have been recorded on the Burrup Peninsula representing 67 families and 184 genera.

Over one hundred species of birds have been recorded in the Dampier Archipelago region, including both terrestrial species and sea and shore birds, some of which are migratory. At least ten terrestrial species, and fifteen sea and shore bird species, are known to breed on the islands and many more use the extensive mudflats, intertidal reefs and salt-marshes during their annual migration between Australia and south-east Asia. Many reptiles occur in the place with thirty-two species known from the Burrup Peninsula and forty-one species known from the islands of the Dampier Archipelago.

The marine environment

The diversity of marine fauna on the northern coastline of Western Australia is high and the northwest shelf marine region contains significant conservation value. The environmental values characteristic of the Dampier Archipelago reflect both the clear water communities of the Ningaloo Marine Park to the southwest and the more turbid waters of the Kimberley coast to the northeast. The Dampier Archipelago contains a

wide variety of marine habitats, varying from exposed areas subject to high wave energies, clear water and low sedimentation rates in the seaward areas (such as the seaward reefs of Delambre, Legendre, Rosemary and Kendrew Islands), to sheltered habitats with turbid water in the coastal bays. The presence of islands and reefs reduces the ability of the Leeuwin Current and other broad scale regional currents to make any significant sustained incursions into the near shore zone. The marine plants and animals of the area are highly diverse and abundant as the warm tropical waters of the Dampier Archipelago provide an ideal habitat for marine life.

The archipelago is rich in coral species, as a result of the wide variety of habitats found at the place. Coral growth in the inshore waters of the Dampier Archipelago is prolific, particularly on sublittoral rock slopes where species diversity is high, although there is no reef formation in these areas. The best reef development occurs on the seaward slopes of the outer archipelago where the fringing reefs form a deeply dissected reef front sloping to a reef edge zone, with a reef flat behind, shallow back reefs and an occasional lagoon.

Surveys of the Dampier Archipelago between 1998 and 2002 indicated that the place is very rich in marine invertebrates, particularly echinoderms (286 species), molluscs (695 species) and sponges (275 species). The richest groups were the brittle-stars (Ophiuroidea) with 89 species, the sea-cucumbers (Holothuroidea) with 68 species, the starfish (Asteroidea) with 54 species, the sea-urchins (Echinoidea) with 39 species and the sea-lilies (Crinoidea) with 36 species.

The extensive sand and mud flats support a rich invertebrate fauna, including bivalves, gastropods, crustaceans, worms, brachiopods, burrowing anemones, echinoderms. Crustaceans (particularly crabs) and bivalves (mainly *Donax*) and surface gastropods are typical of exposed beach situations. The low tidal limestone pavements include several xanthids, encrusting and erect sponges, polychaete worms, amphipods, fish, scattered corals, algae and a wide range of molluscs including bivalves, gastropods and chitons. Fauna typical of the extensive subtidal plains include a wide range of fish, particularly flatheads, flounders, catfish, eels and rays, echinoderms, polychaetes crustaceans, gastropods and bivalves.

The marine flora includes both vascular plants and macroscopic algae and is as yet poorly known. Marine seagrasses recorded for the place include: *Halophila ovalis*, *H. decipiens*, *H. spinulosa*, *H. ovata*, *Cymodocea angustata* and *Halodule uninervis*. Seagrass beds, although not as well developed as in some other areas, provide important habitat for fauna particularly for dugongs. Macroscopic algae form a dominant component of the marine flora. The most common forms of algae include phaeophyceae such as *Dictyopteris* spp. Shoals of the outer archipelago contain the greatest diversity of species of algae.

A total of 650 species of shallow water marine fish have been recorded within the Dampier Archipelago that includes a rich reef assemblage. Areas with the greatest topographic complexity have the most diverse and rich fish faunas. These areas are mostly those furthest away from the mainland such as the northern edge of Legendre Island where water turbidity is low and fish that favour off-shore conditions can also be found.

Marine vertebrate fauna recorded for the place include at least seven species of mammals; the humpback whale *Megaptera novaeangliae*, the false killer whale *Pseudorca crassidens*, the southern bottle nosed whale *Hyperoodon planifrons*, Risso's dolphin *Grampus griseus*, bottle nose dolphin *Tursiops truncatus*, Indo-Pacific hump backed dolphin *Sousa chinensis*, dugong *Dugong dugong*; six species of sea snakes: *Aipysurus laevis*, *Astrotia stokesii*, *Ephalophis greyi*, *Hydrelaps darwiniensis*, *Hydrophis* species and white bellied mangrove snake *Fordonia leucobalia*. The Dampier Archipelago is recognised as providing important habitat for marine turtles and four of the five species found in the area nest there. Large numbers of green turtles nest in the area, especially on the north-eastern shore of Legendre Island and the north-western beaches of Rosemary Island. Loggerheads also nest in the area although in lower numbers than the green turtles. The hawksbill nesting sites on beaches on Rosemary Island are of significance as the Western Australian population is the only large population remaining in the Indian Ocean. Flatback turtles only breed along the Australian coastline. Within the Dampier Archipelago, there are significant flatback turtle nesting sites on Rosemary, Delambre and Malus Islands.

Mangals line over 50% of the mainland shoreline with the biggest blocks found at the mouths of the larger creeks and rivers and in sheltered bays. These mangals contribute significantly to the nutrient resources of the Pilbara coastal waters and are usually narrow bands of vegetation in sheltered locations where the substrate is muddy. A total of six species of mangroves have been recorded within the place. The white mangrove *Avicennia marina* and the red mangrove *Rhizophora stylosa* are the two most prominent species.

Aboriginal environment

The Ngarda-Ngarli people exploited the resources of both the terrestrial and marine environment of the Dampier Archipelago. The Dampier Archipelago contains very high densities of Aboriginal archaeological sites (McDonald and Veth 2005: 158; Vinnicombe 2002; Bednarik 2006). These include the remains of camp sites under small rock overhangs and in the open, shell middens, quarries, standing stones, stone arrangements, rock engravings and burials. It has been suggested that the density and diversity of sites is a result of large groups of Aboriginal people coming into the area at periods of high resource availability to exploit the area's rich marine and terrestrial environments (McDonald and Veth 2006).

The geology of the Dampier Archipelago does not provide large rock shelters and there are no deeply stratified sites with occupation extending back tens of thousands of years. Radiocarbon dates from excavations in the small rock overhangs and in middens provide clear evidence that Aboriginal people have lived in the area for at least 8,000 years (Bradshaw 1995). There is an earlier date of about 18,000 years ago from a piece of shell wedged between rocks in the southern part of the Burrup Peninsula (Lorblanchet 1992) but this is not a firm date for Aboriginal occupation because it is not directly associated with buried Aboriginal material.

There is archaeological evidence of the pattern of human occupation on the Dampier Archipelago. The occurrence in the Dampier Archipelago of many grinding patches, often stained with silica glass, provides evidence for the grinding and consumption of grass seeds. Excavations in middens show that from the onset of maritime conditions between 8,000 and 6,000 years ago Aboriginal people had a marine focus that

included use of the shellfish in the area (Bradshaw 1995; Lorblanchet 1992: 44; McDonald and Veth 2005: section 3.4.4). The archaeological evidence indicates that as mangrove forests developed with the rising sea levels, Aboriginal people relied on *Terebralia palustris*, a mangrove mollusc. With the development of extensive mudflats by about 4,000 years ago Aboriginal people switched to eating the bivalve *Anadara granosa* and other rocky shore species. The midden material also shows that Aboriginal people ate a wide range of terrestrial and marine animals such as kangaroo, euro, rock wallaby, flying fox, northern quoll, lizard, turtle, dugong, mangrove crab as well as fish and birds (McDonald and Veth 2005: 31) but there is no clear evidence for changes over time in preferences for these species. The range of species in the Aboriginal diet is partly reflected in the engravings of animals found on the Dampier Archipelago which include depictions of the euro, kangaroo, echidna, marine and terrestrial birds, turtles, fish (some of which can be identified to their genus or species level) and crustaceans.

Aboriginal sites and engravings provide evidence for changing Aboriginal technologies during the last 8,000 years of Aboriginal occupation of the Dampier Archipelago. Prior to 3,500 years ago the stone tools found in campsites include scrapers, horsehoof (single platform) cores and retouched flakes (Lorblanchet 1978). Over the next 3,500 years microliths, tula adzes and slugs were added to the Aboriginal tool kit. The smaller tools would have been hafted rather than being held in the hand. The material for making many of the common tools was obtained from stone quarries in the Dampier Archipelago. Most of these are located in areas of fine-grained volcanic rock although coarser material was sometimes used opportunistically (McDonald and Veth 2005: 58). The smaller tools are made of exotic material imported into the Archipelago (McDonald and Veth 2005: 56). Although there are very few engraved images of Aboriginal material culture on the Dampier Archipelago, they show that spears were used (McDonald and Veth 2005: 119). The boomerang is the most commonly depicted item of material culture. These are very stereotyped and appear to illustrate their use as clap sticks (McDonald and Veth 2005: 119; Vinnicombe 2002: 19). There are also engravings of people using nets (McDonald and Veth 2005: 34).

