

# Appendix B: General and environmental glossary

## General glossary

**1 Aboriginal:** Comes from the Latin term 'ab origine' which means 'from the beginning' and refers to the original inhabitants of a particular place. In Australia, an Aboriginal person is someone who is of Aboriginal descent, identifies as an Aboriginal person and is accepted as an Aboriginal person by the community in which he or she lives (Human Rights and Equal Opportunity Commission 2003).

**2 Aboriginal Ceremony and Dreaming:** Spiritual/story places/landscapes where no physical evidence of previous use of the place may occur. Such places include natural landscape features, ceremonial locations, men's/women's places, creation stories and tracks, and birth, marriage and burial places (Brown 2005)

**3 Aboriginal Resource and Gathering:** Relates to places/landscapes where food gathering, hunting, or collection and manufacture of materials and goods for use or trade were undertaken. Wild resource places are those locations where people have obtained wild foods, medicines and materials in the historic past and during the current day (English 2002, p. 2).

**4 Art:** Visual images created on rock surfaces in rock shelters or on rock platforms. Includes images created using pigments (paintings, drawings and stencils) or engraved images created by pecking, pounding, abrasion and/or scratching (Brown 2005).

**5 Artefacts:** Objects such as stone artefacts (pieces used as tools as well as waste products) including fish-hook files, grindstones, ground-edge hatchets/axes and manuports; wood implements such as spears, boomerangs, clubs and shields; shell implements such as shell fish-hooks, 'scrapers' and shells hafted onto the end of spear-throwers; and glass, metal and ceramic artefacts made or used in the historic period (Brown 2005).

**6 Assimilation policies:** In 1937, the Commonwealth Government held a national conference on Aboriginal affairs that agreed that Aboriginal people 'not of full blood' should be absorbed or 'assimilated' into the wider population. The aim of assimilation was to make the 'Aboriginal problem' gradually disappear so that Aboriginal people would lose their identity in the wider community. Protection and assimilation policies that harshly affected Indigenous people included separate education for Aboriginal children, town curfews, alcohol bans, no social security, lower wages, State guardianship of all Aboriginal children and laws that segregated Indigenous people into separate living areas, mainly on special reserves outside towns or in remote areas. Another major feature of the assimilation policy was stepping up the forcible removal of Indigenous children from their families and their placement in white institutions or foster homes (Human Rights and Equal Opportunity Commission 2003).

**7 B.P.:** Before present. The 'Present' is defined as 1950 (Amorosi and Murphy 2000).

**8 Burials:** Location(s) where Aboriginal people were buried and/or where human remains have been found. Burials may be either pre- or post-contact in age and may occur in shell middens, in sandy soils, or in caves or in historic cemeteries, and they may or may not be marked by carved trees, stone arrangements or headstones (Brown 2005).

**9 Caring for country:** An Aboriginal term for the traditions derived from the individual and group identities attained from their own particular area of land and sea, often referred to as country. Throughout life Aboriginal people retain their cultural association with, and responsibilities to look after, their traditional country—even though they may no longer have ownership or even access to it. It is this sense of responsibility to country that makes indigenous groups particularly keen to be involved in the management of coastal areas (Western Australian Planning Commission 2004).

**10 Ceremonial Ring:** 'Bora grounds' comprise a single or double raised-earth circle with or without a connecting pathway. Usually places for male initiation ceremonies (Brown 2005).

**11 Conflict:** Confrontations occurred between Aboriginal and non-Aboriginal people, or between different Aboriginal groups (Brown 2005).



**12 Contact site:** Site relating to the period of first contact between Aboriginal and European people. These sites may be associated with conflict between Aborigines and settlers, or mission stations or reserves, or historic camping places. The artefact assemblage of contact sites will often include artefacts manufactured from glass (Amorosi and Murphy 2000).

**13 Earth mounds:** Raised earth platforms that functioned as cooking ovens, and plant processing and habitation sites associated with inland NSW and Victorian river systems. In AHIMS, commonly applied to mounded shell midden deposits (Brown 2005).

**14 Fish trap:** Constructed stone or brush weirs or walled enclosures designed to trap fish. May be situated on coastlines or along watercourses (Brown 2005).

