

OUTDOOR COLLECTIONS

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Objectives

At the end of this chapter you should:

- be aware of the need to care for outdoor cultural material;
- have a basic understanding of the main causes of damage to objects in an outdoor environment; and
- know the basics of caring for and maintaining outdoor cultural materials.

Introduction

Sculpture, monuments, war memorials and even stone horse-troughs are all familiar features of our landscape. There is no doubt that we notice them and appreciate them. They are decorative, they have meaning for us and they contribute to the visual texture of our surroundings.

Despite the fact that we value these items, it is not often that we examine these objects closely and observe their detail, or note any damage unless it is very obvious—a graffiti attack, for example.

Because these objects are designed to be outside and are made from durable materials, we think that they can withstand all sorts of conditions. They are durable but, like all materials, deteriorate. The process is constant.

Damage and deterioration can occur rapidly and be obvious. However, many items deteriorate slowly over long periods of time—and the damage is not seen clearly until it is advanced. It is important to be aware that this will happen inevitably and that there are steps you can take to minimise the risks to your valued outdoor cultural material.

What is outdoor cultural material?

Outdoor cultural material includes such items as:

- sculpture—art work in three dimensions;
- fountains—figures, animals and other decorative items combined with hydraulics to

form jets, sprays and waterfalls;

- monuments—dedicated to the memory of people or events;
- murals—paintings or decorative items on walls;
- war memorials—dedicated to the memory of those who died during a specific war. Often with larger memorials, additional plaques have been added as other wars have occurred; and
- artefacts—objects which have some link to an historic event, often with a plaque or other memorial features. Such items include cannons, war relics, anchors and items saved from larger pieces which have since been destroyed.



A stone sculpture in the grounds of Carrick Hill, South Australia.

Photograph courtesy of Artlab Australia, reproduced with permission of Carrick Hill

What is outdoor cultural material made of?

Outdoor cultural material includes a vast array of items made from varying materials.

Sculpture gives an indication of the range of materials. Traditional sculptures tend to be made from:

- metals such as bronze and, less frequently, cast iron;
- stones such as marble, sandstone, granite, limestone and bluestone; and
- wood—this is used less frequently, probably because it is generally considered to be less durable.



Close-up of one component of a timber sculpture.

Photograph courtesy of Artlab Australia, reproduced with permission of Carrick Hill

In recent years, a greater range of materials have been used. They are used in combination with each other, and with the more traditional materials. There is now sculpture which uses materials as varied as:

- concrete;
- glass;
- terracotta;
- fibreglass;
- corrugated iron;
- terrazzo; and
- painted metal.

What are the most common types and causes of damage?

Objects in an outdoor setting are fully exposed to almost all of the factors that cause damage and deterioration.

Being outside, sculptures, memorials and other objects are very vulnerable to physical damage such as:

- scratching and abrasion, for example, through children climbing on objects;
- graffiti;
- deliberate breakages and other forms of vandalism;

- accidental damage such as vehicles crashing into—or trees falling on—objects;
- splitting and cracking through plants growing in small fissures in the objects; and
- splitting, cracking, distortion, and loss of coatings and paint layers as objects adjust to extremes and fluctuations in their environment. This type of damage rarely happens quickly. It usually happens over a long period and is often considered to be natural weathering.



This imitation stone work has split, leaving it vulnerable to further damage.

Photograph courtesy of Artlab Australia, reproduced with permission of Carrick Hill

Environmental factors which can contribute to physical damage include:

- extremes and fluctuations in temperature and relative humidity;
- dust storms and dirt picked up by cars on dirt roads—high velocity dust particles act like a sand-blaster. Stone surfaces—especially the softer stones such as limestone and sandstone—are particularly vulnerable to this type of damage especially on areas with fine-detailed carving;
- chipping and flaking of the surface of objects caused by mowing or whipper snipping too close to them; and
- damage from insect and mould attack.

For more information

For more information about adverse environmental effects, please see *Damage and Decay*.

Chemical deterioration also happens. Light, UV radiation, high humidity and high temperatures all contribute to chemical changes, which can include:

- corrosion;
- fading;
- discolouration; and
- materials drying out and becoming brittle.