The Aboriginal occupants built a number of structures to help them catch fish and other prey including fish traps and hunting hides. Standing stones also occur, some of which are thought have been erected as markers for important resources such as water holes, soaks and camping areas.

Other standing stones in the Dampier Archipelago are *thalu*, which are traditional sites where ceremonies were conducted to increase the natural species or phenomenon (e.g. rain) associated with the place. These sites normally comprise a standing stone with one or more smaller stones that are used as part of the ceremony (Vinnicombe 2002: 15, 33; Bednarik 2006). Engraved images of the species may also be part of these ceremonial sites.

The most common Aboriginal sites in the Dampier Archipelago are the engravings. Ngarla-Ngarli people say that the rock engravings on the Dampier Archipelago images serve a variety of purposes. Some are interpreted as ancestral beings, others are interpreted as spirit figures or in relation to sacred ceremonies and rites of passage. Places with depictions of sacred ceremonies and rites of passage may be

specifically for men or women, while others are open to all (Mardudhunera Yaburara *et al* 2004). Images are sometimes an element of increase sites for particular species. Ngarda-Ngarli relate some images to traditional songs and invocations learned during initiation or for use in hunting. As Palmer (1975a: 158) points out, there are spiritual songs for many animals in traditional law, which are sung in association with the engravings since the songs belong to the Dreamtime. Although many of the engravings have spiritual significance, others are interpreted as representations of everyday life or events (Mardudhunera Yaburara *et al* 2004).

There are a wide variety of engraved motifs on the Dampier Archipelago. These include geometric designs, naturalistic depictions of animals, depictions of people, images of some items of material culture as well as depictions of human and animal tracks. Circles, concentric circles, lines and dots are common geometric motifs. Some of these are deeply weathered and probably belong to the earliest phases of rock engraving in the area (Lorblanchet 1992).

Many of the species depicted in the engravings are found in the area today but there are some images of species that no longer occur in the area, such as emu tracks, or are extinct, such as the thylacine (McDonald and Veth 2005; Vinnicombe 2002).

The diversity of engraved human figures on the Dampier Archipelago is outstanding (McDonald and Veth 2005: section 4.5; 2006; Vinnicombe 2002). These include stick figures, solid figures, a variety of profile figures and figures with decorated bodies, marked sexual characteristics, complex headdresses and other items of material culture. There are groups of figures shown copulating, climbing men, dancing men, and larger humans shown with very small figures positioned either side of their bodies. Figures with mixed human and animal characteristics (therianthropes) also occur.

The engravings of the human form in the Dampier Archipelago are often dynamic rather than being static and crudely naturalistic, a characteristic that they share with other engravings styles in the Pilbara region. However, the Dampier Archipelago represents a unique style province within this region. McDonald and Veth (2005: 148-149) have identified the following anthropomorph designs as central to the Dampier Archipelago style:

- Schematised stick figures (mostly male or ungendered);
- Schematised stick figures with concentric arcs placed over the lower body;
- Schematised stick figures with symbolically positioned boomerangs on either side of the body;
- Schematised stick figures with a pair of dots positioned on either side of the head or body;
- Solid-bodied anthropomorphs with disconnected circular infilled heads and sinuous arm positions;
- Profile figures with solid bodies and thin arms (often with an erect penis), occasionally positioned in rows;
- Profile figures with the disconnected heads, grouped with each other or around a central line (as if climbing);
- Groups of figures positioned beneath lines, as if hanging;
- Groups (generally long lines) of figures joined by the arms;

- Complex groups of anthropomorphs which also incorporate other simple figurative motifs;
- The use of infilled circles to indicate joints (elbows, knees) or body parts (genitalia, stomachs, hands, feet);
- Therianthropes with various mixed animal characteristics, particularly lizard and bird;
- Archaic faces are widely distributed – as are an embellished form unique to the Dampier Archipelago which have bodies, headdresses or therianthropic characteristics, produced in intaglio style.

McDonald and Veth's analysis (2005) also demonstrates that these motifs are not evenly distributed across the Dampier Archipelago. Art complexes across the Dampier Archipelago demonstrate internal cohesion and patterning as well as links to the rest of the Archipelago and to the broader western Pilbara region.

Analysis:

Comparative assessment issues

There are several issues that have made a comparative assessment of the nominated area difficult, the most apparent being the influence of survey effort to identify Indigenous sites and marine taxa.

Indigenous values

Although Aboriginal sites are known to exist throughout the nominated areas, large parts of the place have not been subject to systematic surveys. This is reflected in the Aboriginal site register maintained by the Western Australian Department of Indigenous Affairs (DIA). There are almost 2,600 registered sites on the Dampier Archipelago and 140 sites in the area of the proposed Maitland Industrial Estate. Less than one hundred site records exist for the coastal strip between the Maitland Industrial Estate and the Cape Preston area (McDonald and Veth 2006).

Many of the recorded sites are on land zoned for industrial development and have been identified through surveys undertaken prior to industrial development particularly on the Burrup Peninsula (Vinnicombe 2002, 1987a, 1987b). However, Bednarik (1994, 2002) has undertaken broader work across the Burrup Peninsula, and a systematic survey of the conservation area on the northern part of the Burrup Peninsula was undertaken by the Department of Conservation and Land Management using funds obtained from the National Estate Grant Program (Veth *et al* 1993). The survey covered 8.78km² and identified 498 sites. Gum Tree and Skew Valleys, in the southern part of the Burrup Peninsula, have also been the focus of excavation and saturation rock art recording (Bevaqua 1974; Bednarik 1977; Lorblanchet 1978, 1985, 1992; Virili 1977). While the majority of islands within the Dampier Archipelago have not been subject to systematic surveys, DIA records show that engravings, stone arrangements and standing stones do occur on the islands.

McDonald and Veth (2005: 42-43; 2006) reviewed the site files held by the DIA and found they were of varying degrees of comprehensiveness and accuracy. The review of the site files, particularly in relation to suitable petroglyph records, indicate that few of the reports relating to recent surveys contain clear illustrations of individual

motifs. The site files are also subject to different kinds of access restrictions, depending on the sensitivity of ethnographic information they contained. However, the amount of information collected and considered in the both the McDonald and Veth 2005 and 2006 reports show there is sufficient information to establish the heritage values in relation to archaeological features.

Indigenous rock art in Australia is generally divided into three broad styles: Panaramitee, Simple Figurative and Complex Figurative (Morwood 2002: 57-63). The Panaramitee style is characterised by a very high proportion of geometric designs with few images of animals or people. There is some evidence that it is the earliest style in Australia and that it probably has a pan-continental distribution. Lesley Maynard (1979) showed that the number of human and animal figures increased through time and that the Panaramitee developed into the Simple Figurative Style. The latter is characterised by crudely executed and stereotyped human and animal images and a relatively low proportion of geometric designs. The human images are generally shown from the front. The Complex Figurative Style is characterised by a greater diversity and dynamism in human forms than the Simple Figurative Style but also includes human motifs that fit within the Simple Figurative Style. While the Simple Figurative Style is found around the coastal fringes of Australia, the Complex Figurative Style is only found in northern and north western Australia: the Pilbara, Kimberley, Victoria River District and Arnhem Land (Morwood 2002: 60). Within this area, the Pilbara is the area with the richest styles that fall within the Complex Figurative Style.

In assessing the rock art in the nominated areas, some styles such as the Panaramitee were excluded because they were not directly comparable. Comparison with other Aboriginal engraving traditions in Australia has been confined to the other style provinces in the Pilbara, as identified by Wright (1968), and the engravings in the Sydney Basin rock engravings. The latter area was chosen because the engravings are well known and researched (Stanbury and Clegg 1990; McDonald 1990).

Marine Taxa

For many marine taxa, there is insufficient reliable data on their diversity, endemism or biogeography to make any comparable assessments on a continental scale (Hooper *et al* 2002: 851). The Dampier Archipelago has recently been the subject of an extensive and intensive marine survey and is recognised as the most intensively surveyed marine region in Western Australia (Marsh and Morrison 2004: 294). Survey bias has been highlighted in other reports as marine habitats of the Canning and Pilbara coasts were poorly surveyed whilst other areas such as the Dampier Archipelago were relatively well surveyed (CALM 1994 Part 111-5). This recognised survey bias makes accurate comparisons of the Dampier Archipelago with other regions difficult (Marsh and Morrison 2004: 298).

Reasonable comparative data is available for several important taxa such as echinoderms, fish, molluscs and sponges. It is on these values that an assessment of potential National Heritage value has been based.

Scale dependency is an important factor in undertaking natural heritage assessment. Large areas such as the Dampier Archipelago have more species than small areas and comparison is necessary on a unit area basis to minimise this bias. This assessment

has been undertaken by using ANHAT (Department of the Environment and Heritage 2005) on a suite of representative marine and terrestrial taxa.