**15 Grinding grooves:** Grooves formed by rubbing stone, wood or bone pieces on a rock surface during implement manufacture or re-sharpening. Also includes circular or oval shaped ground areas formed during food processing or powdering ochre (Brown 2005).

**16 Habitation structure:** Structure produced by, or for, Aboriginal people for short or long-term shelter. Includes structures, or remains of structures, at historic living places such as missions, reserves and fringe camps (Brown 2005).

**17 Hearth:** A fireplace or campsite, represented archaeologically by concentrations of charcoal, ash and/or hearth stones or discoloured /burnt earth or other materials such as heat-treated stone fragments (Brown 2005).

**18 Heritage place:** An area or region of land that represents a particular focus of past human activity, or that represents a concentration of in situ cultural material. A place includes any structures, buildings or works upon or integral with the land, and any artefacts or other physical relic associated with the land, or it may have no visible evidence of human activity, being rather the site of a past event of importance or the embodiment of a particular belief or legend. Examples might range from an Aboriginal ceremonial ground, a pioneer's house and contents, a shop, the remains of an early whaling station or a recent fish farm, Captain Cook's landing place, a 40 000-year-old Aboriginal campsite or a 1990s brick-veneer house,

a shipwreck, an industrial or mining landscape, a bus stop, a Macassan trepanger campsite or the Surfer's Paradise Caravan Park, a garbage dump, the local war memorial, a garden, an Aboriginal rock painting or a band rotunda (Amorosi and Murphy 2000).

**19 Holocene:** The time from the end of the Pleistocene Ice Age (c 10 300 BP) to the present day (sometimes referred to the postglacial period) (Amorosi and Murphy 2000). Archaeologists generally divide the Holocen into three components. The Early Holocene relates to the period from the end of the last Ice Age (~12,000 years ago) to approximately 5,000 years ago. During this time there is early evidence for a change in technology and subsistence practice; the adaptation to new environments; and responses to climate change and rising sea associated with the end of the last Ice Age. Sub-themes correspond to those listed for the Pleistocene, with the expectation that each theme would have slight variation in the form and context of the sites that are linked to this theme. Middle Holocene: This theme relates to the period from approximately 5000 years ago to 2000 to 1500 years ago. During this time, there is evidence for the introduction of new stone working technologies, and outside influences such as the arrival of the Dingo. There is also evidence for the development of regional territories and more formalised trade and exchange networks. Sub-themes include those listed for the Pleistocene as well as regionalisation, colonisation of new environments, and trade/exchange. Late Holocene relates to the period from 2000 to 1500 years ago to the time of European invasion. During this time, there is evidence for new or more intensive subsistence practices, large social gatherings, increased sedentism, and regionalisation. These are all sub-themes, in addition to those listed for the Pleistocene.

**20 Midden:** A term borrowed from the Danish. It originally applied to the accumulations of shell and other food remains left by Mesolithic man in that country. Australian Midden sites are accumulations of hearth and food debris that has built up a deposit on the ground surface over a length of time. Middens are generally comprised of charcoal and either freshwater or coastal shell species, depending on the site's location. Midden sites may also contain stone artefacts, and the

food refuse of other native animals such as small mammals. Their thick deposit of burnt shells and dark grey/black deposit can distinguish midden sites within the landscape. Coastal shell middens are often found in close association with rock platforms. Freshwater shell middens are found in close proximity to areas that provided freshwater mussels (Amorosi and Murphy 2000).

**21 Modified tree sites:** Locations where either carved or scarred trees occur or where known to have occurred. Trees into which designs were carved are usually associated with burials, ceremonial grounds or territorial markers. Scarred trees have a scar(s) where a section of bark or wood was removed in order to make a canoe, shield or container, or where foot-holds were cut into the tree trunk to gain access to resources such as possums or honey (Brown 2005).

**22 Non-human bone and organic material:** Objects most commonly found within Aboriginal archaeological deposits including bone tools, faunal remains (such as fish, bird or mammal bones), and plant remains (resin, twine and plant food). Also includes fishing lines and nets, net bags, and ornaments such as armbands, belts, necklaces and pendants (Brown 2005).

