

HERITAGE GARDEN RESTORATION AND MAINTENANCE



Anthony Thake

The Pratt Foundation/ISS Institute Overseas Fellowship

Fellowship supported by The Pratt Foundation



ISS Institute

Suite 101
685 Burke Road
Camberwell Vic
AUSTRALIA 3124

Telephone

03 9882 0055

Facsimile

03 9882 9866

Email

issi.ceo@pacific.net.au

Web

www.issinstitute.org.au

Published by International Specialised Skills Institute, Melbourne.

ISS Institute
101/685 Burke Road
Camberwell 3124
AUSTRALIA

July 2009

Also extract published on www.issinstitute.org.au

© Copyright ISS Institute 2009

This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act 1968.

Whilst this report has been accepted by ISS Institute, ISS Institute cannot provide expert peer review of the report, and except as may be required by law no responsibility can be accepted by ISS Institute for the content of the report, or omissions, typographical, print or photographic errors, or inaccuracies that may occur after publication or otherwise. ISS Institute do not accept responsibility for the consequences of any action taken or omitted to be taken by any person as a consequence of anything contained in, or omitted from, this report.

Executive Summary

Heritage garden restoration and maintenance is an important issue worldwide. Gardens are part of our history and give us a window into the past, and once lost are impossible to replace. If we are to preserve this heritage link then funding for maintenance, restoration or reconstruction and skill and knowledge enhancement needs to be allocated.

Currently in Australia we have a short history of heritage gardening compared with overseas. Even so, there are many gardens in need of restoration or reconstruction to bring them back to their original condition. Not only are these activities important, but the ongoing sensitive maintenance of these gardens is vital for their continuing preservation. Managers and administrators of these gardens need to be convinced to allocate resources for this maintenance, restoration and reconstruction as well as skill and knowledge enhancement. These places are important community assets in an increasingly urbanised environment. They are capable of generating income through a variety of sources that would improve their priority ranking, allowing this work to proceed. Heritage gardens, if neglected, can be quickly lost and almost impossible to recreate.

If we are to restore these gardens then there are international agreements and local legislation that control/guide what is done. Historical research is the first crucial step in this process and unless there is evidence from the past it is very difficult to complete an authentic restoration of a heritage garden. Climate change and finding qualified gardeners are other challenges to this process.

Within the Amenity Horticulture training package there are skill gaps in the area of heritage garden restoration and maintenance. At diploma level the only relevant unit is about planning the process of restoration, but not actually completing the restoration work. High level skill to sensitively maintain heritage gardens, project work to link planning with practical restoration work and environment change affecting restoration work needs to be in place.

The Overseas Fellowship provided the opportunity to investigate these skill gaps through visiting heritage restored gardens like Hampton Court and Heligan. Other activities were discussions with the National Trust concerning heritage garden restoration and maintenance, maintenance gardening at heritage sites like the Kew Botanic Gardens and Levens Hall, and also investigating the education issues surrounding heritage gardens at Writtle College, Nottingham Trent University and the Kew Botanic Gardens.

There is a long history of gardening in the United Kingdom; this creates its own challenges in terms of restorations. Restorations can be large or small and all require extensive historical research to ensure an authentic process. There also needs to be consideration given to subsequent maintenance challenges following these works. Gardening and garden visitation is very popular; this brings pressures to historic gardens. Climate change is starting to have an effect on gardens, so planning is being put in place to adjust to changing circumstances. There is a continuing challenge to recruit, train and retain gardeners to look after these spectacular places.

Through the Fellowship opportunity Thake has gained valuable insights about how heritage garden maintenance and restoration is carried out in the United Kingdom, including an education aspect. This experience will allow Thake to pass on ways to address skill deficiencies in horticulture which will benefit our industry. Restorations can be large or small, and there is a growing popularity of gardening and garden visits to those gardens encompassing a long gardening history. In addition there is a move to utilise more organic processes in heritage gardens and a greater awareness of how climate change can impact this area.

There is a great potential benefit to the industry by sharing this knowledge with others through talks with community groups, industry groups both locally and Australia-wide, and with members of the general public.

Heritage garden restoration and maintenance, and the capabilities to do so, are of vital importance if we are to preserve these sites into the future.

Table of Contents

i	Abbreviations and Acronyms
1	Acknowledgments
1	Awarding Body - International Specialised Skills Institute (ISS Institute)
3	Fellowship Supporter
3	Employer Support
3	Supporters
3	Peak Organisations and Key Representatives Impacted by the Fellowship
5	About The Fellow
6	The Fellowship Program
6	Aim of the Fellowship
7	The Skills/Knowledge Gaps
7	Current Education and Training in Australia
8	The Skills/Knowledge Gaps Investigated
10	The Australian Context
13	The International Context
13	Program Content
13	Down House
14	Writtle College
14	National Trust
15	Lost Gardens of Heligan
15	Royal Botanic Gardens, Kew
16	Hampton Court Palace
16	Nottingham Trent University
16	Levens Hall
17	Findings
22	Conclusion
23	Knowledge Transfer
24	Recommendations
24	Government
25	Industry
25	Business
25	Professional Associations
26	Education and Training
26	Community
26	How ISS Institute can be involved
26	Further Skill Gaps
27	References
27	Bibliography
27	Journal Article
27	Report
27	Booklets
27	Internet Article
27	Websites
28	Attachments

Abbreviations and Acronyms

ACNT	AustrFellown Council of National Trusts
AGHS	Australian Garden History Society
AIA	Australian Institute of Architects
AQF	Australian Qualifications Framework
CADE	Centre for the Arts and Design in the Environment
ICOMOS	International Council On Monuments and Sites
ISC	International Scientific Committee on Cultural Landscapes
IFLA	International Federation of Landscape Architects
HHT	Historic Houses Trust (NSW)
LIAA	Landscape Industry Association of Australia
LIAV	Landscape Industry Association of Victoria
TAFE	Technical and Further Education

Acknowledgments

Anthony Thake would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide him throughout the Fellowship program.

Awarding Body - International Specialised Skills Institute (ISS Institute)

We know that Australia's economic future is reliant upon high level skills and knowledge, underpinned by design and innovation.

The International Specialised Skills Institute Inc (ISS Institute) is an independent, national organisation, which has a record of nearly twenty years of working with Australian industry and commerce to gain best-in-the-world skills and experience in traditional and leading-edge technology, design, innovation and management. The Institute has worked extensively with Government and non-Government organisations, firms, industry bodies, professional associations and education and training institutions.

The Patron in Chief is Sir James Gobbo AC, CVO. The ISS Institute Board of Management is Chaired by Noel Waite AO. The Board comprises Franco Fiorentini, John Iacovangelo, Lady Primrose Potter AC and David Wittner.

Through its CEO, Carolynne Bourne AM, the ISS Institute identifies and researches skill deficiencies and then meets the deficiency needs through its *Overseas Skill Acquisition Plan (Fellowship Program)*, its education and training activities, professional development events and consultancy services.

Under the Overseas Skill Acquisition Plan (Fellowship Program) Australians travel overseas or international experts travel to Australia. Participants then pass on what they have learnt through reports, education and training activities such as workshops, conferences, lectures, forums, seminars and events, therein ensuring that for each Fellowship undertaken many benefit.

As an outcome of its work, ISS Institute has gained a deep understanding of the nature and scope of a number of issues. Four clearly defined economic forces have emerged out of our nearly twenty years of research. The drivers have arisen out of research that has been induced rather than deduced and innovative, practical solutions created - it is about thinking and working differently.

A Global Perspective. 'Skills Deficiencies' + 'Skills Shortages'

Skill deficiencies address future needs. Skill shortages replicate the past and are focused on immediate needs.

Skill deficiency is where a demand for labour has not been recognised and where accredited courses are not available through Australian higher education institutions. This demand is met where skills and knowledge are acquired on-the-job, gleaned from published material, or from working and/or study overseas. This is the focus of the work of ISS Institute.

There may be individuals or firms that have these capabilities. However, individuals in the main do not share their capabilities, but rather keep the IP to themselves; and over time they retire and pass way. Firms likewise come and go. If Australia is to create, build and sustain Industries, knowledge/skills/understandings must be accessible trans-generationally through nationally accredited courses and not be reliant on individuals.

Our international competitors have these capabilities as well as the education and training infrastructure to underpin them.

Addressing skill shortages, however, is merely delivering more of what we already know and can do to meet current market demands. Australia needs to address the **dual** challenge – skill deficiencies and skill shortages.

Acknowledgments

Identifying and closing skills deficiencies is vital to long-term economic prospects in order to sustain sectors that are at risk of disappearing, not being developed or leaving our shores to be taken up by our competitors. The only prudent option is to achieve a high skill, high value-added economy in order to build a significant future in the local and international marketplace.

The Trades

The ISS Institute views the trades as the backbone of our economy. Yet, they are often unseen and, in the main, have no direct voice as to issues which are in their domain of expertise. The trades are equal, but different to professions.