Endemism within the Indo-West Pacific biogeographic province is considered as regional rather than localised and specific areas within the tropics or subtropics rarely have significant levels of endemism. Although this long held assumption of homogeneity is now being tested via genetic evidence, heterogeneity is yet to be proven or established for many taxa and regions. For many taxa, it would be misleading to attempt a comparison of anything other than 'apparent' endemism levels because of the lack of information regarding distribution and biogeography. As a result, this comparative assessment focuses on known species richness rather than potential or apparent endemism.

Criterion (a) – *the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history*

Cultural Environment

General Archaeology

There is evidence that Aboriginal people have lived in the Pilbara region for nearly 30,000 years. Dates from excavations in the Montebello Islands show Aboriginal people lived there from 27,000 years ago to 7,000 years ago when, due to sea level rise, the islands became far-flung outliers and were abandoned (McDonald and Veth 2005: 10-11). Similarly, excavations in the interior uplands of the Pilbara provide evidence for Aboriginal occupation of this area from 26,000 years ago to the present. There is also evidence indicating that the upland areas, including places like the Hamersley Range, were occupied at the height of the arid period during the last glacial maximum (McDonald and Veth 2005: 11).

Dated Aboriginal archaeological sites in the nominated place do not provide the same evidence for the antiquity or continuity of Aboriginal occupation that is found elsewhere in the region. Although there is an early date from Skew Valley of about 18,000 years ago (Lorblanchet 1992) it is problematic because there is no clear association between the dated shell and material remains left by Aboriginal people. Dates from excavation of shell middens and archaeological deposit under rock overhangs in the nominated area all fall between 8,000 years ago and the present (Bradshaw 1995; Vinnicombe 1987b; McDonald and Veth 2005; Bednarik 2006).

The history of changes in technology and food preferences in the nominated place conforms to the established Holocene sequence in the Pilbara region. Between about 8,000 and 4,000 years ago the mangrove shellfish, *Terebralia palustris* was the most abundant species deposited in shell middens. Either *Anadara granosa* or a range of rocky foreshore species dominates deposits that are younger than 4,000 years old. As Bradshaw (1995) points out, this change in the Aboriginal use of shellfish is found throughout the coastal regions of northern Australia. While the size of some middens within the Dampier Archipelago are large when compared to others in this region. Bradshaw (as cited by McDonald and Veth 2006) has described the midden complex on West Intercourse Island as 'one of the most significant in Western Australia'. While this midden complex may be significant to Western Australia, more extensive

midden complexes have been located in northern areas of Australia.

The history of stone tool technology in the Dampier Archipelago also reflects the changes documented elsewhere in the Pilbara (McDonald and Veth 2005). Before 3,500 years ago stone tool assemblages include large scrapers, horsehoof (single platform) cores and some retouched flakes (Lorblanchet 1978). After this date there is the addition of edge ground axes, a reduction in the overall size of tools, the development of small, hafted tools and increased retouch.

Aboriginal people obtained some stone for tools from quarries in the nominated area (Dortch 1977; Veth 1982; Vinnicombe 1987b). Seams of fine-grained volcanic rock were quarried, and once blocks were obtained from these seams they were flaked at nearby reduction areas. Veth (1982) found that these finer-grained materials were used and discarded preferentially at habitation sites within the nominated area, while a range of locally available materials were used more opportunistically at smaller task-specific sites. The quarries in the nominated area conform to the general pattern described by Hiscock and Mitchell (1990) and they lack the evidence for long distance trade that is found at other quarries such as Lake Moondara and Mt Victoria.

Grinding patches, mullers and querns are common in the Pilbara region. Some have evidence of silica glass indicating they were used to grind grass seeds for flour. Gorecki *et al.* (1997) suggest that this area should be included within the boundaries of the major seed-exploiting zone identified by Norman Tindale for semi-arid/arid Australia. While there are numerous grinding patches, querns and mullers in the nominated area they are all part of the larger regional pattern of seed use.

Fish traps also occur on the Islands of the Dampier Archipelago as well as the peninsula (McDonald and Veth 2005; McDonald and Veth 2006). These fish traps have been constructed from both long lasting materials, such as stone walls, and non-durable material, such as brush weirs. There is little evidence to show that these fish traps are outside the broader pattern of coastal fish traps found around Australia.

The absence of long archaeological sequences in the nominated area, the evidence for change in diet and technologies and the general archaeology (including grinding patches, artefacts scatters, shell middens, quarries, reduction areas and fish traps) reflects broader patterns found in the Pilbara region and northern Australia.

On the above basis the Dampier Archipelago does not have national heritage values under this criterion for its general archaeology.

History of Rock Engravings

The majority of the rock engravings in the nominated area appear to have been created after the sea level rises at the end of the last Ice Age. The archipelago was formed approximately 6,000 to 8,000 years ago when rising sea levels flooded what were once coastal plains. Although there are no secure dates older than 8,000 years ago from the Dampier Archipelago, the deep weathering of some Aboriginal rock engravings, the varying degrees of re-weathering, the differential distribution of desert varnish, the presence of multiple superimpositions, and the evidence for general re-use of the boulders indicates that Aboriginal occupation of the Dampier Archipelago extended back into the Pleistocene (Lorblanchet 1985; Vinnicombe 2002; McDonald

and Veth 2005; McDonald and Veth 2006). The presence of deeply weathered images of terrestrial fauna coupled with the less weathered appearance of images of marine fauna at single localities is evidence that the Dampier Archipelago was occupied before and possibly during, the rise of the sea levels at the end of the last Ice Age. Aboriginal engravings elsewhere on the Australian coast such as the Sydney Basin engravings (McDonald 1990) and the engravings at Port Hedland (McCarthy 1962) do not provide the same visual evidence for links between changes in faunal motifs and the rise in sea levels. The only area that provides similar evidence is Depuch Island (Ride *et al* 1964) and the assemblage of engravings on Depuch Island is considerably smaller than the assemblage on the Dampier Archipelago.

On this basis, the Dampier Archipelago has national heritage values under this criterion for its unusual and outstanding visual record of the Aboriginal responses to the rise of sea levels.

There are a number of deeply weathered engraved 'archaic faces' in the Dampier Archipelago. This includes an earlier archaic form and a locally developed style (McDonald and Veth 2006). This motif occurs throughout the Pilbara and Western Desert with examples also known from the Victoria River District and into South Australia and Queensland (Dix 1977; McDonald and Veth 2005: 31). The distribution of these engravings indicates there were shared representations across the Dampier Archipelago and the Western Desert.

On this basis, the Dampier Archipelago has national heritage values under this criterion for its demonstration, through the presence of 'archaic faces', of the long history of shared visual narratives between the Dampier Archipelago and arid Australia.

Relations between Europeans and Aborigines

The Flying Foam Massacre of 1868 had a large impact on Aboriginal people in this part of the Pilbara (Gara 1983; Bednarik 2006). It occurred after a group of Aboriginal men killed Constable Griffis and two others during the freeing of an Aboriginal man, Coolyerberri, who had been arrested for stealing flour. The Government Resident swore in nineteen special constables who attacked the Aboriginal camp. Estimates vary as to the size (and nature) of the massacre. The official accounts suggest less than 10 Aborigines were shot in retaliation but letters written by early settlers in the area suggest that up to 40 Aboriginal men, women and children were shot during this episode (Gara 1983).

The Flying Foam Massacre is an important part of the story of early European and Aboriginal relations in the Pilbara. It is one of a number of Aboriginal massacres that occurred in many parts of Australia (Elder 2003; Connor 2002; Reynolds 1981). Unlike the Myall Creek Massacre, it is not associated with major changes in the way the administration dealt with the parties involved. There is insufficient evidence to demonstrate that the site of the Flying Foam Massacre is markedly different from many of the other early massacres of Aboriginal people.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion for its part in the story of early relationships between Aboriginal people and European settlers.

The issue of rock art protection in the Dampier Archipelago is part of the story of Aboriginal peoples' struggle for recognition of the importance of their heritage and the importance of traditional land ownership rights. A number of groups and individuals have protested about the effect of development on Aboriginal heritage in the nominated area (Bednarik 2006). These protests are not mentioned in Attwood's (2003) overview of the struggle for Aboriginal rights. Attwood does however discuss other protests in Western Australia against the effect of development on Aboriginal heritage, such as on Noonkanbah Station, and how these resulted in greater protection for this heritage. There is insufficient evidence to demonstrate that the nominated area has outstanding heritage value to the nation as a place associated with protest about the effect of development on Aboriginal heritage and traditional Aboriginal land rights.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion as a part of the story of Aboriginal people's struggle to protect their heritage.

European Heritage

There are a number of historic heritage sites in the Dampier Archipelago including a shore-based whaling station on Malus Island, grave sites on Dolphin Island, pearling relics on Gidley Island and a pastoral settlement on West Lewis Island. All of these places were nominated to the Register of the National Estate but none were listed.

Although a small whaling station was established on Malus Island in the 1870s (RNE Australian Heritage Commission 1978b), shore whaling was not of particular economic importance in the development of the north-west of Western Australia when compared with the long history of shore-based whaling in the Albany region of Western Australia (Gibbs 1994). The site is not as large or long-lived as other shore based whaling stations.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion for its importance in the history of shore whaling.