Airborne pollutants, which produce acid rain, are one of the major causes of damage to outdoor objects. The unsightly black and brownish-yellow streaks seen on many bronze sculptures are a direct result of pollution. This is not just a problem in the city or in industrial areas. Acid rain can travel vast distances before actually falling. Pollution from fertilisers and crop sprays can also have a detrimental affect on objects in outdoor settings.

Salts cause damage to metals, as well as to concrete and stone.



This bronze sculpture is vulnerable to plant growth below the water level and to accelerated corrosion at the water surface. If the water contained chlorine, extensive damage would occur.

Photograph courtesy of Artlab Australia, reproduced with permission of Carrick Hill

As bird droppings age, they can become quite acidic and can etch into the surface of outdoor objects.

Mould growth also involves chemical action on the object, as moulds digest the items they are feeding on. Moulds can also stain the surfaces on which they are growing.

Plants growing on objects can cause chemical damage, especially if they are feeding off the object.

Resins and other substances which fall on objects from trees can be very difficult to remove from porous materials, and can stain and disfigure the objects.

For more information

For more information on the adverse effects salts have on metals, please see the chapter on Metals in this volume.



This piece is made from wood and iron. It is vulnerable to corrosion of the iron and to deterioration of the wood. It also collects large amounts of pine needles from surrounding trees, because of its shape.

Photograph courtesy of Artlab Australia, reproduced with permission of Carrick Hill.

Care of outdoor objects

National inventory

The Australian Institute for the Conservation of Cultural Materials—Sculptures, Monuments and Outdoor Cultural Material specialty group—AICCM-SMOCM—is preparing a national inventory of sculptures, monuments and outdoor cultural material.

SMOCM's leaflet *Saving the Past for the Future—We Need Your Help!* states that the program will:

'...culminate in the creation of a National Inventory of Sculpture, Monuments and Outdoor Cultural Material. The results of the primary research, on-site documentation and condition assessments will be used by custodians to develop management plans for local collections.'

It further states:

'AICCM wants to work with local councils and private owners of significant objects to assist in establishing conservation parameters for these diverse heritage collections—from documentation to graffiti removal to preventive conservation.

Our aim is to ensure that collections are appropriately documented and conserved for greater understanding and enjoyment now and into the future'

At the end of the project there will be a central, computerised database, which will be available through public screens at the Art Gallery of NSW and on the Internet. This database will be available as a community tool for local councils and custodians. The NSW inventory was completed in December 1997.

To collect the information for the national inventory, SMOCM is carrying out a survey. The survey form and the instructions for completing the form follow.

This survey form is a good starting point for local groups to gather information about the sculptures, monuments and outdoor cultural material in their area. With this information, you can take stock of what you have; and determine what items need attention and the priorities for treatment.

Australian survey of sculpture, monuments and outdoor cultural material—SCOCM—survey form

Guidelines for on-site reporting

- Read the entire form carefully before beginning the report.
- When filling out this form, type or print using a ballpoint pen or pencil. Legibility is critical.
- Do not guess at the information; an answer of 'unknown' is more helpful.
- Research at your local library or Council will be required to complete questions in Parts 4 and 5.
- For sculptures with several separate sculptural components, complete one Survey Form for the entire work. If necessary, complete relevant sections of the Survey Form for each component and staple them together. Attach photographs, photocopies, slides or other reproductions of the work to the back of the Survey Form.

Send completed forms to Inventory of SMOCM, AICCM (NSW), GPO Box 3762, Sydney 2001. Keep a copy for your records.

If you have any questions, please contact Julie Potts, Project Coordinator (02) 9225 1782.

SURVEY COMPLETED BY: _____

ADDRESS: _____

TELEPHONE: Work _____ Home _____

DATE: _____

SUPERVISOR'S NAME: _____

ADDRESS: _____

TELEPHONE: Work _____ Home _____

The printing of this Survey Form has been kindly funded by the Art Gallery of New South Wales.