The ISS Institute has the way forward through its 'Master Artisan Framework for Excellence. A New Model for Skilling the Trades', December 2004. The Federal Government, DEEWR commissioned ISS Institute to write an Australian Master Artisan School, Feasibility Plan.

In 2006, ISS Institute Inc. set up a new ISS advisory body, the **Trades Advisory Council**. Members are Ivan Deveson AO; Martin Ferguson AM, MP, Federal Labor Member for Batman; Geoff Masters, CEO, Australian Council of Educational Research; Simon McKeon, Executive Chairman, Macquarie Bank, Melbourne Office; Richard Pratt, Chairman, Visy Industries and Julius Roe, National President Australian Manufacturing Workers' Union.

Think and Work in an Holistic Approach along the Supply Chain - Collaboration and Communication

Our experience has shown that most perceive that lack of skills is the principal factor related to quality and productivity. We believe that attitudes are often the constraint to turning ideas into product and a successful business; the ability to think laterally, to work and communicate across disciplines and industry sectors, to be able to take risks and think outside the familiar, to share – to turn competitors into partners.

Australia needs to change to thinking and working holistically along the entire Supply Chain; to collaborate and communicate across industries and occupations - designers with master artisans, trades men and women, Government agencies, manufacturers, engineers, farmers, retailers, suppliers to name a few in the Chain.

'Design' has to be seen as more than 'Art' discipline – it is a fundamental economic and business tool for the 21st Century

Design is crucial to the economic future of our nation. Australia needs to understand and learn the value of design, the benefits of good design and for it to become part of everyday language, decision making and choice.

Design is as important to the child exploring the possibilities of the world, as it is to the architect developing new concepts, and as it is to the electrician placing power points or the furniture designer working with a cabinet-maker and manufacturer. As such, design is vested in every member of our community and touches every aspect of our lives.

Our holistic approach takes us to working across occupations and industry sectors and building bridges along the way. The result has been highly effective in the creation of new business, the development of existing business and the return of lost skills and knowledge to our workforce, thus creating jobs - whereby individuals gain; industry and business gain; the Australian community gains economically, educationally and culturally.

ISS Institute
Suite 101
685 Burke Rd
Camberwell 3124 Australia

P 61 3 9882 0055
F 61 3 9882 9866
E issi.ceo@pacific.net.au
W www.issinstitute.org.au

Acknowledgments

Thake would like to express his appreciation to Carolynne Bourne AM and Jeanette McWhinney at the ISS Institute for their direction and support over the past year.

Fellowship Supporter

The Pratt Foundation was established in 1978 by Richard and Jeanne Pratt with the shared vision of supporting charitable enterprises and adding value to philanthropy. The Foundation is now one of the largest private sources of philanthropy in Australia. In the words of its mission statement, it aims “*to enrich the lives of our community*” and, in the words of Jeremiah, it works to fulfil this aim in a spirit of “*kindness, justice and equity*”. Anthony Thake would like to thank them for providing funding support for this Fellowship.

Employer Support

Thake would like to acknowledge the support of the University of Ballarat (TAFE Division) for providing the time and additional funding required to undertake the Fellowship and associated activities.

University of Ballarat

Professor Terry Lloyd, DVC TAFE
 Russell Bray, Head of School Business Services
 Peter Sudholz, Head of Programs Primary Industries
 Graeme Taylor, Program Coordinator Primary Industries

Supporters

Primary Industries Curriculum Maintenance Manager

Kate Bryce, Executive Officer

Primary Skills Victoria

Greg Hallihan, Executive Officer

City of Ballarat

Ian Rossiter, Executive Manager Corporate Planning

Heritage New South Wales

Stuart Read, Heritage Officer and '04 The Pratt Foundation/ISS Institute Fellow

Thanks must also go to Colin Trembath ('04 The Pratt Foundation/ISS Institute Fellow), John Rayner and Toinette Thake for their support of this Fellowship.

Peak Organisations and Key Representatives Impacted by the Fellowship

Australian Garden History Society

Pamela Jellie, Chair. An Australian wide organisation running seminars and excursions to historical gardens. Also publishes newsletters and occasional research papers.

Australian Horticulture

Rosalea Ryan, Editor. A monthly magazine on horticultural issues around Australia.

Australian Institute of Architects (Heritage)

The AIA exists to advance the interests of members, their professional standards and contemporary practice, and to expand and advocate the value of architects and architecture to the sustainable growth of our community, economy and culture.

Acknowledgments

Ballarat City Council

Responsible for a number of heritage buildings and the Ballarat Botanic Gardens.

Ballarat Horticultural Society

Sue Rhook, President. A local society with a long history of looking at all aspects of growing plants.

Heritage New South Wales

This organisation is involved in heritage buildings and gardens.

Heritage Victoria

This organisation is involved in heritage buildings and gardens.

Landscape Industry Association of Victoria Inc (LIAV)

The LIAV is a progressive association of committed professionals working in an exciting and expanding industry. It comprises commercial and residential landscape contractors, landscape designers, students and educators, and landscape service and product suppliers.

National Trust of Australia

The National Trust actively works towards conserving and protecting our heritage for future generations to enjoy. The National Trust is not part of the Government. It is an independent non-profit organisation, supported by a large community base. It is the premier heritage and conservation organisation in Australia, and the major operator of house museums and historic properties open to the public. State bodies operate through the Australian Council of National Trusts (ACNT).

Victorian Horticultural Teachers Network

An organisation that links together horticultural teachers around the state.

Victorian Regional Gardens Curators Network

Ian Rossitor, Manager, Parks and Gardens, City of Ballarat. A Victorian organisation covering regional botanical gardens dealing with issues relevant to this group.

Higher Education Institutes (Universities and TAFEs) For example:

- **University of Melbourne, Land and Food Resources**
John Rayner, Lecturer in Environmental Horticulture. Currently the only training provider in Victoria where higher level horticultural training is offered.
- **Northern Melbourne Institute of TAFE**
John Neilson, Head of Department, Horticulture. NMIT is one of the larger training providers for horticultural training.
- There are a number of other training providers across Victoria offering horticultural training including Swinburne University of Technology, Holmesglen Institute of TAFE and Sunraysia Institute of TAFE.

About The Fellow

Name: Anthony Thake

Employment

University of Ballarat, School of Business Services, Primary Industries

Qualifications

- University of Melbourne (Hawthorn Campus) Graduate Diploma in Education and Training, 1996
- Northern Metropolitan College of TAFE, Supervision Certificate, 1990
- Latrobe University. Degree in Biological Sciences majoring in Botany and Genetics, 1978
- Burnley Horticultural College, Diploma Horticultural Science, 1973

Memberships

- Chairman, Victorian Horticultural Teachers Network
- Member of Primary Industries Horticulture Standing Committee
- Member of Primary Industries Curriculum Maintenance Managers Reference Committee
- Member of International Plant Propagators Society Executive Committee

Over a career of more than thirty years Anthony Thake has gained a wealth of experience in practical garden maintenance and knowledge across a wide range of plants in a series of environments around Melbourne including heritage locations. Plant propagation expertise (with plants ranging from indoor plants, annuals through to indigenous varieties) has also been gained over this time.

Thake has worked for a number of city councils in Melbourne being Diamond Valley, Kew and Heidelberg. He has been responsible for nursery operations and plant maintenance at a variety of parks and gardens.

Through this time Thake also spent seven years working in the System Garden at the University of Melbourne. He was responsible for the heritage garden, plant collections and also assisted with research projects for the botany school.

Currently Thake has changed directions in his career from working in gardens and nurseries to teaching in horticulture at the University of Ballarat (TAFE Division). He is responsible for teaching and assessing apprentices and trainees as well as working with full time and part time students up to Diploma level. Areas of expertise include plant identification, garden maintenance, environmental influences on horticulture and plant propagation.

Away from this, Thake's interests include gardening, organic herb production, land care, cycling, travel and stamp collecting.

The Fellowship Program

The purpose of the Fellowship was to undertake an overseas study program in the United Kingdom to gain a comprehensive understanding of the field of Heritage Garden Restoration including maintenance issues surrounding heritage gardens and the challenges surrounding climate change, especially in terms of plant survival.

Aim of the Fellowship

The aim of this Fellowship was to gain first-hand experience of initiatives undertaken to restore and maintain heritage gardens to a level that allows the original form of the garden plan/setting to be retained.

Specific Areas of Study and Development

- To investigate the methods of assessing the need to restore heritage gardens.
- To investigate how trees, shrubs, perennials and other parts of the gardens are identified and assessed for their future viability.
- To investigate what records are available of original plantings, what period is used to restore the heritage garden and the effect of climate change on these gardens.
- To investigate the process of obtaining funding for heritage garden restoration.
- To identify restoration processes and timelines.
- To identify the consequences of restoration on ongoing maintenance requirements.
- To investigate levels of garden maintenance appropriate to the heritage garden given funding constraints and pressures from the popularity of these locations.
- To investigate the training involved in this field, including the blend of theory and practical skills and on and off job training.
- To investigate the skills and expertise of staff involved in heritage garden restoration and maintenance and the challenges of obtaining suitable staff for these activities.