There are claims that two sites in the Dampier Archipelago are associated with the 1860s pearling industry: Dolphin Island (Australian Heritage Commission 1978c) and Black Hawke Bay on Gidley Island (Australian Heritage Commission 1978a). There are a number of graves on Dolphin Island that may be associated with the use of this area by pearlers but there is no conclusive archival or archaeological evidence demonstrating an association between the burials and the pearling industry. Black Hawke Bay is said to contain more relics and remains of structures than any other known pearling site in the Dampier Archipelago. However, the ruined town of Cossack is important as the Pilbara's first port and as the home of the first pearling fleet in Western Australia in 1866 (Australian Heritage Commission 2001; Heritage Council of Western Australia 03239). It therefore better represents the importance of the pearling industry in the development of the region than the sites on the Dampier Archipelago.

There are claims that there are the remains of an early pastoral settlement on Lewis Island (Australian Heritage Commission 1978d) but there is no historical or

archaeological evidence to substantiate this claim.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion for its importance in the history of Australia's pearling or pastoral industry.

Natural Environment

Terrestrial environment

There is no evidence from ANHAT analyses or from available literature that the Dampier Archipelago is exceptional at a continental scale for species richness or endemism of its terrestrial flora or fauna. Whilst the Pilbara region as a whole is rich in some flora and fauna groups (particularly Acacias and reptiles), inland areas such as Karijini and Millstream-Chichester National Parks contain the greatest number of species (CALM 1999, Department of the Environment and Heritage 2005) and best represent the biodiversity of the region.

The islands, waters and mainland of the Dampier Archipelago support a diverse avifauna and, at a regional scale, appear to be more species-rich than many other coastal areas. However, the place does not match Eighty Mile Beach or Roebuck Bay on the northern Western Australian coastline for the diversity and numbers of shorebirds that they attract.

Marine environment

The tropical east coast of Queensland is the most species-rich marine region in Australia reflecting the extensive coral reef habitat complemented by well-developed nearshore and estuarine faunas (Wilson and Allen 1987). In comparison, the tropical zone outside the Great Barrier Reef region (including the Dampier Archipelago) has a relatively less rich fauna due to the relatively poor development of coral reefs.

An assessment of the coral reef systems of Western Australia in a national context indicates that only the off-shore atolls such as Scott Reef, Rowley Shoals and Seringapatam approach the species richness and structural complexity of the reefs found off the Queensland coast. For fringing reef systems, the species richness within the Ningaloo Marine Park is greater than that of the Dampier Archipelago and is considered a better example of a fringing reef system than any found along the Pilbara coastline (Osborne et al 2000).

Six of the seven marine turtle species are recorded from Australian waters and of those, five are known to occur within the place (Jonker and Hill 2000). Australia is one of the few countries in the world still to have relatively large turtle populations (Hill and Jonker 2000). Species found within the Dampier Archipelago have a widespread but patchy distribution along the northern coastline and there is no indication that the place is more important than other parts of the North-west Shelf for the size or diversity of its turtle populations (Environment Australia 2003). Four turtle species nest in the place but other areas in the region such as the Montebello, Murion and Varanus Islands and Mundabullangana Beach also contain significant nesting habitat for many of these species. Whilst Rosemary Island within Dampier Archipelago is a major nesting site habitat for the hawksbill turtle (*Eretmochelys imbricata*), the importance of the place for a single marine animal taxon is not by

itself sufficient reason to conclude that the place is of outstanding heritage value to the nation.

The most significant component of the Dampier Archipelago fish assemblage is that associated with coral reef habitats (Hutchins 2004 and Osborne et al 2000a). The diversity of the reef fish is comparable with that recorded from the Montebello Island Group to the south but is significantly less when compared to that found within the onshore reef system at the Ningaloo Marine Park and within the offshore reef systems at the Rowley Shoals Marine Park. The fish fauna of the Dampier Archipelago is of comparable richness to other well surveyed areas in the western half of the continent and as a result it is not outstanding at a national scale.

Based on the current, available information, the Dampier Archipelago falls in one of the richest invertebrate marine areas in Australian waters outside the Great Barrier Reef. The Dampier Archipelago forms the eastern corner of a broad region containing areas of high biodiversity extending to Barrow Island in the north-west and south to Ningaloo Reef. The Dampier Archipelago contains a diversity of marine habitats that interact with both offshore and onshore hydrological components within a relatively small area to produce a species-rich marine environment. Literature review indicates that the marine invertebrate richness recorded within the Cape Preston to Dampier Archipelago region is higher than that of both the Ningaloo Marine Park to the southwest and the Montebello and Barrow Islands to the west (Osborne 2000a) and the recorded species numbers for echinoderms are the highest from any area in the western and northern parts of the continent (Jones 2004). ANHAT analysis and literature review suggests that the region of outstanding heritage value, for richness of echinoderms, molluscs and sponges at a national scale, occurs between Ningaloo, Barrow Island and Dampier Archipelago (Department of the Environment and Heritage 2005, Fromont 2004, Marsh and Morrison 2004, Hilla 2002, Hooper et al 2002, O'Hara 2003, Slack-Smith and Bryce 2004, Osborne et al 2000b, Taylor and Glover 2004). These taxa are integral and ubiquitous components of tropical marine areas, and their high species richness indicates that the region is very biodiverse.

The region of interest includes three and potentially four areas of high marine species richness, Ningaloo Reef, Barrow Island, Dampier Archipelago and possibly the Montebello Islands. While the Dampier Archipelago is clearly of high importance within this region, the available information is problematic, as it is largely not provided on a constant area basis that would allow direct richness comparisons. Further work is required to establish which areas within this general region best represent the high marine biodiversity values indicated. The available information is considered insufficient to make a clear decision and requires further review once an assessment of the marine areas of Barrow Island and Ningaloo Reef has been finalised. It is considered that there is insufficient information to reliably delineate the marine biodiversity values of Dampier Archipelago.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion for its marine or terrestrial biodiversity.

Criterion B: Possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.

Cultural Environment

Where systematic surveys have been conducted in the nominated area the density of Aboriginal archaeological sites is high compared with other parts of Australia (McDonald and Veth 2005: 75). The types of sites whose number or density is high include rock engravings, artefact scatters, grinding patches and stone arrangements (McDonald and Veth 2005). While the density of artefact scatters and grinding patches are high, these site types are common throughout Australia and the sites in the Dampier Archipelago cannot be described as uncommon, rare or endangered.

On this basis, the Dampier Archipelago, does not have national heritage values under this criterion for uncommon, rare or endangered artefact scatters and grinding patches.

Diversity of Rock Engravings

McCarthy (1968: vi), one of the founders of Australian archaeology and a person who researched rock engravings throughout Australia, described the Pilbara as ‘... without doubt the richest and most exciting region of rock engravings in Australia.’ Recent analyses demonstrate the diversity of engraved motifs in the Dampier Archipelago (Vinnicombe 2002; McDonald and Veth 2005; McDonald and Veth 2006). They include naturalistic depictions of animals, depictions of people, images of some items of material culture as well as depictions of tracks and geometric designs.

The most common naturalistic depictions on the Dampier Archipelago are engravings of marine species including: turtles, marine mammals (whale, dugong and dolphin), fish identifiable to family and sometimes species (stingray, shark, flounder, groper, angel fish and unicorn fish) and crustacean (crabs and crayfish). The range of terrestrial fauna represented is more restricted with the most commonly depicted marsupial being the euro. There are also rare images of thylacine and dingo in the Dampier Archipelago. Images of echidna are very rare. Snakes are the most commonly represented reptiles. Other reptiles are frequently represented schematically and it is sometimes difficult to tell whether an image represents a lizard, a goanna or a male with an exaggerated penis. Depictions of birds are not common. They may be portrayed with long or short beaks, long or short necks and long or short legs. The birds with long legs and curved beaks are probably marine feeders and some are shown holding fish in their beaks. The only recognisable terrestrial bird is the eagle.

An analysis of turtles, fish and macropods, indicates an extreme diversity in how these images are represented (McDonald and Veth 2006). The analysis shows that sixty one types of fish and sixty eight types of turtle occur within the Dampier Archipelago. There is also large variability in the depiction of macropods including the technique, form, size and the position of features such as the tail, arms, legs and feet. The analysis not only showed a high degree of design variability, but also variability in size, technique and form (McDonald and Veth 2006).

A comparison shows that the range of faunal images in the Dampier Archipelago engravings includes representations of most animal motifs found elsewhere in the Pilbara (McDonald and Veth 2005). It is difficult, however, to compare the range of engravings of fauna depicted on the Dampier Archipelago with other Aboriginal rock engraving traditions elsewhere in Australia because the species depicted may simply reflect the distribution of animals across the continent. For example, the Sydney

Basin rock engravings include images of platypus, koala and possum (McDonald 1990; Stanbury and Clegg 1990) which are not found on the Dampier Archipelago and which have not occurred naturally in the Pilbara (Cronin 1991).