1: BASIC DESCRIPTIVE INFORMATION—See Guidelines

1.1 Category—see Guidelines

r Sculpture (S)

r Fountain (F)

r Monument (Mon)
(include war memorials)

r Mural (Mur)

r Mosaics/terrazzo
floors (Mos)

r Artefact (A) cannon,
anchor, horse trough or other

1.2 Title of Work—if unsure, indicate 'unknown'; if artist named the work 'Untitled', note accordingly.

1.3 Alternate Title(s)—other titles of work known by

1.4 Overall Description—see Guidelines

1.5 Overall Condition—see Guidelines

1.6 Primary Artist(s)—see Guidelines

1.7 Other Collaborators—check as many as apply and see Guidelines

r Architect _____

r Carver _____

r Designer _____

r Other (Designate role, eg. landscape architect, engineer) _____

1.8 Foundry/Fabricator _____

1.9 Execution Date—often found by sculptor’s name _____

1.10 Media—if known, name specific medium, and see Guidelines

MEDIA						
	Metal	Stone	Wood	Ceramic	Plastic	Other
Sculpture						
Fountain						
Monument						
Mural						
Mosaic						
Artefact						
Base						

Was information obtained by direct observation? r YESr NO

If no, indicate source of information.

1.11 Approximate Dimensions—indicate unit of measure, millimetres preferred

	Height	Width	Depth
Sculpture			
Fountain			
Mural			
Mos/Ter			
Artefact			
Base			

1.12 Markings/Inscriptions—check as many as apply

Is the artist’s signature visible on the piece?

r Yes, examined and found signature.

r No, examined sculpture/base but did not see any signature.

r Unable to determine, could not get close enough to check.

If signature is visible, record here—indicate location _____

Does the work have foundry/fabricator marks?

r Yes, examined and found foundry marks.

r No, examined sculpture/base but did not see foundry mark.

r Unable to determine, could not get close enough to check.

If foundry mark/marks are visible, record here. _____

Record the text of any associated nearby identification or commemorative plaques.

Are there any inscriptions badly worn or unreadable?

r Yes r No

If 'yes' provide details.

PART 2: LOCATION/JURISDICTION INFORMATION

2.1 The sculpture is currently located at:

Street address or site location _____

Suburb _____ City _____ State _____

2.2 Setting of Work—see Guidelines

Is the work a focus of space? For example, at the end of a road, in the centre of a prominent intersection, or in a park with views along paths leading to the work.

If yes, describe the setting

2.3 Immediate Locale—check as many as apply

r Industrial

r Street/Roadside—within 6 metres

r Tree-covered—overhanging branches or trees nearby

r Residential

r Commercial

r Institution

r Park

r Other—specify _____

2.4 Is the sculpture in a protected setting?—check if applicable

r Protected from the elements—for example niche, canopy

r Protected from the public—for example fenced

r Security—for example guards

r Lighting

Any other significant environmental factor—such as near airport, subway, sprinklers, cars or birds

PART 3: CONDITION INFORMATION

3.1 Surface Coating—see Guidelines

	OBJECT	BASE
Does there appear to be an applied surface coating?	r	r
Yes	r	r
Unable to determine	r	r

If known, identify type of coating—see Guidelines

3.2 Surface Appearance—see Guidelines

Complete for all materials—check as many as apply

	OBJECT	BASE
1. Guano	r	r
2. Dirty surface	r	r
3. Graffiti applied to surface	r	r
4. Graffiti scratched into the surface	r	r
5. Abraded or gouged surface	r	r
6. Cracked surface	r	r
7. Discoloured surface	r	r
8. Dented	r	r
Other Comments: _____		

Complete for metal objects

	OBJECT	BASE
9. Corrosion	r	r
Other Comments: _____		

Complete for stone objects

	OBJECT	BASE
10. Organic growth	r	r
11. White crusts	r	r
12. Chalky or powdery surface	r	r
13. Spalling	r	r
Other Comments: _____		

3.3 Structural Condition—check as many as apply

	OBJECT	BASE
Is the support deteriorating?	r	r
Are there any cracked joints?	r	r
Is mortar or caulking missing?	r	r
Are there any broken or missing parts?	r	r
Any cracks, splits or holes?	r	r
Look for straight or branching fractures	r	r
Dented	r	r

Does water collect in recessed areas?

r

r

Other Comments: _____

PART 4: OWNER/ADMINISTRATOR

r State Government

r Local Council

r Other

Please give the name and address of the agency, institution or individual who currently owns or administers the work and is responsible for its long-term care.

Name _____

Department/Division _____

Street Address _____

Suburb _____ State _____ Post Code _____

Contact Name _____ Telephone _____

If sculpture has been moved, please list former location(s) and owner(s)

PART 5: HISTORY AND IMPORTANCE—OR SIGNIFICANCE—OF THE WORK

5.1 Attach dated photographs, slides, and a photocopy of an illustration or drawing of the work. Please provide details of the source material.