The Skills/Knowledge Gaps

The restoration of heritage gardens has gained increased prominence in the last few years. These gardens may be community or private gardens that can be viewed as cultural or community assets, some needing to be restored and all requiring to be maintained in a sensitive way that reflects their historical significance. Within these historic gardens there exist trees of a great age, old-fashioned plants, rare specimens, paths, edging and seating. These resources cannot be instantly created – it takes many years for them to mature and eventually become a true reflection of the designer's original vision. It also means those in charge of these gardens must be knowledgeable and sensitive in the management of such important assets.

Gardens grow, develop and change over time and unless adequate resources are expended to maintain them, the original design and plantings can be lost. If all we do is carry out general maintenance tasks such as weeding, pruning, mowing lawns, raking, sweeping and the removal of plants as they die, then the whole design, context and purpose of the particular heritage garden is quickly lost and is very difficult to resurrect. If it is to be reclaimed, people who have specialised training in heritage garden design must be available for consultation and to perform the necessary work.

In any heritage garden there needs to be a sense of the original designer's vision so that the maintenance staff can refer back to plans and notes and suitably replace things that have deteriorated or died – always with an awareness of the original intent. If this happened on a regular basis there would be no necessity for expensive restoration of the heritage garden as it would always be up to the appropriate standard. Gardens never stand still, they are always growing in a changing environment and maintenance procedures need to reflect this. Well-trained staff, sensitive to the philosophy of heritage gardens, are essential in order to carry out these important tasks. As a guide, refer to Attachment 1: *Heritage Victoria Conservation Management Plan Brief March 2003*.

For people to be adequately trained with skills and knowledge in the field of heritage gardening, they need to develop skills to enable them to identify and assess heritage plants, source suitable plant material, research propagation methods as well as propagate and grow these old varieties and maintain the health of those already in the gardens. They also need to be able to interpret plans, be aware of soil modification and preparation techniques, be able to carry out pruning as is necessary and have a good understanding of transplanting mature plants and overall rejuvenation of gardens. In order to develop these skills in others, research needs to be carried out into the methods utilised in large heritage gardens overseas. Australian gardens are comparatively young and therefore, we need to avail ourselves of the vast knowledge already acquired by overseas experts to help us best deal with problems and issues that are now arising as our own heritage gardens start to age.

Current Education and Training in Australia

Skills gaps have been created due to parts missing in competencies relating to heritage garden restoration which forms part of the Amenity Horticulture training package. The training package arises out of the national education and training system through the Department of Education, Employment and Workplace Relations, Australian Government.

Training students to restore and maintain heritage gardens is not covered adequately in the current training package. The skills and knowledge gaps are:

- The practical ability to carry out restoration work.
- Higher level skills to sensitively maintain heritage gardens.
- Project work to link the planning with the practical restoration work.
- Environmental change affecting restoration work.

The Skills/Knowledge Gaps

Specifically, within the national training package for Amenity Horticulture, there is little recognition given to these skills and knowledge. Only one unit of competency is relevant to this topic, 'Plan the Restoration of Parks and Gardens' (RTF5009A). It covers preliminary activities for restoration work, requirements of the program and how to prepare and document the restoration plan and specifications.

More recently in Victoria, due to the inadequacy of the Amenity Horticulture training package in this area, a new unit has been written and has just been accredited for training in the new Diploma of Ornamental Horticulture (Victorian course).

This unit is called 'Conserve and Maintain Heritage Landscapes' (VBQU216) and has an allocation of 120 hours. Teaching for this unit commenced in 2007. From a first reading it does cover the practical aspects missing in the training package.

The Amenity Horticulture training package is currently under review with the stage 1 report being written. In Victoria, training providers are keen to have the Diploma incorporated into the new training package.

The Skills/Knowledge Gaps Investigated

The skill and knowledge gaps that were investigated on the overseas study program can be categorised into a number of areas.

- Heritage gardens that have recently been restored including Hampton Court Palace, Down House and Heligan. Their experiences are valuable to apply to the Australian context.
- Discussions with the National Trust about the process of Heritage garden restoration, funding, priorities and assessing the need for this activity.
- Investigating maintenance gardening in heritage gardens such as Kew Botanic Gardens and Levens Hall, within the context of their level of visitor numbers, staffing challenges, funding issues and time allocations.
- Discussions with education and training providers running heritage garden restoration and maintenance programs, such as Writtle College, Nottingham Trent University and Kew Botanic Gardens.

The following questions were prepared in advance as a basis for discussion with the contacts at each of the sites.

Question Sheet on Maintenance and Restoration of Heritage Gardens

1. Maintenance of Heritage Gardens

- What are the main challenges you face in maintaining this heritage garden?
- What pressures do high visitor numbers put on your staff?
- How do you control people movement through your site given maintenance numbers?
- Is machinery used prior to or post opening?
- What is the maintenance program for the lawns?
- Has climate change had an effect on the gardens and how?
- How do you prioritise your maintenance needs?
- How easy is it to obtain qualified and experienced staff?
- Are any of the staff completing horticultural qualifications and what are those courses?
- Have you sufficient staff for the maintenance needs of this garden – if not, what are the alternatives?
- Waste minimisation, recycling and reuse – how does this occur?

The Skills/Knowledge Gaps

2. Heritage Garden Restoration

- What are the indications that the garden needs to be restored as opposed to extra maintenance?
- How do you go about identifying and assessing the plants? Also what about the landscape materials?
- Researching the history of these gardens is a vital first step – how do you do this?
- How do you locate garden plans and planting plans from the past?
- How do you decide what period to restore the garden to?
- Were archaeological skills used to determine changes in the garden over time? How was this done? What information did this uncover?
- What are the types of legislation that control what garden restoration works can occur?
- Who drew up the plan and works schedule for the garden restoration and how wide was the consultation process?
- What happens to waste disposal from the site and how is this minimised?
- Sourcing materials like soil, paving materials etc – how do you go about this process?
- Do you propagate plants from original stock to plant back in the newly restored garden, or are they sourced from elsewhere?
- Are the current staff trained to restore gardens – if not, are they available in the employment market?
- How do you determine the timelines for this restoration process and what are the contingency factors?

The Australian Context

Australia has a short history of intensive gardening compared with Europe; however, Australia has heritage gardens that were planted/designed about one hundred years ago. A heritage garden is a window from the past and may begin from as little as thirty years ago.

If these gardens are not sensitively maintained into the future then the essence of these areas can be quickly lost. Slow growing, delicate plants can become swamped by the more aggressive ones, environmental weeds start to invade areas and even the trees can deteriorate if not maintained. The trees are the backbone structure to a garden and if these are lost then the heritage garden is gone. Instead of restoring our heritage garden to its former glory we are potentially creating something that was not there in the past. Historical records are vital if we are to restore and or recreate these heritage gardens.

Even though Australian gardens are relatively young compared to the international context, it is extremely important to gather as much historical evidence on Australia's heritage gardens before work commences. Photographs, maps, articles, minutes and correspondence will all help to draw a picture of the site as it was in the past. Decisions about the timeframe to restore a heritage garden will be guided by the present condition of the site and evidence of when the major works were commenced. This evidence gathering period, whilst time consuming, is very important to ensure that we create an authentic restoration. Another aspect that guides this process is the maintenance consequences of the newly restored garden. There is little point changing the current condition of a garden if we do not have the resources to expend on the extra maintenance needs of the site once restored. One option may be to partly restore the garden and wait until a later date to complete the job, when there are more resources. It may be as simple as replacing a dead plant with an historically correct one.

There are a number of international agreements that guide restoration works – they include the Venice Charter. Gardens and parks are not specifically mentioned, but articles 6 and 14 recognise that land surrounding a culturally important building should be protected. The Florence Charter deals with historic parks and gardens in terms of their preservation, maintenance, conservation, restoration and reconstruction. It creates a framework for these activities to occur.

The most recent is the Burra Charter. The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places). This Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians (<http://www.icomos.org/australia/burra.html>).

The Burra Charter provides guidance for the conservation and management of places of cultural significance; though gardens and parks are not specifically mentioned. The Charter embodies seven basic statements:

- The place is important
- Understand the significance of the place
- Understand the fabric
- Significance should guide decisions
- Do as much as possible and as little as necessary
- Keep records
- Do everything in a logical order

The Australian Context

Victorian Legislation, called the *Heritage Act 1995*, and to a limited degree the *Planning and Environment Act*, provides for the protection of places and objects of cultural heritage significance and the registration of such places and objects. A 'place' includes trees and gardens. The National Trust and Heritage Victoria can provide advice as to whether a garden is heritage registered. Local councils have heritage advisors.

Australian heritage gardens exist all over the country. They may be botanical gardens, municipal gardens, stately mansion gardens or cottage gardens. Their size can vary from courtyards to hectares in area. Some of these heritage gardens have been sensitively maintained over their long history, so they look close to the original designers' vision when they were first planted. Even so, some areas may need restoration as gardens/plants mature and die over time.