Schematic representations of the human form (anthropomorphs) are the second most common type of engraving on the Dampier Archipelago (McDonald and Veth 2005: Figure 17; Vinnicombe 2002). Stick figures are the most common form of anthropomorphic representation. Most are plain but some have a pair of dots on either side of their head, or concentric arcs placed over the lower body or symbolically positioned boomerangs on either side of the body. Solid-bodied figures, where the body is wider than the limbs, are the next most common form of anthropomorph on the Dampier Archipelago (McDonald and Veth 2005: Table 27). Some of these have disconnected circular infilled heads and sinuous arm positions. Lizard men have various body shapes and are characterised by genitals that are longer than their legs. This type is distinguished from lizards by body shape and limb position (arms and legs are out and bent up at the elbow and knees for lizards). Profile figures are characterised by solid bodies and thin arms and may have disconnected heads. Sometimes they have exaggerated, erect penises. Occasionally they are grouped in a row or arranged around a central line, forming complex images. The use of infilled circles to indicate joints (elbows, knees) or body parts (genitalia, stomachs, hands, feet) is also characteristic of many of the anthropomorphic engravings on the Dampier Archipelago.

There is a greater diversity of anthropomorphs in the Dampier Archipelago and other Pilbara rock art provinces than in the Sydney Basin engravings. Anthropomorphic figures in the Sydney basin are generally crudely naturalistic (Morwood 2002: 44; McDonald 1990; Stanbury and Clegg 1990). While profile figures occur in the Sydney basin, they do not show the diversity of forms found in the Pilbara and the Dampier Archipelago. The marked diversity of anthropomorphs, many of which are dynamic rather than crudely naturalistic sets the Pilbara engravings apart from other Aboriginal engraving traditions in Australia (Morwood 2002: 60).

An early comparative study of the Pilbara Aboriginal engravings identified a number of style provinces but did not identify the relative significance of each style province (Wright 1968). Similar to the analysis of turtles, fish and macropods, the McDonald and Veth 2006 study demonstrates the high levels of diversity in the anthropomorphic representations in the Dampier Archipelago with sixty seven identifiable types of stick figures, eighty one types of solid figures, thirty types of lizard men, forty seven types of profile figures, forty types of outline figures, forty three types of grouped figures and thirteen types of therianthropic figures. This can be considered as a high degree of diversity of human forms when compared to other regional Pilbara styles (McDonald and Veth 2006)

In addition to the anthropomorphs characteristic of the Dampier Archipelago stylistic tradition, anthropomorphs of other Pilbara styles occur at a low frequency. They include, *Kunungra*-like figures characteristic of the Upper Yule, *Minjiburu* figures characteristic of Port Hedland and stick figures with small anthropomorphs positioned under their arms on both sides of the body characteristic of Cooya Pooya (McDonald and Veth 2005: 138-149; McDonald and Veth 2006). The variety and complexity of anthropomorphic depictions on the Dampier Archipelago is outstanding when

compared with other Aboriginal engraving traditions.

On the above basis, the Dampier Archipelago has national heritage values under this criterion for its outstanding diversity of engraved human forms.

The chronology of different types of rock engravings is poorly understood in the Dampier Archipelago. However, Lorblanchet's (1992) work in Skew and Gum Tree Valleys suggest the most deeply weathered rock engravings include some geometric designs (circles, concentric circles, lines and dots), human figures (stick figures and dynamic human figures in profile), animals (birds and kangaroos) and tracks. The deeply weathered engravings of kangaroos are evidence that these valleys were occupied before the onset of Holocene sea level rises (Lorblanchet 1992).

Images with intermediate weathering include some geometric designs (triangles, mazes, bi-lobes and dumb bells) and human figures (enlarged hands and kangaroo men). The least weathered engraved images are of humans with exaggerated hands and feet and figures of bird-men, snakes and boomerangs. Some types of images can have either a weathered or a fresh appearance. They include a range of stick figures, animal and bird tracks, kangaroos, turtles, fish and eggs (Lorblanchet 1992). Many of these engravings are simple naturalistic depictions of animals and people and belong within the simple figurative style.

There are some complex images that exhibit both a weathered and a fresh appearance. For example, there are three depictions of human figures ascending a line at the 'Climbing Men' site. They all evidence very different degrees of weathering and patination and the faintest of these are barely discernable in normal lighting (McDonald and Veth 2005: 54). Such complex panels demonstrate the antiquity and continuity of the grouping of dynamic images into complex scenes in the Dampier Archipelago.

On this basis the Dampier Archipelago has national heritage values under this criterion for its outstanding antiquity of depictions of complex scenes showing human activity.

Density of Rock engravings

Vinnicombe (as cited in McDonald and Veth 2005: 156), an expert in rock art, has commented on the density of rock engravings in the following way, '...the number of individual motifs inscribed on the boulders of the Dampier Archipelago must be numbered in the millions.... The only area I have seen with a comparable richness of art is the Kakadu National Park'. Surveys in the Dampier Archipelago have provided engraving site densities from 10 to 52 engraving sites per km². Saturation surveys in the Sydney region have provided art site densities of 14 per km² at Maroota and 6 art shelter sites per km² at Warre Warren (McDonald and Veth 2006).

While the overall density of rock engraving sites in the Dampier Archipelago is high, most of these sites contain relatively few engravings (Vinnicombe 1987a). For example, Veth (Veth *et al* 1993; McDonald and Veth 2005: 36) found there was an average of sixteen motifs per engraving site in the National Estate Grants Program (NEGP) survey area on the northern part of the Burrup Peninsula.

There are some sites, however, with thousands of images. Dix (1977: 280) reported a site with over 4,000 motifs and Lorblanchet (1992: 39) estimated that Skew Valley contained over 20,000 motifs and that Gum Tree Valley contained between 15,000 and 18,000 motifs. Both of these sites are at the southern end of the Burrup Peninsula. Vinnicombe (1987a: 26) recorded one site (P2332) with 1,177 motifs while Veth *et al* (1993: 230, 253) recorded one site with approximately 7,500 motifs (I5 on the south-eastern end of Withnell Bay) and another with more than 10,000 motifs (V34 at the north-eastern end of the Burrup Peninsula). Bednarik (2006) has also recorded sites with over 12,000 motifs at the southern end of the Burrup Peninsula. Virili (1977) recorded three sites on the Burrup Peninsula (known as bottom camp, lower site north and main site) that contained over 1,000 motifs at each site. There are also a number of sites recorded by Vinnicombe (1987a: Fig 6), Virili (1977), and Veth *et al* (1993: Fig 7.1) with more than 100 motifs at each site. Islands within the Dampier Archipelago are also known to contain large and complex engraving sites. For example Gidley Island and West Intercourse Island are known to contain sites with over 150 motifs while Rosemary Island, Enderby Island and Dolphin Island all contain sites with between 21-150 motifs (McDonald and Veth 2006).

An analysis of site locations demonstrates that large concentrations of engravings in the Dampier Archipelago tend to be found on the slopes and ridge tops of steep valley inclines bordering watercourses with rock pools and on rock platforms next to the ocean (Vinnicombe 2002: 83; McDonald and Veth 2005:77).

There are estimates for the number of engravings at other sites in the Pilbara. McNickel (1985) states that the line of hills to the north of Spear Hill are, 'among the most prolific rock art sites in the Pilbara; they comprise several thousand petroglyphs altogether'. Similarly, in a preliminary survey, Wright (1968) identified 3,000 engravings at the Woodstock site in the Pilbara. These observations stand in marked contrast to the tens of thousands of motifs found at some of the sites on the Dampier Archipelago. While over 5,000 engravings have been recorded on Depuch Island (the Watering Valley site and Hunter Pool site, each contain approximately 1,200 motifs (Ride *et al.* 1964)), there are no areas on Depuch Island with estimated densities that meet or exceed those recorded at the larger sites on the Dampier Archipelago.

Densities of engravings are rarely reported for sites elsewhere in Australia. The largest recorded engraving site in the Sydney region has approximately 174 motifs (McDonald and Veth 2006). Engraving sites in the Sydney Basin (Stanbury and Clegg, McDonald 1990) rarely if ever have hundreds of motifs and they therefore do not have the same concentrations of engravings as that found on the Dampier Archipelago.

On this basis, the Dampier Archipelago has national heritage values under this criterion for its rare concentrations of rock engravings, particularly on the steep valley inclines bordering watercourses and rock pools and on rock platforms next to the ocean.

Standing stones, stone pits and complex stone arrangements

Stone features found in the Dampier Archipelago include standing stones, placed stones, heaps, grinding patches, cairns, complex arrangements, hunting hides, pits,

fish traps and walls or terraces. There has been some debate in relation to the origin and significance of some of stone features on the Dampier Archipelago features. It has been considered that some of these features have been formed as a result of natural processes rather than human activity, however natural occurring features may have been used by Aboriginal people or have some additional significance for Aboriginal people (Vinnicombe 1997). For this analysis, stone arrangements can be considered as places where Aboriginal people have positioned stones deliberately to form shapes or patterns. This includes standing stones, circular stone arrangements and stone pits.