5.2 Artist Intentions for Future Use/Weathering/Maintenance—if known

When did the artist make this statement? _____

Was this a verbal or written communication? _____

What was the date of communication? _____

Who did the artist address? _____

5.3 What is the history of the work?—see Guidelines

5.4 What is the importance—or heritage significance—of the work?—see Guidelines

Is the work already recognised, that is listed by any of the following?

- r The National Trust.
- r The State or Local Government Heritage Authorities.
- r The Australian Heritage Commission—The Register of the National Estate.
- r Other.

Supply any references.

What value does the work have for the local community?—see Guidelines

Guidelines for Use with Survey Form

PART 1: BASIC DESCRIPTIVE INFORMATION

This survey will include any three-dimensional artwork or artefact which is cast, carved, modelled, fabricated, fired or assembled in materials such as stone, wood, metal, ceramic or plastic, located in an outdoor setting, is free standing and accessible to the public.

1.1 Category

'Sculpture' is any work of art carried out in three dimensions.

'Fountain' is an important category of sculpture linking art and hydraulics. Figures, animals and other objects are combined to deliver jets, sprays and waterfalls. This includes drinking fountains for humans and animals.

'Monument' is usually in dedication to the memory of a person(s), founder(s), institution or government, which will usually be stipulated upon an accompanying plaque.

'War Memorial' is dedicated to involvement in any war, usually stipulated on a plaque as part of the memorial.

'Mural' is a decorative item. However, our interest lies with works executed by artists, rather than minor decorative embellishments. What one needs to look for is a signature or plaque commemorating the work of the artist(s).

'Mosaic' is a design made by cementing small pieces of hard, coloured materials (eg. marble, glass, ceramic or semi-precious stones) to a base.

'Terrazzo floor' is a mixture of marble chips and cement used for flooring. It is laid in situ, ground smooth and then polished.

'Artefact' is an item which is related to historical events, and may include items such as a cannon, anchor or horse trough.

The following items will not be included in the AICCM's current project: plaque, gate, fence, step, an architectural feature—part of a building, rock art, outdoor site, engineering structure, mining equipment, agricultural machinery, garden, 'big' thing—advertising material, street furniture, playground equipment and cemeteries. These items are not priorities for this survey. However, you may decide to use this form for your own record-keeping about these items.

1.4 Overall Description Briefly describe the work including its subject/theme. For figurative works, use the abbreviations PR—proper right—and PL—proper left—to indicate the right or left side of the statue from the perspective of the statue, that is your right or left side if you were positioned on the base facing in the same direction as the statue. For abstract works, describe the predominant forms, colours, shapes and textures. For descriptions of either abstract or figurative pieces, avoid judgemental language.

1.5 Overall Condition What is the overall general appearance or condition of the work? Please indicate any broken or missing parts and describe evidence of cracks. Are there obvious signs of deterioration which require urgent treatment, or is it well maintained?

1.6 Primary Artist(s) Is(are) the person(s) responsible for the overall conception and creation of the work. Frequently the artist's name will appear toward the back, lower edge or another inconspicuous place on the sculpture, followed by the abbreviations 'Sc', 'Sculp' for sculptor/sculpted.

1.7 Foundry/Fabricator If the piece was cast, the foundry name or monogram symbol, as well as cast date, may appear on the base of the sculpture or another inconspicuous place.

'Base' is the support on which the object is placed. Some works will include a plinth as well as a base; however, for the purpose of this survey they should be described jointly.

1.10 Media

Metal

1. Bronze
2. Copper Alloy
3. Lead Alloy
4. Aluminium Alloy
5. Gold Alloy
6. Iron Alloy
7. Unknown metal
8. Other metal

Ceramic

21. Terracotta
22. Glazed earthenware
23. Porcelain

Stone

9. Sandstone
10. Limestone
11. Granite
12. Marble
13. Reconstituted Stone (Terrazzo)
14. Trachyte (NSW)
15. Bluestone (Vic)
16. Other

Plastic

24. Polyester
25. Epoxy
26. Spun Glass reinforced resin
27. Cast Resin
28. Other Resin ie. expanded foam
29. Methods of construction eg. cast or laminated

Wood

17. Blackbutt
18. Teak
19. Marine Grade Plywood
20. Other

Other

30. Brick
31. Concrete
32. Glass
33. Plaster
34. Bone
35. Fabric
36. Leather
37. Rubber
38. Other

1.11 APPROXIMATE DIMENSIONS Always measure the tallest and widest points. Do not climb on objects or lean ladders against them while measuring. A simple diagram or drawing of the object identifying where measurements were taken from would be of assistance. Please include this on the back page of the Survey Form. Taking a photo of someone of known height next to a sculpture can help to estimate height—measure against them with a ruler on the photo.