This level of maintenance is more expensive due to increased time commitment and the need to employ specialist staff and extra resources. If this does not happen then a heritage garden can deteriorate very quickly, subsequently needing full restoration to bring it back to near original condition. In Australia there are a number of heritage gardens that fall into this category. Their priority for resources has lowered over time and if this does not change then these valuable gardens will be lost.

Heritage gardens are an important asset to the community, particularly as we are an urbanised society, therein this type of open space is much valued. Managers and administrators of these gardens need to invest resources to suitably maintain these areas that are now being more highly utilised by the communities' members. They need to be convinced that not only is a heritage garden an important community asset, but that it can be capable of generating income through garden entry, behind the scenes tours, specialist talks, rare plant sales and other functions on the site. If convinced of this, the priority for a heritage garden may then change. If not, a garden could be under threat through due to neglect and eventually become the site for a new building.

One of the main challenges in Australia is to return heritage gardens to their former standard, ensuring long term viability. All too often these places are subjected to minimal and basic maintenance; for example paths are kept clean, plants pruned and lawns mowed. However, more sensitive maintenance is required, eg: pruning plants when required, removing not only weeds but also seedling plants, identifying the plant types present, replanting suitable plants as per the original design when they have died, and spending time to see what else is necessary to keep the garden true to the original vision.

Climate change is having a direct effect on what we grow in our gardens, whether it is temperature change or lower rainfall. In terms of heritage garden restoration we have to ask ourselves if we can now grow plants from the original design and, if not, then are we authentically restoring these sites. It is a threat to the continuing future of heritage gardens. However, it can be viewed as an opportunity to show members of the public how to be sustainable in a garden setting. Creating new low water landscapes beside the heritage garden could also enhance the whole environment. If conditions worsen then perhaps our heritage gardens should change shape to meet these new challenges.

Heritage buildings and surrounding gardens are an important part of our history that is very easy to lose and almost impossible to replace. We still have reasonable numbers and examples of these properties, but unless we are committed to their upkeep we will be poorer for this loss.

The community at large sees this part of our history as valuable and worthy of preservation, though the pressures are there to cut costs (and keep places going). We need to resist this temptation and keep maintaining and/or conserving these assets.

The Australian Context

<p>Strengths of Heritage Gardens</p> <ul style="list-style-type: none"> • A window into the past of garden design • A valuable community asset • Enhances historic buildings • An oasis of peace and solitude from the hectic world • Mature trees and gardens • A living record of the past encapsulating the economic and cultural mores of particular periods. Heritage gardens reflect the purpose for which they were created for the public such as Governor residences, churches, parks and private settings such as family homes. • A source of plants to maintain biodiversity, from roses to potatoes and peaches. 	<p>Weaknesses of Heritage Gardens</p> <ul style="list-style-type: none"> • Cost of sensitively maintaining these areas • Low priority for resource allocation due to little income generation • Restoration and or recreation of these gardens is expensive • Appropriate skill and knowledge levels along the value chain
<p>Opportunities for Heritage Gardens</p> <ul style="list-style-type: none"> • Showcase examples of garden design • Educate members of the public about mature garden design and old fashioned plants • Lead the community by developing low water, contemporary new gardens • Income generation through entry, talks and selling plants • Reintroduce plants to maintain biodiversity as decorative such as roses, or for health and a food source. 	<p>Threats for Heritage Gardens</p> <ul style="list-style-type: none"> • Climate change • Some gardens are viewed only as open spaces to put buildings on • Neglect • Viewed by administrators as expensive with little income generation so are becoming low priorities

The International Context

The overseas program was designed to explore the identified skills and knowledge gaps and to obtain the information necessary for Thake to return to Australia equipped with the knowledge and ideas to enable him to advise, instruct and promote the overall need for heritage garden restoration and maintenance.

Program Content

The Fellowship Program included visits to establishments and meetings with individuals involved in heritage garden restoration and maintenance in the UK. The activities were planned prior to departure. However, upon arrival in the UK, many contacts provided the Fellow with information that led to other significant opportunities that were not known when planning the program in Australia prior to departure. Thake had anticipated this prior to departing on the study tour and had allowed sufficient time in the program to include such impromptu visits.

The following site visits and meetings proved to be the most significant in providing information and inspiration.

Down House

Toby Beasley, Head Gardener, Down House English Heritage

Down House was the residence of Charles Darwin for over forty years to 1896. The original farmhouse dates from 1630 and has been modified and extended over time. During his time at Down House Darwin conducted a number of scientific experiments like 'cross' versus 'self' pollination and the weed garden, and also wrote *On the Origin of Species*. Emma Darwin was the gardener and Charles Darwin the researcher. They were independently wealthy, enabling them to undertake house and garden extensions.

English Heritage took over the property in 1996 and began the process of restoring the house and some of the gardens so visitation could commence. The garden had been neglected for a period of time so the process of restoration began, with a search of Charles Darwin's records to document what had been present in the garden. The period that the garden was restored to was when the Darwins were in residence. An example of this process is the display gardens that were present in Darwin's time, but were only lawn when English Heritage took over. Records showed that these gardens existed in the past and this was confirmed by an archeological survey distinguishing between lawn and garden beds, so they were restored using plants of Darwin's era. Only when there are two independent sources of information that agree with each other can the restoration work proceed.

Volunteers are used to an extent to maintain the garden to the standard required. Training is provided by English Heritage:

http://www.english-heritage.org.uk/upload/pdf/CB53_p34_35.pdf

http://www.english-heritage.org.uk/upload/pdf/CB53_p8_11.pdf

All material produced by the garden is composted and recycled within the property. Visitation numbers of 27,000 to 28,000 people per year create some problems like turf wear in the garden, however these can be solved through garden management practices.

According to Beasley, there is some evidence of climate change, but it is difficult to determine if it is an aberration or a long term change.

The International Context

Writtle College

Dr Jill Raggett, Co-Manager of the Centre for the Arts and Design in the Environment (CADE), Reader in Gardens and Designated Landscapes

Writtle College is affiliated with the University of Essex and is the largest horticultural course provider in the UK. Courses start from basics to degrees in a range of specialist areas. The degree programs consist of Foundation (two years) and Honours (three years) with a wide variety of subject areas on offer to students with practical skills acquisition being an important part of each course.

Heritage restoration is covered in two elective modules: 'Conservation and Restoration of Historic Gardens' and 'Restoration and Management of Historic Gardens'. There is a large list of resources available for each of these units. Copies were obtained of relevant documents, websites and books, all of which will prove to be useful in the Australian situation. For example, one of the articles describes the relevant terminology, restoration, reconstruction and conservation, especially useful for teaching purposes.

National Trust

Mike Calnan, Head of Gardens and Parks

As Calnan noted in the book *Rooted in History*, Heritage Gardens "...remain as ghosts of the past and, without them, life would be a less rich experience". Consequently, a number of the National Trust properties have undergone restoration work in varying degrees since they have been acquired by the Trust. Restoration can be as simple as replacing a dead plant with one as specified in the historical documents, or a major restoration change triggered by storm damage. Before any work commences there needs to be extensive historical research. Layers of ownership over time will change each property and so, to decide what period to restore the garden to, is an important challenge.

Overarching legislation like the register of parks and gardens can affect what is able to be done on each site. Before any works are programmed a conservation plan needs to be constructed as well as community consultation.

The other important consideration is the change in usage of the gardens from private areas to public visitation and the pressures that may place on the garden. Eleven million people visit National Trust properties each year of which 83% come to see gardens.

Financing for these works is obtained from a variety of sources such as lottery grants or donations and the works are generally carried out by National Trust gardeners.

The gardens are maintained by National Trust staff as well as volunteers. Waste material that is generated is recycled – the Trust is moving towards organic standards.

Climate change is affecting the National Trust gardens so policies are being put into place to deal with future change.

Another challenge that the National Trust is facing is recruitment of suitable gardeners, which is difficult due to the community perception of poorly paid outdoor work. Volunteers, apprenticeships and work experience may be an avenue to recruit new gardeners.

The International Context

Lost Gardens of Heligan

Sylvia Travers, Productive Gardens Manager

Heligan is the most recognised garden restoration project of recent times. The Tremayne family established the estate in Cornwall, consisting of productive pleasure gardens and a wider estate. For over 150 years each successive generation expanded the gardens. Following the First World War due to the death of most of the staff members, the property slipped into decline and around 1970 Tremayne house was sold, leaving the garden unattended. In 1990 Tim Smitt found the derelict place which had enormous potential and needed to be restored. Historical research was undertaken to find out what was present and slowly the restoration process began.

After a series of TV programs the garden's popularity increased so it was opened to allow the public access to the restoration project. The walled gardens were the most overgrown, and once the overgrowth was removed, vegetable and fruit production commenced. Other areas were restored, lakes excavated, plants pruned, paths found and weeds removed. The period of restoration was determined to be from 1880 to 1914, so old varieties of vegetable and fruit trees were found locally and replanted.

Today the restoration process continues as finances become available. Meanwhile up to 30,000 people visit annually and vegetables and fruits are produced for the café on-site.

