

Historic Values Health Checks

A guide to undertaking Health Checks for key historic values

Version 1.7



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1. Introduction

Queensland’s parks, forests and reserves are places we want to protect for future enjoyment and wellbeing. What makes these places special are the presence and diversity of natural, cultural, social and economic values. These areas experience natural cycles—they live and breathe—and therefore our management needs to be dynamic too. The Queensland Parks and Wildlife Service and Partnerships (QPWS&P), within the Department of Environment and Science (DES), applies a contemporary management process that is based on international best practice and targets management towards the most important features of each park: their key values.

The Values-Based Management Framework (VBMF) is an adaptive management cycle that incorporates planning, prioritising, doing, monitoring, evaluating and reporting into all areas of our business. This enables the agency to be more flexible and proactive and to improve management effectiveness over time.

By assessing the condition of an area’s key values, QPWS&P can prioritise management efforts, balancing the importance of values and threats with our custodial obligations. Monitoring the condition of values and evaluating our performance is integral to closing the loop on the adaptive management process.



Health Checks are tools for efficiently and routinely assessing the condition of key park values. They use simple visual ‘cues’ and require no specialist skills or equipment and have been designed to work state-wide. Health Checks are the basis for the evaluation of the condition of historic values through time for the majority of estate managed by Queensland Parks and Wildlife Service (hereafter ‘park’ regardless of tenure) (Fig. 1). Where highly significant values require management intervention on a high priority park, detailed, targeted monitoring may be warranted (Melzer 2015), and is identified in the Historic Cultural Heritage Strategy (HCHS) or Monitoring and Research Strategy.

The key historic values on which to undertake Health Checks are selected and defined¹ during the Key Values Assessment workshop (QPWS&P, 2019). The current² condition and desired condition for the historic value is determined along with the strategic direction for its management. Health Checks are subsequently undertaken during park inspections by local staff³. Their frequency is determined during the development of the Monitoring and Research Strategy for the park and is guided by a risk matrix (Fig 2). Over time the information from Health Checks will provide a good indication of the trend in condition, and hence alignment with the stated desired condition for the value, and so help determine whether the current management approach is appropriate. The trend in condition (‘health’) for the key historic value/s on a park are ‘rolled up’ for high level management evaluation and reporting purposes (e.g. State of the Parks Report).

Health Checks provide a critical opportunity for the management unit to regularly review the effectiveness of their management in maintaining or recovering key values. The Health Checks must be reviewed by the management unit upon completion to determine whether, for example: current management actions are appropriate or need adjusting; urgent intervention is required; and additional funds are needed. In-line managers (to whatever level is appropriate) must be alerted to concerns about the condition of a value (whether at a specific site or across the whole park), or an emerging issue on the park, and a decision on a response – which may be to do nothing – must be made and documented. Relevant results should be discussed in forums such as the Fire and Pest Referral Group meetings.

1. What constitutes the key value must be defined clearly in the Values Assessment. For example: is the entire homestead complex the key value or only the primary dwelling; is the whole graveyard the key value or specific graves.
 2. If the current condition of the value is not known it should, if at all possible, be determined soon after the Values Assessment workshop.
 3. Members of local bushwalking clubs or historical societies and the like may also be willing/keen to undertake Health Check assessments in locations that are time consuming to access but are part of the clubs program of activities. Appropriate training and oversight by QPWS&P staff is required.

This document provides: a) guidelines for undertaking Health Checks for historic values; b) descriptions of the Health Check Indicators (Appendix 1) and: c) a record sheet (Appendix 2). Note that the Health Check component of a Monitoring and Research Strategy must be developed prior to undertaking Health Checks. This enables questions about timing and site selection (e.g. number of sites, location) to be workshopped and appropriate guidance (or specifications) to be documented in the Strategy, as well as approval by line managers.

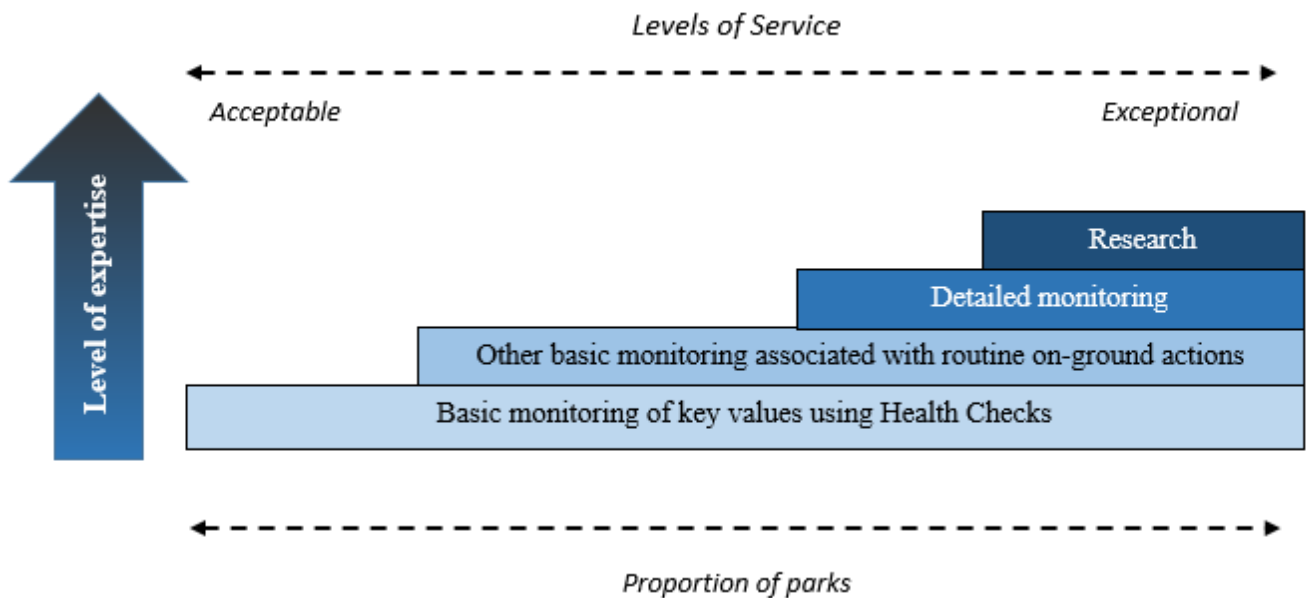


Figure 1. Hierarchical framework for monitoring and research on QPWS&P estate.