PART 2: LOCATION/JURISDICTION INFORMATION

2.3 Environmental Setting of work The general vicinity and immediate locale surrounding an object play a major role in its overall condition. The size of the work can be an important factor here. The Archibald Fountain in Hyde Park, Sydney is very much a focus of space, whereas a small bust on a low pedestal between shrubs in a garden is unlikely to be a focus. But size alone is not the determining factor. For example, the Richard Johnson Obelisk in Bligh/Hunter Streets, Sydney, though smallish, is a focus of the space it occupies—the little square at the street intersection.

PART 3: CONDITION INFORMATION

3.1 Surface Coating

1. Applied patina—chemicals applied to the surface of metal to create a desired colour.
2. Electroplated—the process of depositing metal from a solution of its salts onto a surface, using an electrical current.
3. Gilded—thin layer of gold laid on as gold leaf.
4. Glazed—smooth lustrous coating usually applied to ceramics.
5. Painted—usually applied by brush or spray.
6. Polished—smooth and glossy surface produced by friction.
7. Textured—rough surface, applied as part of the original design.
8. Waxed or lacquered—clear, protective coating, often appears shiny.
9. Other—please specify.

3.2 Surface Appearance

1. Guano—bird droppings, insect or animal remains.
2. Dirty—accumulation of dust and dirt.
3. Graffiti—applied over the surface with paint, felt pen or a similar material.
4. Graffiti—scratched into the surface, damaging original object and exposing fresh material below the surface.
5. Abraded or gouged surface.
6. Cracked surface.
7. Discoloured—a faded or darkened surface.
8. Dented.
9. Corrosion—iron is indicated by rust red but can be orange/brown; copper is indicated by green or black; aluminium is indicated by a dull silver colour.
10. Organic growth—this can be moss, algae, lichen, vines or any other plant matter.
11. White crusts—caused by crystallised salts on the surface.
12. Chalky or powdery surface—loose material is easily transferred to your hand when touched.
13. Spalling—small pieces breaking away from a surface.

PART 4: OWNER/ADMINISTRATOR

4.1 It is very important to establish who owns the work, because that agency or body are responsible for its long-term care and maintenance. The researcher will need to check local Council records and, if the owner cannot be clearly identified from these records, it may be necessary to carry out a Land Titles search. It is usually the case that whoever owns the land is responsible for the maintenance of any structure on that land.

PART 5: HISTORY AND IMPORTANCE — OR SIGNIFICANCE—OF THE WORK

This section is to be completed at your local library, historical society or Council.

5.3 What is the history of the work?

- (a) Why was it made?
- (b) Are there any original drawings or records of the work? Who owns these materials?
- (c) Are there any historical photographs of the work? For example, of the opening ceremony; and any others which may illustrate changes to the work or its surrounds.
- (d) Are there any books or other references to the work?
- (e) Has the work been altered in any way—other than through decay? For example, have parts been added—plaques perhaps—or have the surrounds been changed—was there once a fence?

5.4 What is the importance—or heritage significance—of the work?

Is the work:

- (a) associated with events, or developments in history?
- (b) associated with important people?
- (c) rare?
- (d) of high aesthetic quality?
- (e) a creative or technical achievement?

What value does the work have for the local community?

- (a) Observe how people react to the work.
- (b) Listen to people's comments about the work.
- (c) Ask them whether the work is of special value to them.
- (d) How does the community use the work? Is it the focus of events?

What you can do— general do's and don'ts

Maintenance

Regular maintenance is important if an item and its surroundings are kept clean and tidy and appear cared for, the item is less likely to be vandalised.

This also helps to raise public interest in the piece, which means that any vandalism that does take place is more likely to be reported and can be dealt with swiftly.

If maintenance is done regularly, you are more likely to notice problems as they occur, and can deal with damage earlier.