Surveys by Vinnicombe (1987a, 1987b) in the central Burrup Peninsula and by Veth *et al* (1993) on the northern end of the Burrup Peninsula identified a large number of stone pits, standing stones and stone arrangements. These stone pits have been interpreted as hunting hides (Vinnicombe 1987a; Veth *et al* 1993). The standing stones may be either ceremonial sites (*thalu* sites) where Aboriginal people manipulated the abundance of particular species or markers for resources such as potable water.

The density of pits and stone arrangements was 6.46/km² in Vinnicombe's survey (134 sites/20.74km²) and 34.36/km² in the Veth *et al* survey (302 sites/8.78km²). Veth *et al* (1993: 95) suggest the difference in calculated densities results from biases inherent in the sampling of predominantly near coastal area and areas rich in creek lines by Vinnicombe. From the survey by Veth *et al* (1993: 97; Table 7.3) the majority of stone pits and stone arrangements occur in coastal uplands, inland highlands and inland valleys, although stone arrangements appear to be surprisingly consistent across all geomorphic zones.

Vinnicombe (1987a: 32) states that 'Although stone features occur throughout the Pilbara, they are particularly well represented at the Burrup Peninsula, and display some unusual if not unique components'. She says that extensive alignments comprising at least three or four hundred standing stones have been identified at Happy Valley on the southern end of the Burrup Peninsula and other alignments have been reported bordering Searipple passage to the north. She recorded at least 96 standing stones at a site near the southern shore of King Bay (Vinnicombe 1987a: 32; Fig 25). Similarly, Gara (as cited by Vinnicombe 2002) says that, 'Although stone features have been reported at many sites in Australia they are, in general, not common and, if they are found in any one area, they are usually restricted to one or two types. The Burrup is exceptional by Australian standards, both in terms of the overall density of stone features, about 12 sites/sq km (Vinnicombe 2002), and in the wide range of types of stone features found there.

Mulvaney (2003) has also stated that 'standing stones are an incredible feature and high density on the peninsula. Standing stones and stone arrangements are common throughout Australia but nowhere and I mean nowhere is there the density and diversity of the standing stones as on the Burrup'.

The DIA site records show that stone arrangements are also found throughout the islands of the Dampier Archipelago. For example, standing stones have been recorded on Gidley, Mid Intercourse, West Intercourse, East Lewis, West Lewis, Enderby and Rosemary Islands. While information on the density of stone arrangements on the islands is not available, it is clear that the diversity of stone arrangements extends to

the islands of the Dampier Archipelago.

On this basis, the Dampier Archipelago has national heritage values under this criterion for its rare concentration of standing stones, stone pits and circular stone arrangements on the Burrup Peninsula, and the diversity of these features across the Dampier Archipelago.

Natural Environment

Marine Environment

Mangal communities - The significance of the mangal communities found within the nominated area is that they are situated within an arid environment. There are few areas in the world where mangals occur in arid regions and this rarity makes them of international scientific significance (Hill 2000 p81, CALM 2003 p7, Heyward 1999 p12 and Osborne et al 2000a p14). Although arid mangal communities are internationally rare, mangal communities are found along much of the north-western Australian coastline and other regional expressions of these communities, such as 80 Mile Beach are regarded as not only significant, but include even rarer freshwater mangal communities and outstanding congregations of migratory waders as well. Comparatively at a national scale, the mangals in the place are not considered to uncommon, nor the best representation of the community.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion for uncommon or the best representation of mangal communities.

Criterion (c) - the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history

Cultural Environment

The Dampier Archipelago contains engravings of human figures characteristic of most of the major art provinces in the Pilbara as well as a number of forms unique to the area (McDonald and Veth 2005; McDonald and Veth 2006). While chronometric dating of the Dampier Archipelago engravings has proved difficult, the different degrees of weathering and the large number of super-positioned engravings provides an opportunity to establish a relative chronology for motifs characteristic of the major style provinces in the Pilbara (Lorblanchet 1992; Vinnicombe 2002; McDonald and Veth 2005; McDonald and Veth 2006).

On this basis, the Dampier Archipelago has national heritage values under this criterion for its outstanding potential to develop an understanding of the relative chronology of different art styles in the Pilbara region.

Previous researchers have established that the distribution of engraved motifs across the Dampier Archipelago can be attributed to economic and cultural variability across the study area (Green 1982; Vinnicombe 2002; Veth *et al.* 1993; Bednarik 2006). Large numbers of some motifs in particular areas reflect the availability of particular resources. For example, there are a much higher proportion of marine subjects on the islands and images of turtles predominate on the islands and in the northern areas of the Burrup Peninsula, which are areas known to be popular turtle nesting locations.

The work of Lorblanchet (1992) demonstrates how a detailed analysis of archaeological material and rock engravings can contribute to an understanding of the way economic and cultural factors shape the artistic tradition. Analysis of the engravings and the content of the midden at the entrance to Gum Tree Valley reveal the marine focus of the Aboriginal people who camped in the area (Lorblanchet 1992: 44). An analysis of the locations of different types of motifs at the entrance to Gum Tree Valley showed that anthropomorphic figures are common on vertical surfaces near grinding patches while geometric motifs are common on flat surfaces near the crest of the slopes. This shows that the distribution of geometric motifs 'avoids' areas associated with the activities of women (Lorblanchet 1992: 45). The pattern in the upper part of Gum Tree Valley is very different, while the contents of the midden were the same as that at the entrance to Gum Tree Valley, the absence of grinding patches and the small size of the huts indicated that this was a men's area occupied by a small group.

Lorblanchet's work (1992) shows that archaeological remains (middens, grinding patches, quarries) closely associated with large numbers of rock engravings can contribute to a scientific understanding of the cultural and economic meaning of the rock engravings in the Dampier Archipelago. Areas within the place with a high density of engravings and associated archaeological remains have outstanding exceptional potential to yield information that will contribute to an understanding of the history and cultural meanings of this important art style.

On this basis the Dampier Archipelago has national heritage values under this criterion for its outstanding potential to yield information that will contribute to an understanding of the nation's cultural history.

The 'archaic faces' in the Dampier Archipelago have important research potential. The distribution of these motifs (Dix 1977) suggests links between this area and the Western Desert. It is thought that at the time of European contact Western Desert peoples were actively moving towards the coast (Tindale 1987). The 'archaic faces' have potential to yield information about the antiquity of the links between the Western Desert and the Pilbara Coast. Such information provides an outstanding opportunity to develop an understanding of pre-settlement Aboriginal demography and movement.

On this basis, the Dampier Archipelago national heritage values under this criterion for its outstanding potential to contribute to an understanding of the long history of connections between the coast and the Western Desert.

**Criterion (d) - the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:
a class of Australia's natural or cultural places; or
a class of Australia's natural or cultural environments.**

Cultural Environment

Rock engravings

Wright (1968) identified several distinctive regional styles among the Aboriginal rock engravings in the Pilbara including: the engravings at Port Hedland (McCarthy 1962),

the Upper Yule River (Woodstock-Abydos), Cooya Pooya (including the Fortescue River) and in the eastern Hamersley/Ophthalmia Ranges area. His comparison also showed that the greatest stylistic diversity in Pilbara rock engravings is found in the representations of people (anthropomorphs) with each style province having some characteristic images of people.

A comparison between the images from rock engraving sites in the Pilbara suggests that many of the figures found elsewhere in the region also occur in the Dampier Archipelago. Images of terrestrial and marine animals and birds in the Dampier Archipelago are similar to the range of images found at other coastal sites in the Pilbara such as Depuch Island and Port Hedland while the range of land animals is similar to those depicted in inland areas (cf Wright 1968; Ride *et al* 1964).

The characteristic anthropomorphs found at the Woodstock and Abydos Stations in the Upper Yule (*Kurangara* figures), are generally shown in profile, and have beaked or snout-like faces, exaggerated genitalia (male and female) long flexible arms and legs and two pronged (bifurcated) hands and feet (Wright 1968). They have head ornamentation which ranges from wispy antennae to lengthy decorated headdresses. A slightly simpler version of this style is found in the Dampier Archipelago, only differing in the exaggeration of genitalia and intricacy of headdresses (McDonald and Veth 2005: 143). Similarly, a type of *Minjiburu* figure characteristic of Port Hedland also occurs in the Dampier Archipelago. The Port Headland *Minjiburu* figures are a combination of outline style with intaglio hands and feet. They are interpreted as being female figures and many have exaggerated vulvas or are positioned around natural holes in the rock, which are thought to represent the sexual characteristics. They occasionally have facial features and sometimes their hair is indicated. However, the *Minjiburu* figures on the Dampier Archipelago were not positioned on natural holes in the rock, and one example had a penis (McDonald and Veth 2005: 143).

Sherlock Station and Depuch Island have identifiable similarities in their motif assemblages. Two of the most obvious similarities are the depictions of highly decorated turtles and very small humans seen in hunting scenes with large land or marine animals. Large birds or macropods with spears in their backs are also common. Images of turtles are ubiquitous in the Dampier Archipelago. Hunting scenes, like those on Depuch Island, also occur in the Dampier Archipelago (McDonald and Veth 2006).