	Consequence				
Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	Every 3 years	Every 3 years	Every year	Every year	Every year
Likely	Every 3 years	Every 3 years	Every year	Every year	Every year
Possible	Every 4 years	Every 4 years	Every 2 years	Every year	Every year
Unlikely	Every 4 years	Every 4 years	Every 3 years	Every 2 years	Every 2 years
Rare	Every 4 years	Every 4 years	Every 4 years	Every 3 years	Every 3 years

Figure 2. Risk matrix used to guide the minimum frequency of Health Checks. Note that an explanation of the likelihood and consequence is provided in the Planning User Guide.

1.1 How to do Health Checks and complete the record sheets

1. Determine the most appropriate time period/season of the year to assess the condition of the key value. Endeavour to undertake the assessment in the same time period/season each year. Note that where important, the timing for Health Checks is specified in the Historic Cultural Heritage Strategy (HCHS) or Monitoring and Research Strategy (M&RS). During or soon after a peak visitation period may be most informative.
2. The inspection should ideally be undertaken by at least two observers. It may be advantageous, but is not mandatory, for one of the observers to have participated in the previous assessment. A copy of the previous Health Check/s, including photographs from permanent sites, should be carried with you for reference. Photographs are particularly useful for assessing the condition of ruins with the strategic management direction 'maintain as a ruin'; photographs taken during the previous Health Check help gauge whether the ruin has been damaged or deteriorated since the previous assessment.
3. *Selecting sites*

The number and location of sites, particularly permanent sites, are best determined during development of the HCHS or M&RS.

For many key historic values there will be little, if any, choice when it comes to selecting a site/s because the value is unique (e.g. Pallarenda quarantine station) or only occurs in a small number of locations (e.g. two stone huts located in different parts of the park).

Where the value is extensive (e.g. convict built road), or there are many examples (e.g. a dozen wells), access as much of it or as many examples as possible to get an 'overview' of the condition but also select 'representative sites' at which to undertake the assessments. A site should be relatively 'uniform' in terms of usage, management intent and factors such as topography. For example: a portion of convict built road that is frequently accessed by visitors and one that is rarely accessed would be assessed as two separate sites; and a portion subjected to flooding would be assessed separately from a portion that never gets flooded.
4. *Defining your site*

Determine what constitutes your site (if this has not already been specified in a HCHS or A&MS). For example, if your key historic value is a homestead complex your site would usually include all of the infrastructure that constitutes the complex and the associated grounds. If part of the key value has a different management intent from the rest then a separate Health Check is required. For example, if a whole pastoral property is on the Qld Heritage Register but it has been determined that some assets (e.g. homestead) will receive more attention/resources than others (e.g. outbuildings) then a Health Check must be undertaken for the homestead separate to the one for the outbuildings. Seek advice prior to going in the field if you are at all uncertain. Define your site as clearly as possible on the first page of the record sheet (Appendix 2).

The size of each 'representative site' (i.e. the area of the value that you include in your inspection) must be recorded on the record sheet as a quantitative measure (e.g. 10m², 20x40m) unless the Site Id. clearly defines the area encompassed in the assessment (e.g. all buildings and grounds within the perimeter fence; all built infrastructure and the orchard).
5. It is not mandatory to go back to exactly the same site/s each year if you are dealing with a value that has plenty of representative sites from which to choose (e.g. many wells) but in that case it will usually be highly beneficial to revisit at least some of the same sites each year. However, for most historic values there will be one or few options (e.g. the historic homestead complex; two stone huts) and you will be returning to the same sites each year.
6. It is advisable to incorporate standard photo-monitoring points into your Health Checks.

7. A record sheet (Appendix 2) has to be completed for each key value. The standard record sheet allows up to five sites per key value (Table 2.1, Appendix 2). If more than five sites are required to get an adequate representation of condition (only likely for extensive key values with complex management issues) add extra columns.
8. Health Check Indicators (described in Appendix 1) are used to assess the condition of the key value. They are based on disturbance/damage and features that provide a good indication of the condition. Table 1.1 lists Health Check Indicators appropriate to various types of key values – every Health Check Indicator that applies to your value **MUST** be used in your assessment.

Use the tables in Appendix 1 to determine the Condition Class, from *Good* to *Critical*, for each Health Check Indicator. **Ensure that you read the information and instructions provided for each Health Check Indicator every time! Do not assume you've remembered them correctly from last time!**

NOTE: The assessment is based on visual inspection only. There must be no destructive interference with the value.

9. For each Health Check Indicator, the Condition Class that you determine for each site must be recorded on the record sheet.
10. Your general impression of the condition of the key value across the park for each Health Check Indicator is also recorded (unless the value occurs only at one site). Note that this general impression IS NOT an 'average' of the Condition Classes you recorded at each site. It IS your considered opinion about the state of the key value across the park based on the site results AND your observations as you drive, walk, paddle or fly between sites!
11. Where it is relevant (refer box 1), provide information in Table 2.3 of your record sheet on factors contributing to the Condition Class assigned to the value at an inspection site, and in Table 2.4 for your general impression for a Health Check Indicator.
12. When you have completed your inspection of a key value (i.e. assessments at all Health Check sites and your general impression across the park) record the Overall Condition Class (Table 1.2; note that this table is repeated on the record sheet for your convenience as Table 2.2) based on all of the Health Check Indicators.