**23 Ochre quarry:** Source of earth used as a pigment for art (drawing, painting or stencilling images on rock surfaces, as well as for decorating bodies, tools and weapons), for ceremonial occasions, burials and trade. Usually comprise clays coloured by red, brown and yellow iron oxides or white clay pigments (Brown 2005).

**24 Pleistocene:** The geological period corresponding with the last or Great Ice Age. The onset of the Pleistocene is marked by an increasingly cold climate, by the appearance of Calabrian mollusca and Villafranchian fauna with elephant, ox, and horse species, and by changes in foraminifera. The oldest form of man had evolved by the Early Pleistocene, and in archaeological terms the cultures classed as Paleolithic all fall within this period. The date for the start of the Pleistocene is not well established, and estimates vary from 3.5 to 1.3 million years ago. The period ends with the final but gradual retreat of the ice sheets, which reached their present conditions around 10,300 BP (Amorosi and Murphy 2000). Archaeological research and the discovery of new sites continually refine our

understanding of this broad period. It has been established that Aboriginal groups colonised and adapted to diverse Australian environments that underwent significant changes due to climate fluctuations. Sub-themes include colonisation of the continent, mobility, technology, settlement, subsistence, human morphology, ritual/ceremonial, and art.

**25 Post-contact Aboriginal site:** Also referred to as Historic Aboriginal Site. These area sites/ places/localities indicate that contact has been made with European culture during the period of initial European settlement (glass in tool assemblage, massacre sites), or that activities culturally significant to Aboriginal people have occurred (camping, employment, travelling routes) (Amorosi and Murphy 2000).

**26 Potential archaeological deposit:** An area where surface artefacts may or may not have been identified and where sub-surface artefacts and/or other cultural materials are thought likely to occur (Brown 2005). On the basis of collated existing data and site inspection an area or specific site may have the potential for extant or archaeological deposits. Background research will present the most likely site types, contents and state of preservation. Relative levels of potential are described as Low (10 to 30 per cent probability), Moderate (40 to 60 per cent probability) and High (70 per cent and above probability) (Amorosi and Murphy 2000).

**27 Protection policies:** Indigenous survivors of frontier conflict were moved onto reserves or missions. From the end of the 19th Century, various State and Territory laws were put in place to control relations between Aboriginal people and other Australians. Under these laws, protectors, protection boards and native affairs departments segregated and controlled a large part of the Aboriginal population. It has been estimated that the Aboriginal population during the 1920s had fallen to only about 60 000 from perhaps 300 000 or even one million people in 1788 (Human Rights and Equal Opportunity Commission 2003). 'The restrictions and controls placed on Aboriginal people living within the managed missions and reserve system affected life on a daily basis. Cultural practices, particularly language, were suppressed, behaviour was modified and movement on and off the settlements was controlled' (Purcell 2002).



**28 Rock shelter/cave:** Sites that are located within a rock shelter/overhang or caves. The archaeological deposits within such sites can vary considerably but are often predominantly lithic. Depending on their location, the archaeological deposit may also include midden deposits of shellfish, fish or terrestrial fauna. Owing to the often undisturbed deposits at these sites, they are potentially very valuable sites and are generally considered of high scientific significance. There are instances where rock shelter sites also possess art work on the stone walls are considered as rock shelter/art site combined (Amorosi and Murphy 2002).

**29 Shell sites:** Places where shells from beach, estuarine or river species have accumulated as a result of Aboriginal gathering and food consumption. Shell middens vary in size from a few scattered shells to extensive shell deposits, which may include artefacts, hearths, animal bones, other organic material, ochre and burials (Brown 2005).

**30 Sampling (archaeological):** To 'define' Sampling in archaeology, we quote from Pardoe and Martin (2001) as presented in their report on the Murrumbidgee Province:

**Systematic sampling** involved the assessment of the distribution of sites in the Murrumbidgee Province from the NP&WS sites register. In order to ensure as complete a treatment as possible, areas with no registered sites were targeted. This approach was one of 'filling in the gaps'. One aspect of this approach is that while it may seem counterproductive to examine areas where experience suggests there will be little material evidence, it is necessary to quantify that experience. Equally, there were areas that had no sites registered simply because no one had ever looked there.