Royal Botanic Gardens, Kew

Martin Staniforth, Practical Training Coordinator, Horticulture and Public Education Dept
Kathleen Smith, Science/Collections Coordinator, Great Glasshouses and Training Section, Horticulture and Public Education Dept

The Kew Gardens deliver a Diploma in Horticulture on-site. Students must have two years work experience prior to entry to the course and must also have a prior horticultural qualification. It is a very popular course – interviews are conducted to select suitable students of 14 per year for the three year course. The students are employed by the Botanic Gardens and about 80% of their time is spent working in the gardens and 20% is class time. In winter most of their time is spent in class. There are external lecturers and external assessors and a principal who organises how the course runs. Once the students have graduated they have good job prospects due to the high regard the Diploma is held in the industry.

Martin Staniforth is involved in the practical aspects of the students' training in the gardens. His role includes practical appraisal, practical plot diary assessment and reporting to supervisors on the students' performance. He is currently setting up a project on horticultural standards which endeavours to quantify work quality in the gardens.

Kathleen Smith is involved in the Rotational Traineeship Program which is aimed to transfer into a horticultural apprenticeship scheme. Currently the Kew Gardens employs four trainees per year with a total of 12 in the program. They have trouble locating suitable staff due to low pay and the work being outdoors. Once employed the trainees are sent to a local horticultural provider through a day release scheme.

Smith is also responsible for the glasshouse complex in the gardens. They have 21 zones of different environments allowing them to grow a great range of rare, unusual and threatened species. It is not only about growing these plants successfully, but being able to propagate plants that have not been propagated previously.

The International Context

Hampton Court Palace

Graham Dillamore, Gardens and Estates Operations Manager

In 1987 there was a major fire at Hampton Court Palace. Through the restoration process it was noted that the outside surroundings did not match the wing of the palace (erected by King William III and Queen Mary II in the late 1690s), so the process of restoration of the Privy Garden began. Research of historical records took one year, archaeology of the whole site took two years and the restoration one year. Only when the records and archaeology matched could the restoration go ahead, after community consultation and funding from the Prince of Wales (1.5 million pounds).

The whole site was cleared prior to the replanting of the 1702 garden; all the plants were from stock of that lineage including the annuals. It is a parterre garden – all plants are kept under control, annuals are replaced twice yearly and potted specimens are moved regularly. The consequences of higher levels of maintenance were not fully realised so changes to the maintenance program needed to be put into place. They now have garden and building harmony.

Nottingham Trent University

Stephen Dando, Lecturer, School of Animal, Rural and Environmental Science

Nottingham Trent University runs a range of horticultural courses from basic qualifications through to Foundation degrees and finally to Honours degrees. The Foundation degree in Landscape and Heritage Horticulture has a range of pre-entry requirements including relevant school qualifications and/or some previous horticultural study. The course runs for two years with students having a 200 hours work placement requirement to be fulfilled. Specialisations like heritage garden restoration can be covered through a number of modules such as 'Industry Placement', 'Industry Case Study' and 'Landscape and Garden History'. At the end of the course students can be employed in areas like Local Government, with project manager roles for a restoration project or as park managers. Another option at the end of the foundation degree is to take on a further year of study and complete the Honours degree in Environmental Design and Management. Students vary in age from school leavers to mature age people. The course has practical work, assignments and exams as part of its requirements.

Levens Hall

Chris Crowder, Head Gardener

A pele tower was erected on this site in 1250, which has since been incorporated into the property's current mansion. In 1680 Colonel James Grahme expanded the house and planted the original garden, parts of which survive untouched today, including a topiary garden. The unusual shapes of this garden are created from yew trees and are annually pruned by a team of five gardeners. Volunteers and work experience people help to maintain the garden to a suitable standard. Up to 40,000 visitors per year put pressure on the garden, especially the lawns, where a program of renovation including coring keeps them growing well. If a particular plant dies in the garden then Crowder is allowed to replace it with another type, provided the original layout – the backbone of the garden – is maintained. To mark the tercentenary of the garden in 1994 Crowder created, in consultation with the owners, a fountain garden with a pleached lime walk. Other aspects of the garden include herbaceous and annual borders, beech and box hedging, a nuttery, a vegetable garden and a modern propagation facility which keeps Crowder and the team busy throughout the year.

The International Context

Findings

From each place visited the following findings have been created.

Down House *Luxted Road, Downe (London Surrounds)*

As established previously, for a restoration project to occur, historical evidence from two corroborating sources needs to be obtained. Historical evidence combined with archaeological evidence gives the ability to restore the area. Properties have 'layers' due to different owners maintaining the property over time and decisions have to be made as to which period to restore the property to.

Down House considerations:

- Progressive restoration over time, fitting in with current maintenance requirements.
- Authentic restorations influenced by plant death issues. For example Dutch elm disease removed elms from landscapes and they cannot be replaced.
- Staff are hard to obtain due to perception of hard work and a poorly paid occupation.
- Volunteers are used to bridge maintenance requirements; they need to be monitored to ensure quality work.
- Ability to access plants from a particular time period can be difficult.
- Down House is a scientific garden that also needs to be garden-worthy to enable it to attract visitors and funding.
- Most waste generated on-site is recycled and composted.



Restored flower beds

Writtle College *Chelmsford, Essex*

Key findings:

- A list of suitable resources was obtained to assist Thake's teaching in the area of conserving heritage.
- Historic gardens are registered nationally and this controls what is able to be done at each site.

The International Context

- There is a skills shortage in horticulture and an associated challenge of engaging younger people in this field.
- Heritage restoration subjects exist in both the Foundation (two years) and Honours degree (three years).
- Restoration work falls into three categories: major rapid restorations, restorations over time and major restorations due to storm type damage.



Glasshouses and surrounds maintained by students

National Trust *Kemble Drive, Swindon*

Key findings:

- Restoration works are carried out by gardeners on-site.
- Restoration can be as simple as tree replacement through to complex work such as whole garden removal and replacement.
- Prior to restoration, a conservation plan is created then widespread consultation occurs prior to the work commencing.
- Varying past owners of a particular garden exert their influence on the site; this is called the 'layering effect'. The totality of all influences is an important determinate of what is done to the site.
- Funding can come from the National Trust resources or from external sources such as lottery grants.
- Tension occurs between conservation and access to the gardens given the need for visitation (funding).
- There is a need to accept that climate change is occurring, and as such policies must be introduced that shift organisations toward reducing their environmental footprint and improving organic standards.
- Water harvesting, climate proofing and sensitive plant movement are some of the climate change strategies that the National Trust is putting into place.

The International Context



Mike Calnan and Anthony Thake

The Lost Gardens of Heligan *Pentewan St, Austell, Cornwall*

Key findings:

- This was the first recognisable garden restoration project; it began slowly in 1990 and with publicity became much larger.
- Some parts of the garden have experienced little change, such as the woodland areas, while others have become derelict.
- Little 'layering effect' has been experienced with the property as it remained in the one family for 150 years.
- Productive garden growing of heritage varieties from 1900 is in place. The produce is used in the café.
- Brochures guide visitors through the site. Signage is displayed to inform but not intrude on the experience.
- Popularity brings its own challenges.



Productive gardens

The International Context

Royal Botanic Gardens *Kew, Richmond, Surrey (London)*

Key findings:

- The Royal Botanic Gardens run a Diploma in Horticulture, with students being employed by the gardens to work there through the three year course.
- Lecturers for this course are brought in as industry experts.
- The course is highly popular so intense levels of student selection occurs prior to the start of the course. Once students finish the course they are readily able to find work due to the course's reputation.
- Practical standards are being developed allowing assessment of students to take place.
- Restoration projects are done within the gardens providing funding is made available and the plans are approved by English Heritage, as the gardens are a world heritage site.
- The Royal Botanic Gardens' funding is being reduced from the Government. However, costs remain, so there is a need to generate more income from other sources like gate receipts, to survive.
- Apprentice schemes are slowly being reintroduced in the gardens.
- A large glasshouse complex of 21 zones allows maintenance of a vital plant collection.
- The Royal Botanic Gardens is an important worldwide horticultural research facility.



Palm House

Hampton Court *Surrey (London)*

Key findings:

- After an internal fire in the palace it was realised that the outside gardens needed to be of the same time period as inside the palace.
- In the early 1990s at Hampton Court Palace a major restoration project commenced, combining engraving, archaeology and other historical records, allowing the Privy Garden to be completely recreated to the year 1702.
- A restoration plan was created, and then consultation with stakeholders occurred prior to commencement of works.
- Plants sourced for the Privy Garden have a heritage from 1702; however box blight means regular plant replacement is required to keep the garden authentic.
- Once recreated the Privy Garden required higher levels of maintenance, so resources must be found to support this need. This shows that consequences of a restoration plan need to be borne in mind before work commences.

The International Context



Privy Garden

Nottingham Trent University *Brackenhurst, Southwell*

Key findings:

- A heritage restoration subject is part of the Foundation degree in Landscape and Heritage Horticulture.
- This subject area is contained in the modules 'Landscape and Garden History', 'Industry Case Study' and 'Industry Placement'.
- After completing the course of two years students can be employed as a manager of a restoration project within Local Government or employed by the National Trust or a similar body.
- Basic horticulture courses are nationally controlled qualifications.
- Higher level degrees are created within each institute and approved by Government.