Make sure that you make this decision on the day of the inspection or at least within a few days of it. It is intended to be a 'considered opinion' guided by the site results and your other observations.

Make notes (refer box 1), in the space provided below Table 2.4 on the record sheet, about your decision especially if you assign an Overall Condition Class of Significant Concern or Critical.

Box 1 Make good use of notes!

Notes are important! Ask yourself, for example – “Will it be obvious to someone reading this record sheet (or to me in 12 months' time) why I have assigned a 'General Impression' of Significant Concern to the Health Check Indicator Vertebrate animal damage; or why I have assigned Significant Concern as the Overall Condition Class for the value?” If it's not – then make some detailed notes on Table 2.4 of the record sheet.

Photographs are similarly important and useful!

Table 1.1 List of Health Check Indicators and the types of Key Values to which they are applied ¹ .	
Note: For Key Values where the strategic management direction (SMD) is 'let nature take its course' ¹ apply indicators 11, 12 and 13 ONLY.	
Indicator	Key Values
1. Vertebrate animal damage	All ²
2. Invertebrate animal damage	All ² values composed of timber, fibre, stone, brick or rock. Do not include plants (e.g. historic plantings) – invertebrate impact on plants is covered by indicator 10 <i>Tree/Shrub health & dieback</i> .
3. Vegetation – direct mechanical damage	All ² that consist of constructed/made fabric ³ .
4. Vegetation – increased fire risk	All ² that are flammable or that can be damaged by heat (e.g. stone, mortar) including historic plantings.
5. Vegetation – invasion	All ²
6. Ground surface modification (e.g. erosion, subsidence, compaction, altered drainage)	All ²
7. Damp (rising/falling)	All ² that consist of built, or human modified, fabric ³ regardless of construction material.
8. Weather events & weathering – exposure to water, wind, sun	All ²
9. Fire damage	All ² that are flammable or that can be damaged by heat (e.g. stone, mortar) including historic plantings.
10. Tree/shrub health & dieback	Historic plantings; heritage listed plants.
11. Visitor impacts including vandalism, theft and other inappropriate behaviour	All
12. Visitor safety/restricted access	All
13. Inappropriate management	All

1. Values for which the strategic management direction is 'let nature take its course' are often actively managed for public safety. Such values will rarely be included in the Health Check program, instead being subject to safety risk assessments. If the value is included in the HC program and the deterioration of the value is such that there is a risk to public safety this must be recorded as an emerging issue in Table 2.5. A decision on a response must be made and documented.

2. Values that we intend to actively manage, including ruins that we intend to maintain in their current state (i.e. we do not intend to 'let nature take its course')

3. Fabric as defined by the Burra Charter (2013) means all the physical material of the *place* including elements, fixtures, contents, and objects. It includes building interiors and sub-surface remains, as well as excavated material.

Table 1.2 Overall Condition Class – what the categories mean.

(from IUCN 2012 & Osipova *et al.* 2014)

Good	The Key Value is in good condition and is likely to be maintained for the foreseeable future, provided that current conservation measures are maintained.
Good with some concern	The Key Value is likely to be essentially maintained over the long-term with minor additional conservation measures to address existing concerns.
Significant concern	The Key Value is threatened by a number of current and/or potential threats. Significant additional conservation measures are required to preserve the value over the medium to long-term
Critical	The Key Value is severely threatened. Urgent additional large-scale conservation measures are required or the value may be lost.

1.2 New or emerging issues noticed (anywhere on the park) while undertaking an inspection

When you are undertaking the inspection you may notice localised disturbances (point source or linear), breaches (e.g. in the weather tightness of a building; damage that permits unauthorised entry), issues that require attention to prevent degradation and significant resource input in the future (e.g. graffiti at a cultural site; pollution event; erosion; tree-fall across a track resulting in new tracks; a new infestation of an ecosystem-changing weed), or pose risk to life and property, or significantly impact on visitor experience (e.g. overcrowding, excessive noise, conflict amongst user groups). Table 2.5 is provided as part of the record sheet to note relevant information.

Your in-line manager/s must be alerted to the issue as soon as possible after the inspection and a decision made about the management response to be undertaken.

This table must be taken on future inspections so that the effectiveness of the management response can be evaluated.

2. References

(References used in the Guidelines and Appendix 1)

IUCN 2012. Conservation Outlook Assessments - guidelines for their application to natural World Heritage Sites

Version 1.2 (final).

Melzer R. 2015. QPWS Monitoring Framework. Ecological Assessment Unit, Operational Support, Queensland Parks and Wildlife Service, Department of National Parks, Sport and Racing.

Osipova E, Shi Y, Kormos C, Shadie P, Zwahlen C & Badman T. 2014. IUCN World Heritage Outlook 2014: A conservation assessment of all natural World Heritage sites. Gland, Switzerland: IUCN. 64pp.

Queensland Parks and Wildlife Service & Partnerships (QPWS&P) 2019. Planning User Guide: Values-Based Management Framework Version 2 Planning Unit, Parks Services, Queensland Parks and Wildlife Service & Partnerships, Department of Environment and Science, Queensland Government.

The Burra Charter: The Australia ICOMOS Charter for places of cultural significance, 2013.

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Appendix 1. Health Check Indicators

1. Vertebrate animal damage

Livestock, native fauna (e.g. macropods, possums, birds) and feral animals (e.g. pigs, brumbies and camels) can threaten historic cultural heritage sites. Places such as graves, historic vegetation and dwellings can be damaged by animals digging, rubbing, licking (to obtain salt) nesting, displacing roofing and otherwise making physical contact with vulnerable structures. Items in historic tips can be displaced or broken.