The characteristic anthropomorphs at Cooya Pooya Station are stylised stick figures. They often have rayed headdresses, and small anthropomorphs positioned under their arms on both sides of the body. They are often shown in coitus, joined by a thick curved line between the two genital areas. They occasionally have exaggerated hands and feet. Similar stick figures, and compositions, are recorded on the Dampier Archipelago including depictions of coitus, smaller anthropomorphs positioned under the arms of a larger anthropomorph, stick figure/lizard man with headdresses and stick, lizard and solid figures with exaggerated hands and feet (McDonald and Veth 2005:146; McDonald and Veth 2006).

Unlike the areas described by Wright, the Dampier Archipelago includes examples of the anthropomorphs found in the smaller provinces as well as having its own

characteristic anthropomorphic motifs (McDonald and Veth 2005: Section 4.6; McDonald and Veth 2006).

On this basis, the Dampier Archipelago has national heritage values under this criterion for its outstanding ability to demonstrate the principal characteristics of the range of rock engravings in the Pilbara.

Standing stones

The examples of standing stones in the Dampier Archipelago range from single monoliths through to extensive alignments comprising at least three or four hundred standing stones. Vinnicombe (2002: 15, 33) provides information on the role of some upright stones. She states, 'at many sites where upright stones have been wedged into position, senior Aboriginal informants looked for and often located water worn pebbles. They maintained they were used to rub the stones in *thalu* increase rituals'. While standing stones are often associated with *thalu*, they also served other purposes in Aboriginal tradition. They were used to mark particular places with scarce resources, such as seasonal rock pools, and could also be used at significant sites.

Vinnicombe (2002) and Mulvaney (2003) have stated that the Burrup Peninsula is exceptional by Australian standards, for its overall density of stone features. Vinnicombe (2002) record a density of stone features of about 12 sites/sq km. Gara (as cited in McDonald and Veth 2005) noted that the Burrup Peninsula 'provides examples of the major types of stone features known in Australia...' They have also noted the exceptional range of types of stone features with the area. DIA records also show that standing stones are found throughout the islands of the Dampier Archipelago. The standing stones within the Dampier Archipelago exhibit exceptional diversity and demonstrate the principle characteristics and diverse functions of stone arrangements and standing stones.

On this basis, the Dampier Archipelago has national heritage values under this criterion for its outstanding ability to demonstrate the principal characteristics of the diverse functions of stone arrangements and standing stones.

Criterion (e) - the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group

There are claims that the Dampier Archipelago is a site of great aesthetic attributes, visual and non-visual, being the place where the magnificent mountains of the Pilbara meet the Indian Ocean. Another claim is that the Burrup Peninsula and associated islands and coastal strip comprise a unique landscape of granit[ic] rocks with the world's largest and prolific collection of Aboriginal engravings.

Local people from the nearby towns of Dampier, Karratha, Wickham, Point Samson and Roebourne value the islands and waters of the Dampier Archipelago and places like Miaree Pool on the Maitland River. These places are also described as attractions in information disseminated by Roebourne Shire (1999). While the local community may value the aesthetic characteristics of these places, there is insufficient information to demonstrate that this is of outstanding heritage value to the nation when compared with other local attractions elsewhere in Australia.

The Marine Parks and Reserves Selection Working Group the Department of Conservation and Land Management (Department of Conservation and Land Management 2002) state that, ‘... of all the islands on the Pilbara coast, those of the Dampier Archipelago have the greatest potential for tourism.’ However, the area receives relatively few visitors (Tourism Western Australia 2004a, 2004b) when compared with other parts of Western Australia such as the Kimberley (Tourism Western Australia 2004c). It is estimated that only four to five operators currently utilise the islands on a regular basis with a focus on fishing, but also accessing the islands for day and overnight trips (Department of Conservation and Land Management 2002). Although the nearby Karijini National Park was included, the Dampier Archipelago was not included in the comprehensive list of inspirational landscapes in the report on identifying nationally significant inspirational landscapes (Crocker 2005).

A methodology to establish a threshold for aesthetic values has been developed in the Department’s thematic study Inspirational Landscapes (Crocker and Davies 2005). Against the indicators in this methodology, the place is not considered a powerful or uncommon landscape nor has it defined images, which have shaped national perceptions. The Dampier Archipelago does have aesthetic values, which stem from the dramatic environment created by the drowned Archaean landscape, creating the peninsular and off shore islands. The landscape of the place is characteristic of landscapes throughout the Pilbara and Kimberley, although the ancient geology featuring on offshore islands is unusual. This landscape is famously associated and particularly well developed in the coastal landscapes of Cape Ranges and the cliffs and river valleys of the Kimberley, and also with the Devonian Barrier Reef formations at Geikie and Windjana. The nominated area cannot therefore be considered of outstanding significance in this respect. While the place is of undoubted significance to local communities, there is no evidence that it is of outstanding significant at the national level.

A number of individuals have commented positively about the aesthetic value of the rock engravings on the Dampier Archipelago. They include rock art specialists’, developers, parliamentarians and even a member of the English Royal Family. None of these constitute a community or cultural group. While Ngarda-Ngarli people have strong feelings about the rock engravings as part of their traditions, it is unclear whether they value them for their beauty or the sense of awe they inspire.

On this basis, the Dampier Archipelago does not have national heritage values under this criterion.

Criterion (f) - the place has outstanding heritage value to the nation because of the place’s importance in demonstrating a high degree of creative or technical achievement at a particular period

The analysis in McDonald and Veth (2005: Section 4.3, 4.5; 2006) demonstrates that the rock engravings in the Dampier Archipelago show exceptional diversity when compared with the other art provinces in the Pilbara or rock engravings elsewhere in Australia. While it includes examples of the types of human figures characteristic of the smaller provinces it also has unique forms (McDonald and Veth 2006). The

engravings on the Dampier Archipelago include detailed and finely executed examples of water birds, crabs, crayfish, kangaroos, turtles and fish which can, because of their detail, be identified to species level.

Engravings of animals in the Sydney Basin can sometimes be identified to species level, however, they tend to be much cruder (cf. Stanbury and Clegg 1990). The panels of composite engravings such as the climbing men panels are unusual. While composite panels occur in the Sydney Basin, they normally consist of chains of identical static figures or figures in coitus. The dynamic representations in the climbing men panels exhibit a degree of creativity that is unusual in Australian rock engravings.

The Dampier Archipelago contains the exceptional diversity of engraved images, including finely executed depictions of animals that can be identified to species level and complex and dynamic panels of engravings, demonstrate a high degree of creative achievement.

On this basis, the Dampier Archipelago has national heritage values under criterion (f).

Criterion (g) - the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons

Environmentalists, heritage professionals, rock art specialist and others who collectively seek protection of the Aboriginal heritage in the nominated area do not appear to meet the definition for a community or cultural group. They do not reside in, or share a heritage in a specific locality, and they do not share a common ethnicity or cultural background required for a cultural group. The grouping of people by a common purpose described as to 'seek the protection of the precinct' suggests that this is an interest group rather than a community or cultural group.

Ngarda-Ngarli people have a strong or special association with the Dampier Archipelago through their traditions and Aboriginal law. Some Ngarda-Ngarli people know and can sing images of particular animals or ceremonies found on the Dampier Archipelago. They also have knowledge of a number of the engraved images, standing stones and stone arrangements that are part of *thalu*, or increase sites (Vinnicombe 1987a: 33 Daniel 1990; Veth *et al.* 1993). However, this strong or special association through tradition is common throughout Indigenous communities. There is insufficient evidence to show that this association is of outstanding significant at the national level.

On this basis, the Dampier Archipelago does not have national heritage values under criterion (g).

Criterion (i) the place has outstanding heritage value to the nation because of the place's importance as part of indigenous tradition.

There are a number of features in the nominated area that are important expressions of Aboriginal tradition. These include the rock engravings, ceremonial sites including

standing stones (some of which are *thalu* sites), sites associated with the travels of ancestral creation beings and a landscape populated by spirits.

Despite the impacts of the Flying Foam massacre on the Yaburara Traditional owners, the Ngarda-Ngarli continue to have traditional knowledge of the variety of spirits. Ngarda-Ngarli state that spirits such as Ngkurr, Bardi, and Gardi continue to live in the area (Mardudhunera Yaburara *et al* 2004). Engraved images on the Dampier Archipelago relate to Aboriginal ancestral creation beings, spirit figures, ceremonies and rites of passage (Veth *et al* 1993: 149-150; Robinson as cited by McDonald and Veth 2005: 73-74).