**Stratified sampling** assumes prior knowledge of relevant factors likely to affect site distribution. Our selection of places to survey was influenced by landform, soils and water source within the existing blank spots of the sites register.

**Hierarchical sampling** involves sampling with increasing detail at a number of levels. In effect, once areas and associated features had been prioritised, it remained only to selectively

narrow down sampling possibilities to particular properties and paddocks within them. This latter was done in discussion with local residents and formed part of the consultation process.

**30 Stone arrangements:** Humanly arranged stones or rocks, which form lines and circles as well as cairns and piles (heaps), sometimes in complex groups. Stone arrangements are associated with ceremonial activities, or used as markers for territorial limits or to mark/protect burials (Brown 2005).

**31 Stone quarry:** Location from where stone has been removed by Aboriginal people from a stone raw material source for use in the production of stone tools. Includes locations where pebbles or cobbles were obtained from gravel beds or eroded conglomerate sediments. Also termed 'stone source' or 'extraction site' (Brown 2005).

**32 Terra nullius:** From 1788, Australia was treated as a colony of settlement, not of conquest. Aboriginal land was taken over by British colonists on the premise that the land belonged to no one ('terra nullius'). Australia's colonisation resulted in a drastic decline in the Aboriginal population. Estimates of how many Indigenous people lived in Australia at the time of European settlement vary from 300 000 to one million. Estimates of the number of Indigenous people who died in frontier conflict also vary widely. While the exact number of Indigenous deaths is unknown, many Indigenous men, women and children died of introduced diseases to which they had no resistance such as smallpox, influenza and measles. Many also died in random killings, punitive expeditions and organised massacres (Human Rights and Equal Opportunity Commission 2003).

**33 Visibility:** Refers to the degree to which the surface of the ground can be observed at the time of an archaeological survey (Fanning & Holdaway 2004). This may be influenced by natural processes such as wind erosion or the character of the native vegetation, and by land-use practices such as ploughing or grading. It is generally expressed in terms of the percentage of the ground's surface visible to an observer on foot. For example: 10 per cent visibility equates to 10 cm<sup>2</sup>/ 1 m<sup>2</sup> of ground surface that is not covered by vegetation or soil deposit. For example (Amorosi and Murphy 2000):

0% = No visible ground surface

0%–10% = Very Poor

0%–30% = Poor

30%–50% = Fair

50%–70% = Good

70%–90% = Very Good

90%–100% = Excellent

**34 Waterhole:** Natural or human-made cavities where fresh water could be obtained. Waterholes may have been sources of water for Aboriginal groups. They may have had ceremonial or dreaming significance and/or may also be used to the present day as a rich resource gathering area (e.g., waterbirds, eels, clays, reeds etc) (Brown 2005).

## Environmental terms

**Alluvial fan:** A cone- or fan-shaped alluvial deposit; usually where a stream leaves a narrow valley and enters a broad plain. Generally steeper angled than alluvium. Often with traces of many abandoned channels on the surface.

**Alluvial terrace:** Abandoned floodplains of stream or rivers (abandoned because the stream has eroded its bed, and floodwaters can no longer reach the old floodplain). Usually a natural process, although gullying can have the same effects).

**Alluvium:** Deposited by streams or rivers. Mapped areas will usually surround a channel and include both the channel and the floodplain. Where the floodplain is too small to map, the creek lines may indicate small pockets of alluvium. Soils range from sand to clay, usually deep. Creek beds may erode top bedrock in some areas. Some alluvial areas have only poorly defined drainage lines or discontinuous channels (chains of ponds).

**Bench:** Flat or near flat area of rock on a plateau, often at the edge of the plateau, above a steep slope.

**Claypan:** Small, shallow, circular depression that intermittently holds water (from local runoff). Usually without trees, but sometimes with grasses. Circular shape suggests possible shaping of shoreline by wave action. Appears to form by deflation of the topsoil, exposing the impermeable subsoil that holds the water.