Level of invasion	Description	Condition Class
None	No deterioration/damage/disturbance evident.	Good
Minor	<ul style="list-style-type: none"> • Damage/disturbance is minor and temporary/repairable. • Structural integrity ('soundness') is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> • Damage/disturbance is substantial but all/largely reversible/repairable if addressed promptly. • Structural integrity ('soundness') is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> • Damage/disturbance is substantial and some or all is permanent. • Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. • Value is at risk. 	Critical

2. Invertebrate animal damage

Visually inspect your value for damage caused by invertebrates such as termites ('white ants'), borers and mud wasps. Termite infestations can also sometimes be detected by listening!

Termites perhaps present the greatest risk to the long-term viability of historic structures, in particular, timber-framed structures. Contact with soil, vegetation, or damp conditions can expose structures to risk of termites.

Level of impact	Description	Condition Class
None	No deterioration/damage evident.	Good
Minor	No signs of termites but signs of minor damage from other invertebrates and: <ul style="list-style-type: none"> • Damage is minor and temporary/repairable. • Structural integrity ('soundness') is not impaired/threatened. 	Good with Some Concern
Moderate	Signs of early/limited termite infestation and/or: <ul style="list-style-type: none"> • Damage from other invertebrates is substantial but all/largely reversible/repairable if addressed promptly. • Structural integrity ('soundness') is at risk. 	Significant Concern
Major	Signs of established/extensive termite infestation and/or: <ul style="list-style-type: none"> • Damage from other invertebrates is substantial and some or all is permanent. • Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. • Value is at risk. 	Critical

3. Vegetation – direct mechanical damage

Vegetation can damage cultural values by direct mechanical means such as rubbing or root/limb penetration. Strangler figs and robust vines can cause major structural damage. Vines and creepers can have deleterious effects on mortar or cement.

Use the descriptions to get the ‘best fit.’

Level of impact	Description	Condition Class
None	No deterioration/damage evident and no apparent risk of it occurring.	Good
Minor	Vegetation that has the potential to cause damage is present but no damage is apparent or: <ul style="list-style-type: none"> • Damage is minor and temporary/repairable. • Cause of damage easily redressed. • Structural integrity (‘soundness’) is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> • Damage is substantial but all/largely reversible/repairable if addressed promptly. • Cause of damage may be costly to redress. • Structural integrity (‘soundness’) is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> • Damage to cultural fabric is substantial and some or all is permanent. • Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. • Cause of damage very difficult and costly to redress. • Value is at risk. 	Critical

4. Vegetation – increased fire risk

The encroachment of flammable vegetation types or accumulation of plant litter around historic places can increase the risk and severity of damage by fire.

Use the descriptions to get the ‘best fit.’

Level of impact	Description	Condition Class
None	<ul style="list-style-type: none"> • No build-up of fuel or vegetation at or near the site that poses a fire risk. • Fuel-reduced zones (e.g. fire control lines), if present, are maintained. 	Good
Minor	<ul style="list-style-type: none"> • There is light vegetation or fuel build up near the cultural fabric such that it is possible for a fire to occur. • The vegetation/fuel is sufficiently minor that it can be removed during a routine patrol. • Fuel-reduced zones (e.g. fire control lines), if present, are maintained at least prior to the fire season or require minor maintenance. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> • There is enough fuel sufficiently close to, or in contact with, the fabric of the place that it is possible or likely that a fire will occur • Clean up requires more time than available on a routine patrol. • Fuel-reduced zones (e.g. fire control lines), if present, are poorly maintained. 	Significant Concern
Major	<ul style="list-style-type: none"> • There is enough fuel sufficiently close to, or in contact with, the fabric of the place that it is likely or almost certain that a fire will occur. • Clean up requires a major, coordinated effort and/or heavy equipment. • Fuel-reduced zones (e.g. fire control lines), if present, will be completely ineffective if a fire occurs under ‘normal’ conditions. 	Critical

5. Vegetation invasion

Historic places, including cemeteries, roads/trails and historic plantings (e.g. gardens, orchards, arboreta, experimental plots and plantations) can be overgrown by native and/or non-native plants.

Note: The term pest is used in the table below to describe any plant that is not part of an original (or restored) planting or is otherwise 'in the wrong place'. The term **damage** refers to overgrowth not mechanical damage to a structure. The latter is covered under *Vegetation – direct mechanical damage*.

Use the descriptions to get the 'best fit.'

Level of impact	Description	Condition Class
None	<ul style="list-style-type: none"> There is no invasion by pest plants that have the potential to damage the historic place. 	Good
Minor	<ul style="list-style-type: none"> Scattered individual pest plants that have the potential to damage the historic place are present. They can easily be removed and have done no permanent damage. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> Invasion by pest vegetation is such that expert advice and a coordinated effort are required to remove it. The types of pest plants present, and the extent of invasion, pose significant risk to the integrity/survival of the historic place if not removed. Substantial damage has occurred and/or remediation will be time consuming/costly but is possible for most or all the historic place. 	Significant Concern
Major	<ul style="list-style-type: none"> Invasion by pest vegetation is extensive and/or has caused severe damage some, or much, of which may be irreversible or soon will be. A restoration program designed/informed by experts will be required. A funding submission will be required. 	Critical

6. Ground surface modification

Water runoff, soil erosion, compaction, subsidence and/or altered drainage can threaten the integrity of structures and sites.

NB: Abbreviation > means 'greater than'

Use the descriptions to get the 'best fit.'