Maintenance includes:

- washing surfaces regularly with water and sponges. This prevents a build-up of dirt on the surface, which not only looks unattractive but can lead to staining, particularly in the case of porous stone items. Make sure that water is not left pooling on the object; dry it with rags if necessary;
- removal of bird droppings—the sooner the better. Bird droppings become acidic over time and can etch into surfaces. The longer they are left, the more damage they can cause. Bird droppings can remove patinas on metal objects; and
- clearing drainage outlets and weep holes. Many sculptures are designed with water outlets, to prevent water building up in unwanted areas. These holes are generally quite small, and easily clog up with leaves and debris. Clearing them regularly helps to ensure the longevity of the object.

Ground barrier

Display items with wheels—like carts—in such a way that the wheels are lifted up off the ground. This alleviates stress on the small areas of the wheels which are touching the ground, and prevents contact between the wheel and the ground.

This is important, because every time it rains the ground becomes wet and acts like a sponge around the wheel, creating conditions that will contribute to corrosion if the wheel is metal, and to rot and insect attack if the wheel is made of wood.

There should always be a barrier between a sculpture and the ground, unless the artist specifically wants the work directly in contact with the ground.

Grass and plants

If contact between an outdoor object and the ground is considered necessary, it is important to keep grass trimmed around the piece, because long grass will also hold moisture close to the surface of the object.

When you are mowing around outdoor heritage items, take care that small stones and sticks are not thrown up, because they can damage the item's surface. This is especially important with painted metal items, where a break in the paint layer can cause corrosion problems.

It is best not to whipper snipper close to outdoor heritage items because the whipper snipper action can cause damage.

Consider the positioning of plants around outdoor objects. Remember that overgrown bushes make it difficult to see the objects clearly. Plants can also cause damage, for example, by scratching the surface; by branches dropping onto the object; a faster build-up of leaves in drainage holes; damage to foundations from root growth; and by attracting insects which will attack the object.

Naturally, it is important to consider the heritage value of the planting as well. It is also important to note that well positioned planting can act as a windbreak on sites where dust and pollutants are problems for the objects.

Water

Look for areas where rain can become trapped and held against a surface. Where possible, alter the display technique to prevent this happening. If you are unable to make any alterations, it is important to set up a program of regular monitoring, so that you can identify damage early on and act to treat it.

Avoid watering the object when you are watering surrounding gardens. The garden may need water to survive, but outdoor objects do better without additional water.

Sprinklers often spread water horizontally, so that the water can enter areas of the sculpture protected from normal rainfall.

Coatings

Microcrystalline wax is often applied to bronze sculptures to protect them from damage—from both the environment and graffiti. Like all coating systems, it offers protection only if it is complete.

A coating system which has broken down can be more damaging to a sculpture than no coating system at all. So it is important to monitor the condition of the coating and renew it annually.

For more information

For more information on the care of bronze items and the application of coatings to bronze items, please see the chapter on Metals in this volume.

Graffiti

Graffiti can be a major problem. If the object has an anti-graffiti coating, then it is this coating which is damaged, not the object. If an appropriate system is used, it is far easier to remove a coating system than graffiti.

CAUTION:

Beware of coating systems which seal off stone surfaces, this can lead to spalling of the stone, as moisture trapped under the coating cannot escape and may build up pressure. If a graffiti coating is to be applied to the surface of a heritage item, it is recommended that a conservator is consulted for advice.

If graffiti needs to be removed from the surface of a heritage item, it is best to contact a conservator for advice before taking any action. The successful removal of graffiti is very much dependent upon the media used to apply the graffiti and the nature of the object which has been graffitied.

When consulting a conservator about graffiti removal, try to be specific about the amount of graffiti and what it looks like. Systems used to remove graffiti can be quite specific and the conservator needs specific information; this is particularly important if a range of graffiti media has been used, for example, spray can, pen or crayon.

It is best to remove graffiti as soon as possible. Graffiti invites more graffiti, and it is far easier to remove when it is fresh than when it has had several months to set.

If you are using solvents to remove graffiti from stone, you run the risk of driving the stain further into the object rather than drawing it out, as stone is extremely porous. It is best to use a poultice system such as Safest Stripper by 3M or Quick Strip when removing graffiti from stone.