The images associated with ceremonies marking major stages in the life cycle may depict ceremonial clothing and objects (Vinnicombe 2002: 19) or events during these ceremonies. Some of the ceremonial and rites of passage places are specifically for men or women, while others are open to all (Mardudhunera Yaburara *et al* 2004). Some Ngarda-Ngarli people know and can sing spiritual songs associated with images of particular animals or ceremonies found on the Dampier Archipelago. Many of the engraved images are still in use in ceremonies today (Wong-Goo-Tt-Oo 2005)

Features in the Dampier Archipelago landscape relate to traditional Aboriginal land management (Mardudhunera Yaburara *et al* 2004). A number of the engraved images and standing stones occur on the Dampier Archipelago that are part of *thalu*, or increase sites (Vinnicombe 1987a: 33). Increase sites are an important aspect of Aboriginal environmental management. There are *thalu* sites for economically useful species and for species such as louse and flies that are not economically important (Daniel 1990; Veth *et al.* 1993). In Aboriginal cosmology, *thalu* operate to assist natural processes rather than overriding them. They help to keep the world in balance although some *thalu* for species that are not economically important may be increased as a way to attack enemies. There are a number of identified *thalu* on the Dampier Archipelago (McDonald and Veth 2005: 73; McDonald and Veth 2006) and a number of other standing stones where senior Aboriginal informants found water worn pebbles that they maintained they were used to rub the stones in *thalu* increase rituals (Vinnicombe 2002: 15).

The Ngarda-Ngarli people state that they have a living Aboriginal culture, which can be shown through Aboriginal land management (Mardudhunera Yaburara *et al* 2004). The Indigenous traditions about creative beings and ceremonies provide an interpretive framework without which it is difficult to understand the rock engravings, ceremonial sites and *thalu* on the Dampier Archipelago.

Creative being sites exist on the coastal strip of the mainland. They include the Mainee Pool and two small hills at the mouth of the Maitland River, and sites on Cape Preston (DIA Site Register; Wong-Goo-Tt-Oo 2005). Most of these sites are associated with water. Links between creative beings and water sources are common in Aboriginal Australia. There is insufficient information to demonstrate that these sites are of outstanding heritage value to the nation when compared with similar sites elsewhere in Australia.

Similarly there are numerous groups across Australia with strong traditional associations with places, including rock engravings, ceremonial sites including

standing stones, sites associated with the travels of ancestral creation beings and a landscape populated by spirits. There is evidence that the Ngarda-Ngarli people have an active traditional life. However, there is insufficient evidence to show that the importance of the Dampier Archipelago, as part of Ngarda-Ngarli traditions, is of outstanding heritage value at a national scale.

On this basis, the Dampier Archipelago does not have national heritage values under criterion (i).

History:

Aboriginal people from this region identify themselves as Ngarda-Ngarli and say they have lived in this area since time immemorial, with the last tribe known as Yaburara (Mardudhunera Yaburara *et al* 2004). Archaeological studies demonstrate occupation in the Dampier Archipelago, which includes the Burrup Peninsula, for at least 8,000 years. During this time the Ngarda-Ngarli people have adapted to significant changes including changes to the environment, sea levels and climate (Department of Environment and Conservation 2006:13). The Ngarda-Ngarli people also actively managed the land (Mardudhunera Yaburara *et al* 2004). This is shown by features in the landscape, including *thalu* or increase sites, which are used to manage a range of natural resources.

Sir William Dampier was the first European to visit the archipelago that is now named after him. He landed on Rosemary Island but didn't encounter any Aboriginal people. In 1818, the British Admiralty sent Captain Phillip Parker King to search for rivers and fresh water on the West Coast of Australia. He landed in the Dampier Archipelago and had a number of meetings with Aboriginal people. He recorded information on their use of logs as canoes and their humpies. While most of his encounters were friendly, he did not attempt to land on a second island because the occupants gestured for him not to (King 1826: 33-36).

In 1861 Francis T Gregory undertook the first European exploration of the Pilbara region. He landed on the coast and followed the Fortescue River before turning to the south-west and following the Harding River. He returned to the coast and then undertook another journey to the east and north of the previous track. Gregory returned with his party on 17 October 1861 having discovered some excellent country. A return was made by sea to Perth which was reached on 9 November 1861. Gregory estimated that there were two or three million acres of land in the area suitable for grazing, and he drew attention to the possibilities of a pearling industry.

As a result of Gregory's reports Walter Padbury landed at the mouth of the Harding River in 1863 (Australian Heritage Commission 2001). He brought with him a party of settlers and some stock. A port was established at the Mouth of the Harding River. It was originally named Tien Tsin after the barque which carried Padbury and his party. The town was also later referred to as Port Walcott, North District and Landing. In December 1871, after a visit by Western Australian Governor Weld on the HMS Cossack, the town was renamed Cossack. As the first port in the North West, Cossack provided a vital point of access for the settlement and development of the Pilbara region.

Pearling and shore-based whaling industries were established in the area in the 1860s and 1870s (Australian Heritage Commission 1978a, 1978b). These industries attracted a diverse work force including Aboriginals, Chinese, Malays, Filipinos and Japanese. While Cossack was the main port for the pearling industry, the fleet also established a small station at Blackhawk Bay on Gidley Island (Australian Heritage Commission 1978 b). Shore-based whaling, which lasted for almost a decade, was established on Malus Island in 1870 (Gibbs 1994; Australian Heritage Commission 1978b). Gold was discovered in the Pilbara in the 1870s.

Aboriginal people of the area played a significant role in both the pearling and pastoral industries. However, the development of these industries, and the shore-based whaling industry, began the process of Aboriginal dispossession in the area. In 1868, Constable Griffis arrested an Aboriginal man, Coolyerberri, for stealing flour although there are also suggestions that Griffis had earlier abducted Coolyerberri's wife. Griffis and two companions were killed when Coolyerberri was rescued by a group of Aboriginals. The Government Resident responded by swearing in nineteen special constables who, over several days, attacked the Aboriginal camps on the Burrup Peninsula and islands to the north of the peninsula (Gara 1993, Bednarik 2006). Records vary, but indicate that between five and forty Yaburara men, women and children were killed during what has become known as the Flying Foam Massacre (Gara 1993). This devastated the Yaburara population.

The harbour at Cossack, Butcher's Inlet, could only cater for ships up to 200 tons, and could only be safely negotiated at high tide. As a result the pearling industry relocated to Broome in the early 1890s. The gold rush also slowed in the early 1900s.

The need for a deep-water port to serve the Pilbara remained an important issue. Depuch Island was an early candidate, with the first serious scheme for a railway between Marble Bar and the coast being raised in 1908. There was no progress on developing a port until the 1960s when Depuch Island again was considered. However, it was concluded that because of the Island's exceptional Aboriginal heritage the port should be built elsewhere (McDonald and Veth 2005:160; Vinnicombe 2002: 6; Bednarik 2006:25). In 1963 the Western Australian Government and Hamersley Iron entered into an agreement to develop the Tom Price mine and the town and port of Dampier. The town was completed by 1966.

In 1978, the Burrup Peninsula was chosen as the site for a treatment plant for offshore gas deposits on the North-West Shelf. Following an Environmental Impact Assessment, Withnell and King Bays were recommended for the development. A programme to salvage information on Aboriginal heritage in the area began in 1980 (McDonald and Veth 2005: 162).

At this same time, the Clough report on port and land planning on the Burrup Peninsula was prepared and concluded that there was no serious conflict between industrial needs and conservation requirements (McDonald and Veth 2005: 162). Although a report was prepared by Bruce Wright identifying the Dampier Archipelago as a major archaeological resource with high scientific value and specifying the need for consultation with Aboriginal people (Department of Aboriginal Sites 1980) the Western Australian government adopted the Clough report as a guideline for future development on the Burrup Peninsula. Throughout the

nineties and into the new millennium there were numerous ongoing developments that have resulted in additional large and small-scale survey work on the Burrup Peninsula.

During this time three native title claims were registered that included parts of the Dampier Archipelago. In 2002 the Western Australian Government entered into the Burrup and Maitland Industrial Estates Agreement Implementation Deed (the Agreement) with the three native title claimant groups. This Agreement enabled the State Government to compulsorily acquire any native title rights and interests in the area of the Burrup Peninsula and other parcels of land near Karratha. The Agreement also included a range of economic and community benefits for the Ngarluma Yindjibarndi, Wong-Goo-Tt-Oo and Yaburara Mardudhunera peoples, including education, training and a stake in future land developments (Department of Premier and Cabinet 2005).

The Agreement also provided for the parts of the non-industrial land of the Burrup Peninsula to be returned as freehold title to Ngarda-Ngarli, and for this area to become a Conservation Reserve jointly managed with the Department of Environment Conservation (Department of Environment Conservation 2006).

Condition:

Parts of the area, particularly the Burrup Peninsula, East Intercourse Island and Mid East Intercourse Island, have been subject to industrial development and other impacts such as the construction of towns and work camps. A land use impact assessment, undertaken using aerial photographs from August 2004, estimates that high levels of impact have occurred on 1,643 hectares (or 16.4 square kilometres) on the Burrup Peninsula (McDonald and Veth 2006). A high level of impact in these areas on the Burrup Peninsula has resulted in the destruction of archaeological material and in some cases the relocation of engravings and other stone features. Despite this, the natural and cultural heritage in Dampier Archipelago and its surrounding waters is in good condition.

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