Level of impact	Description	Condition Class
None	<ul style="list-style-type: none"> Little or no (0-5% of site) evidence of runoff, altered drainage, soil movement or compaction, and; No deterioration/damage/disturbance evident. 	Good
Minor	<ul style="list-style-type: none"> >5-15% of site impacted by runoff, altered drainage, soil movement or compaction. Damage/disturbance is minor and temporary/repairable. Structural integrity ('soundness') is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> >15-25% of site impacted by runoff, altered drainage, soil movement or compaction. Damage/disturbance is substantial but all/largely reversible/repairable if addressed promptly. Structural integrity ('soundness') is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> >25% of site impacted by runoff, altered drainage, soil movement or compaction. Damage/disturbance to cultural fabric is substantial and some or all is permanent. Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. Value is at risk. 	Critical

7. Damp (rising/falling)

The impact from rising or falling damp on a building or other built fabric (e.g. grave/road markers) can be significant, and

can threaten the structural integrity. Falling damp usually arises where guttering or flashings fail. Rising damp may occur when a damp proof course/membrane fails and/or there is direct impact from a watering system or a garden/vegetation abuts the structure.

Signs/symptoms include: mouldy smell; corrosion; fungal/algal growth; rot; crumbling brickwork and mortar.

Use the descriptions to get the 'best fit.'

Level of impact	Description	Condition Class
None	No deterioration/damage evident.	Good
Minor	<ul style="list-style-type: none"> • There are some early signs of damp. • Damage is minor and temporary/repairable • The cause is able to be readily redressed (e.g. repair overflowing guttering). • Structural integrity ('soundness') is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> • Damage is substantial or will become so without urgent remedial intervention. • Damage all/largely reversible/repairable if addressed promptly. • Likely cause of damage is not easily repaired; repairs will be costly (e.g. failure of a damp proof course). • Structural integrity ('soundness') is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> • Damage to cultural fabric is substantial and some or all is permanent. • Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. • Value is at risk. 	Critical

8. Weather events & weathering – exposure to water, wind and /or sun

Total or partial loss of critical structural elements such as the roof, wall cladding and guttering greatly accelerates the deterioration of structures. Exposure to water promotes rot and erosion. Gaps allow strong winds to enter structures and damage them. Wooden buildings, in particular, are susceptible to damage from wind and water.

Severe weather events such as cyclone or floods can result in damage to historic plantings as well as historic structures.

Also use this indicator to ‘pick up’ general ‘wear and tear’ if it is not caused by factors addressed in other indicators. Record details in the record sheets.

Use the description to get the ‘best fit.’

Level of impact	Description	Condition Class
None	<ul style="list-style-type: none"> No deterioration/damage evident. Structural elements necessary for maintaining the place in good condition are in place and in an appropriate condition. 	Good
Minor	<ul style="list-style-type: none"> Damage is minor and temporary/repairable. Damage is minor; planting will recover/regrow; pre-event appearance will soon be restored; little or no supplementary planting required. Structural elements necessary for maintaining the place in good condition are in place and mostly in an appropriate condition. Structural integrity (‘soundness’) is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> Damage is substantial but all/largely reversible/repairable if addressed promptly. Damage is substantial; planting will partially/mostly recover/regrow though may take months/years to resemble pre-event appearance; supplementary planting may be required. Structural elements necessary for maintaining the place in good condition are missing in places and/or are in poor condition Structural integrity (‘soundness’) is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> Damage is substantial and some or all is permanent. Planting largely killed; little recovery expected. Substantial funding and urgent attention required to redress the damage and prevent collapse/loss of original fabric. Structural elements necessary for maintaining the place in good condition are missing or have failed. Value is at risk. 	Critical

9. Fire damage

Fire is often the greatest threat to heritage structures. Most at risk are wooden structures (e.g. buildings, bridges, fences), historic plantings, blazed trees and survey markers. The impact can be direct (e.g. burning, scorching) or indirect (e.g. smoke damage, heat damage).

Use the description to get the 'best fit.'

Level of impact	Description	Condition Class
None	No damage evident.	Good
Minor	<ul style="list-style-type: none"> • Damage is minor and temporary/repairable; • Damage is minor; planting will recover/regrow; pre-fire appearance will soon be restored; little or no supplementary planting required. • Structural integrity ('soundness') is not impaired/threatened. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> • Damage is substantial but all/largely reversible/repairable if addressed promptly • Damage is substantial; planting will partially/mostly recover/regrow though may take months/years to resemble pre-fire appearance; supplementary planting may be required. • Structural integrity ('soundness') is at risk. 	Significant Concern
Major	<ul style="list-style-type: none"> • Damage is substantial and some or all is permanent. • Planting largely killed; little recovery expected. • Substantial funding and urgent attention required to redress the damage and prevent further degradation. • Value is at risk. 	Critical

10. Tree/shrub health & dieback

Dieback is the premature & relatively rapid decline in vigour that may end in the death of trees and shrubs. It can be caused by a wide range of factors which are often interacting. Examples include insect attack, pathogens, salinisation, freshwater intrusion (e.g. mangroves), nutrient enrichment, soil acidification, over-browsing by arboreal mammals, changes in the water table (water logging or water deficit), drought, herbicide overspray & soil-borne pathogens (e.g. phytophthora).

Death, or epicormic regrowth occurring in response to the loss of branches/crowns, caused by storm, cyclone or intense fire is not dieback.

When assessing your historic planting or plant, be aware of deciduous (winter or dry season) tree species & of understorey species that appear dead in some seasons (e.g. *Cycas* spp.).