Plant identification test

The International Context

Levens Hall *Kendall, Cumbria*

Key findings:

- Levens Hall's garden has been continually maintained for 300 years with little restoration work conducted on the site.
- So long as the basic structure remains then the gardeners can change the detail within.
- Plants required for the garden are produced in the nursery on-site.
- Equipment is generally used when the garden is closed, but this is not always possible. Most visitors do not mind this as they are aware it is part of a working garden.



Topiary garden

Conclusion

As evidenced by the findings, the Fellowship experience provided a valuable opportunity to obtain new knowledge regarding heritage gardening restoration and maintenance.

There is a long history of gardening in the United Kingdom; this creates its own challenges in terms of restorations. Gardening and garden visitation is very popular which can bring pressure to historic gardens. Climate change is starting to have a small effect on gardens – even so, planning is being put in place to adjust to changing circumstances. There is a continuing challenge to recruit, train and retain gardeners to look after these spectacular places.

Knowledge Transfer

Through the Fellowship opportunity Thake has gained valuable insights about how heritage garden maintenance and restoration is carried out in the United Kingdom, including an education aspect. In terms of knowledge transfer the Fellow has already passed on information and experience to various groups:

- Ballarat Horticulture Society – Thake gave a talk to members of this society about heritage garden maintenance and restoration in August 2007 at the Robert Clark Centre in Ballarat for sixty minutes.
- ABC Radio Ballarat – Interview on ‘garden spot’ Wednesday morning for ten minutes about the overseas Fellowship.
- National Horticulture Network meeting – Members from around Australia are involved in teaching horticulture in TAFE from Certificate II to Diploma. Thake gave a talk about heritage garden maintenance and restoration in Adelaide at TAFE South Australia, Urrbrae campus, in October 2007 for sixty minutes.
- Cacti and Succulent Society – Thake gave a talk to members of this society about heritage garden maintenance and restoration in November 2007 at the Robert Clark Centre in Ballarat for sixty minutes.
- Victorian Agriculture and Horticulture Teachers Network – Annual Conference. Sixty TAFE teachers from around Victoria met in Ballarat at the Mt Helen Campus of the University of Ballarat. Thake gave a talk to both networks and horticulture teachers about heritage garden restoration and maintenance for seventy minutes.
- Heritage Week, May 2008 – Thake gave a talk and walk around a heritage garden to members of the public about heritage gardens and maintenance at the School of Mines campus of the University of Ballarat for thirty minutes.
- On a number of occasions in 2007 and 2008 Thake has addressed the Diploma of Ornamental Horticulture students and the Certificate III in Horticulture students in regard to heritage gardens and maintenance at the Ballarat Horticulture Centre, University of Ballarat.

Recommendations

The following observations encapsulate the information that was gained throughout the course of the Fellowship program:

- Gardeners doing restoration work need to be qualified and experienced, as this work brings together a wide range of high level skills and knowledge in areas like plant identification, soils, pests and diseases, weeds, pruning and plant establishment, just to mention a few.
- A wide range of historical research needs to be carried out, creating at least two pieces of evidence that agree with each other, prior to commencing any work.
- Once a conservation plan has been created for a heritage site, widespread consultation with stakeholders needs to be carried out before the restoration is started.
- Even though Australia has a shorter history of gardening compared with the UK, there is still a requirement to maintain and restore heritage gardens.
- In Australia we need to value heritage gardens as part of our history and also need to expend resources to restore and maintain them for the future.
- There is no point in restoring heritage gardens unless resources are allocated to properly maintain these assets.
- 'Layering' of heritage gardens means that subsequent family generations will contribute to the site. This influence needs to be taken into account. It is the sum of these layers that is the most important deciding factor of the restoration work to be carried out.
- Climate change is having an influence on restoration projects. Plant choices that were once relevant in terms of authenticity may now no longer survive in the new environment.
- Garden maintenance can be a form of restoration work. For example, if a plant dies then replacement with another type of plant that fits with the conservation is an option.
- Minimal maintenance for historic gardens is not good for their long term survival. They are easily able to fall into decay and hard to restore to their original condition.
- Restoration projects can be on a grand scale and very dramatic over a short time span or slowly completed and less dramatic over a longer time span, provided there is a conservation plan to follow.
- As Australia becomes more urban, green space within the suburban environment is a more valuable asset. This should lead to a change of priority in the area of garden maintenance, from minimal to whatever is required, and to provide extra funding to restore heritage gardens.
- Garden bed maintenance has been poorly dealt with in the current training package. It is not treated as a competency, but as a sum of other units, like 'Plant Establishment', 'Pruning', 'Weed Control,' 'Plant Identification' etc, to name a few. It is the interaction of all these elements that needs to be separated into its own competency called 'Maintaining Garden Beds'.

The following are recommendations to Government, industry, the business sector, professional associations, education and training providers, our community, and the ISS Institute.

Government

In view of the findings, the Australian Government is encouraged to:

- Place more emphasis on quality gardening skills through changes to the training package for horticulture. Units on garden bed maintenance need to be added from level 2 to level 5. Another change to the training package is to change the heritage restoration competency from just planning to incorporate actual restoration work. The two parts are vitally linked together; things found during the restoration work may change the final outcome, hence to change the restoration plan.

Recommendations

- Demonstrate to industry the value of heritage gardens and to input enough resources to achieve this aim. If these gardens are well maintained then there becomes little need to restore, however gardens are living things that need to be replaced once they are at the end of their useful life. If we minimally maintain these assets then gardens can be lost and are extremely hard to recreate, for example a 100 year old tree.
- Link heritage gardens to heritage buildings in terms of the resources that are expended inside the buildings, compared to the lower priority of funding external areas. A heritage building is a time capsule of a previous era and is kept that way; outside gardens should be treated in the same way.
- Preserve heritage buildings and gardens, and botanic and pleasure gardens – these are continually under threat from development and once lost our link to the past becomes much more tenuous.
- Assist in changing the public perception that trained gardeners are not highly valued. Skills need to be recognised to encourage a highly skilled workforce to look after historical places and should be delivered through appropriate training pathways such as a Master Artisan qualification.

Industry

- The Horticulture Industry is made up of a large number of diverse groups, often small in size, that are not linked together, especially as a lobby group.
- Within the industry anybody can say that they are a professional gardener, however it is a highly skilled and technical area of horticulture.
- The industry needs to recognise that once heritage gardens are lost then they are impossible to replace. We need to expend more resources and value these places more highly; they are snapshots of the past.
- Industry challenges with heritage gardens include the fact that they not static but are a growing environment. Climate change is having an effect on our ability to grow exotic plants, and suitably qualified and experienced staff are harder to find.
- Minimal maintenance of heritage gardens is not a long term solution for these places. Eventually they need to be restored at higher cost if they are to continue into the future.

Business

- The challenge is to convince organisations that heritage gardens are worth expending resources on restoration and maintenance, even though they may not generate income to offset costs.
- Heritage gardens may not generate large amounts of income, however there is an indirect value in terms of tourism (local, interstate and international). People visiting the gardens also stay locally and spend money on meals, accommodation, events such as conferences, weddings, to name a few income generating areas.
- There is a community expectation that heritage gardens will be well maintained, especially as green space is a valuable resource in urban environments.

Professional Associations

- Professional associations in this area are generally small organisations and only represent part of the industry. It is difficult for them to direct influence over areas such as Government policy.

Recommendations

- Professional associations such as the Australian Institute of Architects (Heritage) and the Landscape Industry Association of Australia Inc (LIAA) need to lobby to Government that heritage gardens are deserving of preservation and that we need a highly skilled and trained workforce to carry out maintenance and restoration work.
- These organisations need to convince the community that gardening is a professional occupation and it needs to be valued.

Education and Training

There is a need for education and training organisations to:

- Run short courses for qualified gardeners on heritage restoration planning and works.
- Create links with heritage gardens allowing garden maintenance and restoration work to be carried out on-site.
- Run more short courses on heritage restoration from the Diploma in Ornamental Horticulture.
- Lobby for this course to be included into the National Horticultural Qualifications and for the inclusion of a more 'garden bed maintenance' focus in the training package from AQF level 2 to level 5 (Diploma).
- In terms of universities delivering horticultural degrees, there needs to be a greater emphasis put on heritage gardens and the issues involved.

Community

- Heritage gardens are a vital link to the past as well as being a recreational enclave in our urban environment and should be highly valued by the community.
- Once lost these gardens are impossible to replace, especially in terms of heritage trees.
- Historic parks and gardens reflect the styles, tastes and social mores of past generations. From knot gardens and botanical parks to sweeping 18th century landscaped gardens, Victorian exotica and post-war examples, these parks and gardens traverse the centuries. They are all important and much treasured parts of our heritage and our identity as a people. There is much to be learnt that can be transposed into contemporary settings for our economy and our pleasure.