CAUTION:

If you are using Quick Strip remember that even if the system used removes the graffiti, it may alter the colour of the underlying stone so that the ghost of the graffiti is still present. Do not paint over graffiti on a cultural heritage item.

Consult a conservator if you are considering using an air-abrasive cleaning system, such as sand-blasting to remove graffiti. Abrasive cleaning removes graffiti, but often removes a layer from the surface of the object as well.

If damage has occurred, what should and shouldn't be done?

There has been a lot of discussion recently about the appearance of outdoor cultural material. This discussion has focused particularly on bronze sculpture, but is equally valid for all outdoor artefacts.

It is only natural that outdoor materials will deteriorate, simply because they are located in a harsh environment; and in many ways this deterioration is a significant part of their history. If treatment gives them an as new appearance,

this visual history will be lost. In some cases this may be valid, for example, if the deterioration is threatening the existence of the object. However, in most cases it will be a matter of:

- consulting with the relevant people, that is, conservators, custodians, historians and the artist;
- weighing up a number of factors, such as the artist's intention, the relationship between the item and its site, and the historic or cultural significance of the piece; and
- taking into account the ethics of the conservation treatment.

These general guidelines are provided to help you if you have a damaged piece of outdoor cultural material.

If part of an item has broken off, collect all the pieces, wrap each piece separately and place the pieces in a clearly labelled box. Contact a conservator as soon as possible. Because the other half of the break is in an outdoor setting, it is best that the repair is done as soon as possible before the edges are worn by weathering, or before more damage occurs.

Do not repair stone with concrete. These repairs are usually unattractive; but they can also be damaging because the concrete can be harder than the stone. If this is the case, future cracks form in the stone, not in the concrete.

Heritage items should not be repainted. The original paintwork is an integral part of these items and can be damaged and destroyed by repainting. Consult a conservator if you feel that repainting is important for the future survival of any painted items.

Beware of replacing components of a heritage item to 'pretty it up'. It is often tempting to replace worn or damaged components, especially where the skills and technology are readily available; but you must be aware that it may interfere with the historic value of the item. Remember, an historic artefact is only as historic as the sum of its components. Consult a conservator if you are unsure about whether to replace components.

Avoid using sand-blasting and steam-cleaning to treat historic artefacts. While there are occasions when an air-abrasive technique will be necessary

to treat an item, sand-blasting is generally considered to be too abrasive. It causes loss of surface detail and pitting of the surface, which in metal objects can lead to accelerated corrosion. Steam-cleaning is often used on stone and it is also too harsh. It can cause loss of detail on delicate, stone surfaces.

If you need to use metal fixtures with metal outdoor objects, wherever possible use fixtures of the same metal as the structure to be secured. In this way you can avoid the problems of galvanic corrosion. If you cannot use the same metal, place an inert barrier layer between the two different metals.

Some outdoor sculpture is intended to deteriorate. Unless there is a public safety issue involved, these objects should be left alone to deteriorate slowly. Any work that must be done on the piece should always be carried out in consultation with the artist, if the artist is alive and accessible.

Outdoor cultural material in Australia's climatic zones

The climatic zones outlined below are broad categories; and conditions may vary within these categories, depending on the state of repair of your building and whether the building is air conditioned or not.

Arid

This climate is generally very dry, however, in arid areas, it is often very hot during the day and very cold at night. This wide fluctuation in temperature is matched by wide fluctuations in relative humidity, for example, from 75%–20% in a day.

When caring for outdoor materials in arid areas it is important to note that:

- insects can still survive;
- wood moved from more humid climates may be prone to cracking and splitting; and
- condensation may form on metal objects which become very cold overnight.

Dust storms effectively sandblast outdoor objects. It is worth considering strategic placement of windbreaks to prevent damage. If the objects are small enough you may want to have covers made. The covers can be put in place during periods of high wind.

Remember also that outdoor objects can be adversely affected by the dust raised when vehicles travel over dirt roads. Similar steps as those taken for preventing damage from dust storms should be considered.

If the area is very dusty, you may need to inspect items for dust and dirt build-ups, especially in periods of low rainfall.

Note: If your collection of outdoor cultural materials have been displayed in an arid environment for a considerable period and they are stable—**do not** try to alter the environment to meet the recommended ideal conditions. This could do more harm than good. The emphasis should be on long term stability.

Temperate

A temperate climate is considered a moderate climate, however, temperate climates tend to have a greater range of temperatures than tropical climates and may include extreme climatic variations.