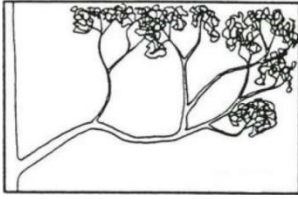
Note: the term ‘canopy’ in the table is referring to the canopy of the planting OR the canopy of an individual tree. The term ‘leaves’ is used for true leaves, phyllodes (e.g. acacia) & branchlets (e.g. casuarina, cypress). ‘Large’ is relative to the canopy species dominating your community (e.g. a large branch in an acacia forest would be small in a eucalypt forest).

Use the description to get a ‘best fit’ – not all parameters may be relevant or exactly ‘fit’ your site especially during recovery. Refer to the diagrams to determine the extent of branch death & epicormic growth throughout the canopy.

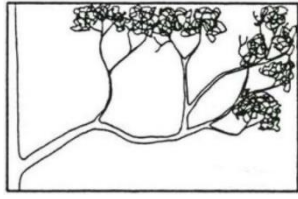
Health	Description	Condition Class
Very healthy	<ul style="list-style-type: none"> No or very few dead small or large branches or branchlets in the canopy. For eucalypt communities – nil to slight epicormic growth in the canopy. No obvious insect or pathogen damage to foliage (i.e. you have to ‘look’ to notice it); few dead or discoloured leaves; little or no honeydew or sooty mould. No obvious defoliation; the canopy looks ‘leafy.’ No ‘unusual’ deaths in the understorey (e.g. dead or yellowing grass trees, macrozamia, Proteaceae). 	Good
Healthy	<ul style="list-style-type: none"> Very few dead trees (no more than you’d expect). No or very few dead large branches. Some dead branchlets & small branches present here & there throughout the canopy; they may be obvious but don’t give the impression that there is any significant effect on the canopy. For eucalypt communities – slight epicormic growth in the canopy. Some obvious insect or pathogen damage, honeydew or sooty mould, may be present but overall impression is of a healthy canopy; few dead/ discoloured leaves. No obvious defoliation; the canopy looks ‘leafy.’ No or rare ‘unusual’ deaths in the understorey (e.g. dead or yellowing grass trees, macrozamia, Proteaceae). 	Good with Some Concern
Unhealthy	<ul style="list-style-type: none"> Dead trees present (more than you’d expect). Dead large branches as well as small branches & branchlets are common. For eucalypt communities – moderate epicormic growth in the canopy; some may be present on stems. Insect or pathogen damage, honeydew or sooty mould, widespread & conspicuous; foliage may appear ‘tatty’; leaf death &/or discolouration may be common. Some to considerable defoliation; the canopy looks sparse to very sparse AND/OR ‘Unusual’ deaths in the understorey (e.g. dead or yellowing grass trees, macrozamia) are common in patches or widespread 	Significant Concern
Very unhealthy	<ul style="list-style-type: none"> Dead trees are common. Many large branches are dead. For eucalypt communities – severe epicormic growth in canopy &/or stems. Insect or pathogen damage is widespread & severe; may be heavy honeydew ‘rain’ &/or abundant sooty mould; leaf death widespread & very common to complete. Canopy severely to completely defoliated AND/OR Most or all individuals of understorey taxon group (e.g. grass trees, macrozamia, Proteaceae) are dead or dying. 	Critical

Crown diagrams (from Grimes 1978)

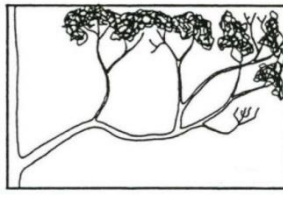
1a-d Extent of dead branches; 2a-d Extent of epicormic regrowth



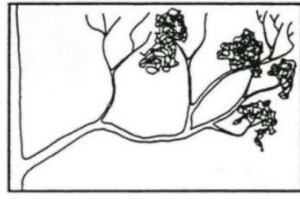
1a. No dead branches



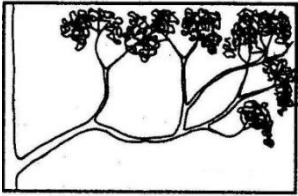
1b. Branchlets dead



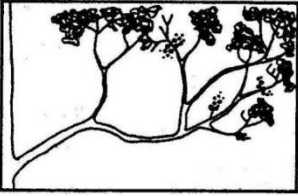
1c. Small branches dead



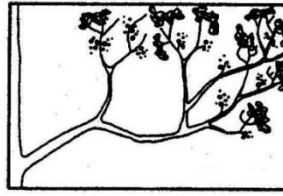
1d. Main branches dead



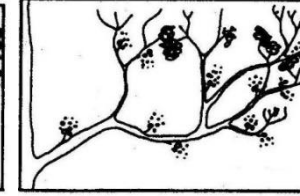
2a. None



2b. Slight



2c. Moderate



2d. Severe



Examples of epicormic shoots. The shoots grow from buds that are protected deep within the bark of trunks, stems and branches. They usually remain dormant unless the actively growing shoots at the top of the plant are damaged or lost. (Photographs: R. Melzer)

11. Visitor impacts including vandalism, theft and other inappropriate behaviour

Vandalism is a serious threat for many historic heritage places. It includes graffiti, littering, dumping, property damage and arson. These can damage the historic place and may put visitors at risk (e.g. broken glass).

All isolated cultural heritage sites such as artefact scatters, bottle dumps, crash sites, mine sites, tip sites, machinery, homesteads are at risk from theft (includes so-called 'souveniring' and 'scavenging'). Historic bottle and coin collecting are popular pastimes. Heritage values are seriously threatened by theft.

Inappropriate visitor behaviour such as: camping in heritage structures; driving through sites or on historic roads/tracks; making new access tracks to heritage sites; and winching off historic trees or markers can lead to direct damage and expose the place to threats such as accidental fires or human interference.

An inventory for the site and/or photographs from standard photopoints will be very useful in determining the level of impact – in particular from theft.

Use the description to get the 'best fit.'