**Colluvial slope:** Deposit of slope processes, usually sheet (rather than channel) flow, accumulating on the lower slope, below a soil mantled or rocky slope. Slopes range from steep (>15 degrees) to very low (<1 degree). Colluvium slopes towards the creek line from the slope, distinguishing it from alluvium, which slopes down the valley parallel to the creek. Often has a deep coarse or medium (sand to loam) soil. Highly susceptible to erosion, especially where vegetation has been disturbed (such as by cultivation, forestry, road-building).

**Ephemeral creeks** (second and third order): Drainage lines that are unlikely to hold water after rain events or hold water only for a short period

**Floodplain:** Broad area of alluvium around the major rivers and creeks. Key floodplain characteristics include channel size, permanence of water, in-channel features (bars, pools) and abundance of floodplain features such as flood channels, meander scrolls or Paleochannels. Generally fine-grained soils (clays to earths). Flat with poor drainage.

**Floodplain features:** Features such as former meanders and terraces that indicate that the morphology of the current creek was different in the past.

**Flood channel:** Discontinuous channels on the floodplain formed by scouring when floodwaters leave the main channel. Flood channels often hold water for extended periods after floods, thereby forming waterholes.

**Footslope:** Slope element adjacent to and above a floodplain/flat.

**Gilgai:** Area of deep, black cracking clay where the surface has a pattern of mounds and hollows (formed by expansion and contraction of the clays as they wet and dry). The hollows often gather water after rain and can hold it for some time.

**Mid slope:** Slope element not adjacent to a crest or flat.

**Overland flow:** Water runoff across the unchannelled surfaces of hillslopes and floodplains. May transport leaf litter and mineral sediments, as indicated by deposits of litter dams and microterraces left on the surface when the flow subsides.



**Paleochannel:** An old channel (abandoned). Usually as the result of natural processes and the creation of new channels elsewhere on the floodplain. Conspicuous because they retain the characteristic meandering channel pattern. They range from being permanently dry and largely filled in, to some with widely spaced waterholes to some that are often full of water and act as flood channels.

**Ridge line/crest:** A crest is a smoothly convex landform that stands above all, or almost all, points in adjacent terrain. A ridge line comprises a narrow crest with short adjoining slopes; the crest length is greater than the crest width.

**Ridge line/saddle:** A saddle on a ridge line is an area that occurs between two higher points (crests on the ridge line).

**Rocky ground:** Bare rock surfaces or thin soils with abundant rock. Can range from cliffs to flat benches. Steep rocky ground includes cliffs and steep slopes of rocky outcrop.

**Rocky ravine:** Valleys with very steep straight-sided slopes, narrow ridge crests and narrow valleys. Soils thin or absent on slopes. Main erosion process is mass movement along joints or bedding planes in rock; usually greater than 30 degrees. Creeks will have boulders, gravel and sand as a thin cover over bedrock. Channel gradients will be low to steep, with occasional rapids and waterfalls at bedrock steps.

**Sand sheets:** Deep, uniform medium to coarse sand. Possibly in situ weathering product of a particular stratum with or without subsequent reworking by wind into sand dunes.

**Sand monkey:** Term for a sandy Paleochannel 'stringer'. Unlike Paleochannels, which retains a concave shape and hold water, sand monkeys are convex at the surface. The channels are filled with deep medium sand, either yellow or red, depending on the drainage.

**Scald:** Bare areas where water and wind erosion has removed the topsoil, exposing (usually) saline subsoils that retard vegetation growth.

**Soil-mantled slopes:** Low to steep slopes with a continuous cover of soil and no rock outcrop.

Soils range from shallow to deep and a range of textures. Soils formed largely by in situ weathering of rock. Subject to sheet erosion and gully erosion only in extreme cases, but only usually with cultivation.

**Spur/crest:** Runs off a ridge line and is also a smoothly convex landform that stands above all or almost all points in the adjacent terrain. A saddle is an area that occurs between two higher points (crests) along the spur.

**Spur (secondary):** A spur that runs off a spur.

**Talus:** Blocks of rock at the base of a cliff, usually steep, >30 degrees.

**Terrace:** Abandoned floodplain. Abandonment caused by incision of river to greater depth so that floodwaters never or rarely reach this level. Will usually still retain floodplain features of Paleochannels, flood channels etc although these may carry water less regularly than on the floodplain.