How ISS Institute can be Involved

The International Specialised Skills Institute has the potential to utilise its many contacts to:

- Attract funding and work with TAFEs to develop and implement training programs.
- Increase the profile of heritage parks and gardens, their importance, their need to be suitably maintained and when necessary to be restored.
- Liaise with the appropriate Industry Skill Councils to integrate the above findings into training packages through the Fellow.

Further Skill Gaps

Another area of investigation could be the history of garden changes over time including past restorations, giving us a chance to evaluate their effectiveness. Other areas could include the impact of climate change on garden restoration including plant selection, water harvesting, and mulching, plus the ongoing skills deficiencies in horticulture.

References

Bibliography

National Trust. *Rooted in History, Studies in Garden Conservation*, The National Trust Enterprises, London, 2001

Journal Article

Sales, J. *Garden Restoration, Past and Present*, The Horticulturalist, volume 4, no. 1, January 1995, pp 2-6

Report

Gardening in the Global Greenhouse, the Impacts of Climate Change on Gardens in the UK, Summary report, 2001

Booklets

Batey, Mavis and Woudstra, Jan. *The Story of the Privy Garden at Hampton Court*, Barn Elms publishing, 1996

Staff of Heligan Gardens Ltd. *The Lost Gardens of Heligan, Handbook and Essential Guide to the Gardens and Wider Estate*, Francis Antony Printing, 2002

Cloutman, P. *Royal Botanic Gardens Kew, Souvenir Guide*, Royal Botanic Gardens Kew Publishing, 2004

Internet Article

Kate Clark. *Conservation plans...a benefit or a burden?*: www.buildingconservation.com/articles/consplans/consolve.htm

Websites

Australia's Open Garden Scheme: <http://www.opengarden.org.au/index.html>

Heritage Act 1995: www.buildingcommission.com.au/resources/documents/Heritage_Act.pdf

Heritage Victoria – for information on heritage gardens and charters: www.heritage.vic.gov.au

ICOMOS – for Venice, Florence and Burra Charters: www.international.icomos.org

The Australian Garden History Society <http://www.gardenhistorysociety.org.au/>

The Australian Institute of Landscape Architect (AILA): <http://www.aila.org.au/>

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.



Heritage
VICTORIA

Conservation Plan Standard Brief March, 2003

PREAMBLE

Heritage Victoria's requirement of a Conservation (Management) Plan is that it should provide clear and justifiable direction for owners and permit issuing authorities in the management of the particular place for which it has been prepared. Clear and justifiable policies and actions should be negotiated during the process of preparing the report.

By justifiable is meant that policy options must be identified and a proper argument made for the policy put forward in the Conservation Plan. In particular a rationale must be given for the determination of the relative significance of the parts of a place.

By negotiated is meant that the policies and actions must be determined through consultation with relevant bodies including the client, owners, tenants, committees of management, relevant community groups, the National Trust, the Local Government Authority and Heritage Victoria.

All relevant statutory requirements must be considered in relation to the future development and use of the place. Where necessary, specialist input other than from conservation architects or historians must be sought, such as from a building surveyors engineer, horticulturalist, landscape architect, materials conservators, archaeologists etc.

Archaeological Issues

The Conservation Plan should identify any archaeological components of the place. The report should outline the level of statutory protection that relates to archaeological sites and should include reference to the Victorian Heritage Inventory.

Any significant archaeological elements of the place should be recognised in the assessment of cultural significance and the Statement of Significance.

The Conservation Policy should identify whether areas of demonstrated archaeological value or archaeological potential will be affected by development proposals. The issues of management, use and interpretation and research should consider a place's significant archaeological content.

Horticultural Issues

It is acknowledged that trees will eventually die and gardens require constant renewal and planting changes will be necessary. This may be due to the growth of trees creating new microenvironments, plant diseases or inappropriate original plantings that are not suited to the environmental conditions. The unavailability of plant species and changes to maintenance and cost considerations may require species substitution.

The following legislation and standards must be considered in relation to future development and use of gardens and landscapes:

AS4373 Pruning of Amenity Trees
Catchment and Land Protection Act 1994.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Code of Practice for Powerline Clearance [Vegetation] 1996.

Building Issues

The requirements of the Building Code of Australia (BCA) must be considered in relation to the future development and use of the place.

EXECUTIVE SUMMARY

This should summarise in one page if possible, the heritage status of the place, its cultural significance, the conservation policy for the place, and the strategy for implementing the policy. It should list the most urgently required conservation works, and give their total cost estimate.

BACKGROUND

It must be stated for whom the conservation plan has been commissioned and by whom it is being funded. Ownership and copyright for the reports must be specified. It should be stated that the aim of the Conservation Plan is to:

- establish the cultural significance of the place
- formulate conservation policy
- prepare a management plan to maintain, and where appropriate, enhance the significance of the facility

HERITAGE STATUS

The report should state whether the place has any current statutory heritage listing, including local government classification. It should also record any non-statutory classification, such as classification by the National Trust.

METHOD

The report should describe the methodology used. In Australia, the Conservation Plan should be prepared in accordance with the Australian ICOMOS Charter for the Conservation of Places of Cultural Significance (Burra Charter) 1999 and its guidelines. Where objects are associated with the place the Conservation Plan should also incorporate the principles of the US APT/AIC New Orleans Charter for the Joint Preservation of Historic Structures and Artifacts.

ASSESSMENT OF CULTURAL SIGNIFICANCE

The conservation plan should set out clearly the reasons for the place's significance, and argue this on the basis of information collected from physical investigation, oral history and documentary information. It should include an historical summary and physical survey of the fabric of the place and set out its developmental sequence and changes to the fabric. The assessment should include consideration of the archaeological values and potential of the site.

The assessment of cultural significance must include a comparative analysis of heritage significance and should discuss the relative significance of the parts of the place, as well as the significance of the place as a whole. The rationale for the determination of relative significance must be given. The assessment should be carried out against the Heritage Council's criteria for the Victorian Heritage Register.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

STATEMENT OF CULTURAL SIGNIFICANCE

The statement of cultural significance should set out concisely the reasons for the place's significance and the reasons for the significance of any component part(s). If a Victorian Heritage Register Statement of Significance already exists this should be used or reasons given for any proposed alternative.

CONSERVATION POLICY

The Conservation Policy should be based on the Statement of Significance for the place and should incorporate recommendations for preservation, restoration, reconstruction, adaptation and interpretation as appropriate. Possible conservation policy options must be discussed and the rationale given for the policy put forward in this Conservation Plan.

The policy should take into account the current condition of the place, current and future user requirements, statutory requirements, community views, locational and social context, potential risks, tourism potential if relevant, and financial resources. It must address the significant areas and elements. A Statement of Conservation Policy should be prepared as set out in the guidelines to the Burra Charter: Conservation Policy. In developing the policy the consultant should have specific regard to the requirements set out in Section 3.2 of the above and must particularly address the following:

Fabric and setting

The conservation policy should identify the most appropriate way of caring for the fabric and setting of the place arising out of the Statement of Significance and other constraints. The physical investigation of the place and the existing condition survey will provide input to this. The physical investigation should include archaeological components of the place. A specific combination of conservation actions should be identified, including any need for the involvement of other specialists (materials conservator, horticulturalist, engineer, etc.). This may or may not include changes to the fabric.

Future development - consideration of functional and statutory requirements

The conservation policy should set guidelines for future developments resulting from changing needs, particularly if there are known functional requirements. It is important to identify any local community issues that may affect the development of the place. If the proposed development of the place is known, any likely community objections to this must be identified. It is also essential to identify statutory constraints on development, including planning controls, access for the disabled, and fire protection. The input of a building surveyor may be required here. It may be necessary to outline a project of archaeological investigation to determine whether any future development is likely to disturb archaeological features of the site.

Environmental risk

This section should identify risks to the place such as fire, flood, earthquake, and propose risk management strategies.

Available resources

This section should identify specialist skills that might be required in the conservation of the place and whether they are locally available; time constraints due to the requirement of specialist skills or the need to import particular materials or elements, or to have an item made to order (for example encaustic tiles from Britain); and funding sources normally available to the place owners/managers.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Use

The conservation policy should identify criteria for determining future use particularly where the place or object has become or is likely to become redundant in its current use, including any constraints deriving from statutory controls. The purpose of this is to encourage feasible uses that are compatible with the retention of significance of the place. Again, it is important to identify any local community issues that may affect the use of the place. If a proposed new use of the place is known, any likely community objections to this must be identified. Again it is essential to identify statutory constraints on future use, including planning controls, access for the disabled, and fire protection.

Interpretation

The conservation policy should identify appropriate ways of making the significance of the place understood consistent with the retention of that significance, should a new use be required. It is necessary to consider any archaeological values that the site may have and how they can contribute to the interpretation of the place.

Management

The conservation policy should describe the management arrangements through which the Conservation Plan will be implemented. In the case of redundant buildings, disused places or objects, the conservation policy should identify the means of providing security and regular maintenance of these.

Further Investigation and Research

The need for specific technical investigation must be identified, together with any need for public consultation or further research into community attitudes.