Level of impact	Description	Condition Class
None	No visitor impact evident.	Good
Minor	Some visitor impact evident; amenity little impaired: <ul style="list-style-type: none"> • Damage is minor and temporary/repairable. • Theft inconspicuous/difficult to detect. • Visitor safety unimpaired if appropriate behavior/precautions taken (e.g. suitable footwear). 	Good with Some Concern
Moderate	Conspicuous visitor impact evident; amenity and/safety impaired: <ul style="list-style-type: none"> • Damage is substantial but all/largely reversible/repairable • Loss from theft is obvious but does not threaten structural integrity nor the ability to 'tell the story' of the place. 	Significant Concern
Major	<ul style="list-style-type: none"> • Extensive visitor impact evident; amenity and/safety significantly impaired • Damage is substantial and some or all is permanent – substantial funding and urgent attention required to redress the damage. • Loss from theft is substantial; may include structural elements and significantly impacts on the ability to 'tell the story' of the place. 	Critical

12. Visitor safety and restricted access

Access to historic heritage places is often an expectation from the visiting public. Public access to sites that have been closed or restricted can present serious safety risks to visitors, encourage further inappropriate visitation/access to the site, and cause detrimental impacts to the historic value.

Note: new or emerging issues must be noted in Table 2.5 and escalated to the in-line manager for action.

Use the description to get the 'best fit.'

Safety/access issues	Description	Condition Class
None	<ul style="list-style-type: none"> No safety concerns <p><i>For closed/restricted access areas:</i></p> <ul style="list-style-type: none"> Safety/access signage is in place <u>and</u> barrier fencing is in place and structurally sound. 	Good
Minor	<ul style="list-style-type: none"> Visitor safety is unimpaired if appropriate behavior (e.g. warning signs are followed) and/or precautions are taken (e.g. suitable footwear) <p><i>For closed/restricted access areas:</i></p> <ul style="list-style-type: none"> There is no safety/access signage is in place but barrier fencing is in place and is structurally sound. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> Visitor safety is impaired even if appropriate behavior and/or precautions are taken <p><i>For closed/restricted access areas:</i></p> <ul style="list-style-type: none"> Safety/access signage is in place but there is no barrier fencing. 	Significant Concern
Major	<ul style="list-style-type: none"> Visitor safety is significantly impaired even if appropriate behavior and/or precautions are taken <p><i>For closed/restricted access areas:</i></p> <ul style="list-style-type: none"> There is no safety/access signage in place and there is no barrier fencing 	Critical

13. Inappropriate management

Operational activities such as planned burning, earthworks, road/track construction and maintenance, fence construction, vegetation removal, off-road driving, mustering and weed control can threaten some heritage values.

Use the description to get the 'best fit.'

Level of impact	Description	Condition Class
None	<ul style="list-style-type: none"> No evidence of adverse impacts from operational activities. 	Good
Minor	<p>Minor disturbance/damage is evident.</p> <ul style="list-style-type: none"> Damage is superficial or temporary/repairable. Remedial action (changing management practices) and prevention of further damage is readily achievable. 	Good with Some Concern
Moderate	<ul style="list-style-type: none"> Disturbance/damage is conspicuous. Damage is substantial but all/largely reversible/repairable if addressed promptly and management practices causing the damage cease. Potential for further degradation is high if management practices remain unchanged. 	Significant Concern
Major	<ul style="list-style-type: none"> Disturbance/damage is substantial and some/all is permanent Substantial funding and urgent attention required to redress the damage. Management practices causing the damage must cease if there is to be any chance of redressing/preventing further damage. Value at risk. 	Critical

Appendix 2. Record sheet: Historic Values Health Checks

Park name (& section): _____

Recorder/s: _____

Value¹: _____

Site Details (for permanent and non-permanent sites):

	Site Id.	GPS Location (Datum:)	Permanent site & photo point established (Y/N)	Approx. site area	Date assessed (d/m/y)
1					
2					
3					
4					
5					

Site & photo point definition

In many cases it will not be necessary to precisely define the boundary of your site in order to ensure that the next time you (or a colleague) do the Health Check you use exactly the same area.....a few metres either side will not be a problem. However, in some circumstances the definition of your site will be important (e.g. Are all of the buildings associated with the homestead complex included in the site or only some?). Is it likely that someone else coming to do the Health Check in future could be confused about what might or might not be included in the site you are establishing? If the answer to the last question is yes, then provide clear details about your site and its boundary below.

Details about why you chose the site and why you included some components but not others (e.g. shearing shed but not shearer’s quarters) may also be useful.

For permanent sites describe how the photos are to be taken each time. Record photo numbers here also.

Site 1

Site 2

Site 3

Site 4

Site 5

1. Use the name provided in the management plan/statement (or Values Assessment if there is no plan)

Condition class summary

Record: the Condition Class that you determine for the value at each inspection site for each Health Check Indicator (HCI); your general impression of the condition of the value across the park (if there is more than one example of the value) for each HCI (based on site results and other observations – note that the Condition Class you record as your general impression IS NOT an ‘average’ of the Condition Classes at each site. It IS your considered opinion about the state of the value (across the park if relevant) based on the site results and your observations); and the overall condition of the value (across the park if relevant) based on the IUCN definitions (Table 2.2).

Where it is relevant, provide information on factors contributing to the Condition Class assigned to an inspection site {e.g. be specific about which component (e.g. stable, homestead, store shed) of the value has been damaged} in Table 2.3. Details relevant to your determination of the General Impression and Overall Condition Class can be recorded in Table 2.4 and the notes field below Table 2.4, respectively.

Table 2.1 Record of the Condition Class for a key historic value.

Key: **G = good**; **GC = good with some concerns**; **SC = significant concern**; **C = critical**; **NA = not applicable**.