When caring for outdoor cultural material in temperate climates it is important to note that:

- freezing conditions will occur in some regions. Where water has entered cracks in stone and wood, freezing conditions can lead to splitting. Ice takes up more space than water and thus as the water freezes it opens up cracks in the material;
- seasonal fluctuations can lead to the splitting of wood; and
- extended rainy periods can accelerate corrosion in metals and can promote the growth of lichens, mosses etc.

Note: If your collections of outdoor cultural material have been displayed in a temperate environment for a considerable period and they are stable—**do not** try to alter the environment to meet the recommended ideal conditions. This could do more harm than good. The emphasis should be on long term stability.

Tropical

These climates are characterised by heavy rainfall, high humidity and high temperatures.

When caring for outdoor cultural materials in high humidity conditions, it is important to note that:

- insects, lichens, moulds and plants thrive and reproduce rapidly;
- metal corrosion will be accelerated;
- wooden components of objects will take up water and hold it. If the wood is in contact with metal components, metal corrosion will proceed faster in these areas; and
- deterioration, particularly of plastic components, due to light and UV radiation will be accelerated.

Because the rate of deterioration is likely to be quite rapid, it is important to check items for damage and carry out maintenance more regularly than in other climatic zones.

Carry out the maintenance of coatings on metal components during the dry season, when there is less moisture present. In this way you are less likely to trap moisture between the coating and the metal.

Note: If your collections of outdoor cultural material have been displayed in a tropical environment for a considerable period and they are stable—**do not** try to alter the environment to meet the recommended ideal conditions. This could do more harm than good. The emphasis should be on long term stability.

Coastal Regions

Coastal regions generally have more moderate climates than inland areas but they also have high levels of wind-borne salt. Consideration must be given to counteracting the corrosive effects of salty air.

When caring for outdoor cultural materials in coastal regions it is important to note that the presence of moist salty air is going to lead to high levels of corrosion and damage from windborne particulates. It is, therefore, vital that metal components are treated, coated and frequently inspected in these conditions.

Take all steps possible to reduce water retention. These steps include ensuring there is good drainage and clearing weep holes.

It is better to display outdoor cultural material away from the sea front. Windbreaks would also assist in protecting items.

It is important to monitor items for the formation of salt crystals, and concrete and stone should be checked for spalling.

If you have a problem related to the care of outdoor cultural material contact a conservator. Conservators can offer advice and practical solutions.

Self-evaluation quiz

Question 1.

Which of the following statements are true?

- a) Objects in an outdoor setting have been designed to be there and should last a long time without attention.
- b) Acid rain is only a problem in the city—regional areas are not affected by pollutants.
- c) Plants and mould can severely damage items and, if allowed to continue growing, will continue to cause damage.
- d) Bird droppings don't look too good, but they don't cause any damage.

Question 2.

Regular maintenance of outdoor material and its surroundings is important because:

- a) people are more likely to care for objects that appear well cared for;
- b) vandalism is less likely to occur;
- c) you are more likely to notice problems if you are regularly examining and caring for an item;
- d) the sooner problems are dealt with, the less damage is likely to occur;
- e) all of the above

Question 3.

Which of the following should be included in a maintenance program for your outdoor objects?

- a) Regular whipper snipping close in to the base of objects to remove long grass.
- b) Regular washing with water and sponges, followed by drying with rags if necessary.

- c) Removal of bird droppings as soon as possible.
- d) Ensuring that the surrounding plants and grass do not become too overgrown.
- e) Watering the object in dry weather to ensure that it does not dry out too much.
- f) Clearing drainage outlets and weep holes so that they do not become clogged.
- g) Removing graffiti as soon as possible in consultation with a conservator.

Answers to self-evaluation quiz

Question 1.

Answer: c) is true. a), b) and d) are false. Objects in an outdoor setting are exposed to almost all factors that cause damage and deterioration and, although most are durable, they will deteriorate. Acid rain is not confined to the city: pollutants can travel over large distances, and fertilisers and crop sprays become pollutants when they are in the atmosphere rather than on the crops. Bird droppings become quite acidic as they age and can etch into the surface of outdoor objects.

Question 2.

Answer: e).

Question 3.

Answer: b), c), d), f), and g) are all valuable parts of a regular maintenance program. a) and e) should be avoided.