If the technical investigation requires physical intervention, such as sampling, this should be identified and the degree and nature of the intervention defined. The required analysis of the samples should be specified. Such sampling and testing should be included in the Prioritised Schedule of Works (see Conservation Action below).

Where the need for public consultation or consultation with statutory authorities is identified, the procedures for doing this should be outlined.

Research proposals must be clearly defined, with the objective adequately explained, including how the resulting information is to be disseminated.

Where archaeological excavation is required, the excavation aims and methodology should be outlined. The provisions for the conservation, analysis and storage of significant excavated material must be indicated. The treatment of the place following completion of any physical intervention should be described.

The investigation of designed landscapes should consider the value of archaeological work to determine the location, condition and fabric of sub-surface features. These may include garden beds, pathways or other garden features.

Constraints on Investigation

Any cultural or legal constraints that would limit the accessibility or investigation of the place for the purposes of further research should be identified.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Heritage Permit Exemptions

The conservation policy should contain recommendations for works that could be undertaken without a permit under the Victorian *Heritage Act 1995*, Sections 33, 42 (2) and 66.

CONSERVATION ACTION

The Conservation Plan should contain a management strategy, setting out how the conservation policies can be implemented. This should include:

- Recommendations for the statutory protection of the place, if it is not already registered or listed;
- A prioritised schedule of works containing short and long-term conservation requirements. The level of detail in this schedule should be sufficient to guide more detailed specifications in the case of buildings, but in the case of gardens and archaeological sites may need to be sufficient to be the basis on which quotations are called for the works.
- Sources of financial and technical assistance.

FORMAT

The written report should be typed and spiral bound in an A4 vertical format. In addition to the content outlined above, it should include the title, the name of the client, author, and date on the cover; a list of contents as attached; executive summary; an introduction setting out the information under “BACKGROUND” above; the place’s current heritage status, a list of illustrations and a list of sources and bibliography.

Graphic material should be included as needed to show the chronology of development, areas of primary and contributory significance, and basic existing condition plans with rooms, zones and/or objects numbered for reference purposes.

Photographs, maps and drawings should be of a suitable quality to enable reproduction, and should be provided as necessary to confirm the written report. Drawings should be capable of reduction to A4, and should be provided no larger than A3 size, folded into the report.

In all cases sources of information should be fully documented.

Reports should usually be no more than forty pages in total and may be less. However it is recognised that in some cases where little previous research has been done, this restriction may be too tight. In such cases a summary should be provided in the Conservation Plan, and the main body of the research should be submitted as an appendix in the form of a separate document. Similarly, in the case of large places with many rooms or zones, the record of the physical investigation should be submitted as an appendix in the form of a separate document, with a summary in the body of the main report. Alternatively, the Conservation Analysis and Assessment may form one (Part 1) document, and the Conservation Policy and Action the Part 2 document. Where an existing conservation analysis exists, this should be reviewed and summarised for the Conservation Plan.

The consultant should usually provide two bound copies of the report, and one unbound to enable further copies to be made by the client. One copy is to be submitted to Heritage Victoria.

PERMITS UNDER THE VICTORIAN HERITAGE ACT 1995

The Victorian Heritage Council encourages the use of Conservation Plans. In issuing permits the Executive Director is guided by the Conservation Plan but not bound and discussions should be undertaken with Heritage Victoria before submitting a permit application or proceeding with works.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Contents

A proposed Contents List for the Conservation Plan report is given below. This should be varied as appropriate, but gives the general outline for a standard report.

Executive Summary

1 Introduction

- 1.1 Background
- 1.2 Heritage Status
- 1.3 Method

2. History

- 2.1 Introduction
- 2.2 The Site
- 2.3 The Buildings (landscape, plants, objects etc.)
- 2.4 Use of the Place
- 2.5 Historical Associations
- 2.6 Services
- 2.7 Documented alterations to the Fabric

3. Physical Evidence

- 3.1 Site
- 3.2 Buildings (landscape, plants, archaeological features, objects etc.)
- 3.3 Services
- 3.4 Changes to the Fabric
- 3.5 Areas of archaeological potential

4. Cultural Significance

- 4.1 Analysis
- 4.2 Assessment of Significance
- 4.3 Statement of Significance
- 4.4 Significance of Components (rationale)

5. Conservation Policy

- 5.1 Introduction
- 5.2 General Policy (rationale)
- 5.3 Significant Areas and Elements
- 5.4 Fabric
- 5.5 Setting

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

5.6 Future Development

- Client/owner/tenant requirements
- community constraints
- statutory constraints (Building Control Act, Catchment and Land Protection Act, etc.)

5.7 Environmental Risk

- risks
- risk management strategies

5.8 Available Resources

- specialist skills
- time implications of special needs
- normally available funding sources

5.9 Use

- Client/owner/tenant requirements
- community constraints
- statutory constraints (Building Control Act, Catchment and Land Protection Act, etc.)

5.10 Interpretation

5.11 Management

- Management arrangements
- Security arrangements
- Maintenance regime

5.12 Further Investigation and Research

5.13 Constraints on Investigation

5.14 Heritage Permit Exemptions

6. Condition Assessment

6.1 Summary of condition

6.2 Repair/maintenance/security priorities

- Roof (buildings)
- Stormwater drainage (buildings/structures/gardens/archaeological sites)
- Vermin/termites (buildings/structures/gardens/archaeological sites/shipwrecks/objects)
- Water usage and drought management; weed management (gardens/landscapes)
- Corrosion (buildings/structures/objects/shipwrecks)
- Security

7. Conservation Action

7.1 Statutory Protection

7.2 Prioritised Schedule of Works

7.3 Financial and Technical Assistance

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

List of Illustrations**Sources and Bibliography****Appendices:**

- Detailed Description of Place
- Room/zone/plant/object/archaeological features Surveys
- Existing Condition Survey Report

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

CONTRACT DETAILS

The client for this report is _____.

Services

The client shall supply/ provide the following services _____.

Appointment

The appointment of the consultant shall be upon the recommendation of the Steering Committee. On appointment, the consultant shall provide the Steering Committee with an outline of the proposed method and approach to the study. The outline shall include a schedule of tasks and completion times, persons responsible and proposed reporting times.

Supervision

The consultant will report to a Steering Committee comprising:

- the owner or a representative of the owner;
- a representative of _____.

General administration of the study will be by _____ on behalf of the steering committee.

Budget

The total budget for the Conservation Plan is _____.

Payment

- 10% on commencement of contract;
- 60% on submission of first draft acceptable to the Steering Committee;
- 30% on submission of final draft/ completed conservation plan acceptable to the Steering Committee.

Timing

The required examination of the property is to start no later than _____, with the first draft being completed by _____, and the final draft being completed by _____. The finished Conservation Plan is to be submitted by _____. Any change to this timetable is to be agreed to by the Steering Committee.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Meetings

The consultant shall meet with the Steering Committee on three occasions as follows:

- First meeting, following appointment and prior to commencing examination;
- Second meeting, six weeks after commencement of examination;
- Third meeting, two weeks after submission of the first draft. At this stage _____ copies of the report shall be supplied to the steering committee.

Further meetings may be scheduled with the agreement of both Steering Committee and consultant.

On the agreed date of completion for the conservation plan _____ bound copies of the report including any photographic negatives shall be submitted to the client. One copy must be a master copy with all original documentation and photographs as researched. The master copy is to be unbound and in a condition suitable for reproduction.

Electronic files

A copy of the conservation plan shall be supplied in MS Word version 97 or later, with all diagrams and images supplied in TIFF format on an archival quality CD Rom in accordance with the format details, to the client on the agreed date for completion of the report.

Ownership and copyright

Ownership and copyright of the Conservation Plan including all reports, maps, plans, photographs and the like supplied to the Steering Committee by way of progress, draft, or final report or publication, (including the original of the final report) be vested in _____.

The consultant(s), the _____ shall have a perpetual, free license to use the material for its own purposes at any time in the future.

Acknowledgment

Acknowledgment of assistance from _____, in the production of the Conservation Plan is required and shall take the following form:

The production of the Conservation Plan for _____ was carried out with the assistance of funds made available by _____.

Archival storage

The responsibility for effecting archival storage in accordance with Article 28 of the Burra Charter is held by the client.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

Dismissal

Should progress of the work be considered unsatisfactory, the Steering Committee may recommend the dismissal of the consultant and the appointment of a further consultant to complete the work.

The grounds for dismissal shall only be:

- a) Repeated failure to meet agreed submission dates (or as reasonably extended) provided that such failure not be the fault of the Steering Committee;

and/or;

- b) Deliberate failure to undertake the work (or portions of it) as agreed to on appointment, or during the progress of the brief.

Changes to brief

Where it becomes clear that some aspect of the task will require more investigation or more expertise than has been allowed within the budget or the terms of the agreement, the practitioner shall advise the client immediately

Insurance

The consultant shall be fully responsible for obtaining all necessary insurances.

Attachments

Attachment 1: Heritage Victoria Conservation Management Plan Brief March 2003.