Health Check Indicator	Condition Class					General impression
	Site 1	Site 2	Site 3	Site 4	Site 5	
						Not an ‘average’!
1. Vertebrate animal damage						
2. Invertebrate animal damage						
3. Vegetation – direct mechanical damage						
4. Vegetation – increased fire risk						
5. Vegetation – invasion						
6. Ground surface modification (e.g. erosion, subsidence, compaction, altered drainage)						
7. Damp (rising/falling)						
8. Weather events & weathering – exposure to water, wind &/ sun						
9. Fire damage						
10. Tree/shrub health & dieback						
11. Visitor impacts including vandalism, theft & other inappropriate behaviour						
12. Visitor safety/restricted access						
13. Inappropriate management						
Overall Condition Class (refer Table 2.2)						

Table 2.2 Overall Condition Class – what the categories mean					
Good	The Key Value is in good condition and is likely to be maintained for the foreseeable future, provided the current conservation measures are maintained.				
Good with some concern	The Key Value is likely to be essentially maintained over the long-term with minor additional conservation measures to address existing concerns.				
Significant concern	The Key Value is threatened by a number of current and/or potential threats. Significant additional conservation measures are required to preserve the value over the medium to long-term.				
Critical	The Key Value is severely threatened. Urgent additional large-scale conservation measures are required				
Trigger for management response:	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #28a745; color: white;">Maintain effort</td> <td style="background-color: #ffc107; color: white;">Minor attention required</td> <td style="background-color: #dc3545; color: white;">Requires prompt decision &/or planned course of action</td> <td style="background-color: #6c757d; color: white;">Requires urgent decision re course of action</td> </tr> </table>	Maintain effort	Minor attention required	Requires prompt decision &/or planned course of action	Requires urgent decision re course of action
Maintain effort	Minor attention required	Requires prompt decision &/or planned course of action	Requires urgent decision re course of action		

Table 2.3 Information, including key issues/threats, relevant to determining the condition of the value at Site/s _____

Health Check Indicator	Notes <i>If you don't use a separate notes page for each site then record the relevant site number below against each set of notes</i>
1. Vertebrate animal damage	
2. Invertebrate animal damage	
3. Vegetation – direct mechanical damage	
4. Vegetation – increased fire risk	
5. Vegetation – invasion/encroachment	
6. Ground surface modification (e.g. erosion, subsidence, compaction, altered drainage)	
7. Damp (rising/falling)	
8. Weather events & weathering	
9. Fire damage	
10. Tree/shrub health & dieback	
11. Visitor impacts including vandalism, theft & other	
12. Visitor safety/restricted access	
13. Inappropriate management	

Table 2.4 Information relevant to the determination of the *General Impression* for a Health Check Indicator.

Health Check Indicator	Notes <i>If you don't use a separate notes page for each site then record the relevant site number below against each set of notes</i>
1. Vertebrate animal damage	Vertebrate animal damage
2. Invertebrate animal damage	Invertebrate animal damage
3. Vegetation – direct mechanical damage	Vegetation – direct mechanical damage
4. Vegetation – increased fire risk	Vegetation – increased fire risk
5. Vegetation – invasion/encroachment	Vegetation – invasion/encroachment
6. Ground surface modification (e.g. erosion, subsidence, compaction,	Ground surface modification (e.g. erosion, subsidence, compaction, altered drainage)
7. Damp (rising/falling)	Damp (rising/falling)
8. Weather events & weathering	Weather events & weathering
9. Fire damage	Fire damage
10. Tree/shrub health & dieback	Tree/shrub health & dieback
11. Visitor impacts including vandalism, theft & other	Visitor impacts including vandalism, theft & other inappropriate behaviour
12. Visitor safety/restricted access	Visitor safety/restricted access
13. Inappropriate management	Inappropriate management

Notes relevant to the determination of the Overall Condition Class:

New or emerging issues noticed (anywhere on the park) while undertaking an inspection

Make a note in Table 2.5 of localised disturbance, breaches (e.g. in the weather tightness of a building; damage that permits unauthorised entry), issues that require attention to prevent degradation and significant resource input in the future (e.g. graffiti at a cultural site; pollution event; erosion; tree-fall across a track resulting in new tracks; a new infestation of an ecosystem-changing weed) or pose risk to life and property, or significantly impact on visitor experience (e.g. overcrowding, excessive noise, conflict amongst user groups).

Determine, with your in-line managers and QPWS&P Heritage Officer, an agreed management response and desired outcome – record these in Table 3 (or in a separate project plan if warranted). During future inspections evaluate the effectiveness of the management response in achieving the stated desired outcome – use the ratings below to do so.

Effectiveness of management response	Rating
Desired outcome achieved	1
Heading towards desired outcome	2
Situation static	3
Heading away from desired outcome	4

Table 2.5 Details of localised disturbances/issues requiring attention and effectiveness of management response.

Y = yes; N = no; P = partially

ISSUE 1							
Date of initial record (d/m/yr):				GPS location (including datum):			
Issue & current condition:							
Agreed management response (AMR):							
Desired outcome:							
				Follow-up inspections			
Date (d/m/yr)							
AMR implemented (Y/N/P)							
Rating:							
ISSUE 2							
Date of initial record (d/m/yr):				GPS location (including datum):			
Issue & current condition:							
Agreed management response (AMR):							
Desired outcome:							
				Follow-up inspections			
Date (d/m/yr)							
AMR implemented (Y/N/P)							
Rating:							
ISSUE 3							
Date of initial record (d/m/yr):				GPS location (including datum):			
Issue & current condition:							
Agreed management response (AMR):							
Desired outcome:							
				Follow-up inspections			
Date (d/m/yr)							
AMR implemented (Y/N/P)							
Rating:							