



AILA NSW LANDSCAPE HERITAGE REPORT • VOLUMES 1 & 2

TEN STATE HERITAGE REGISTER NOMINATIONS

CASE STUDY: SYDNEY HARBOUR

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AILA (NSW) Landscape Heritage Conservation Listing Project



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Australian Institute of
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Executive Summary

The landscapes of Australia are integral to our national identity. Cultural landscapes are all around us and reflect human relationships with the landscape. They tell us about our history and the values of our predecessors. They comprise a complex of geophysical landscapes derived from natural systems interwoven with cultural use and values. Yet in heritage terms, they are the most challenging to interpret and manage, often because of the large area they cover.

Many of these landscapes have been lost, particularly as development occurs, or their heritage integrity is severely compromised. One of the many issues eroding heritage landscapes and their management is the difficulty of coordinating multiple ownerships to retain a landscape's significance.

A major shift in thinking is required to recognise that landscapes themselves are an essential component of cultural heritage in addition to individually significant trees, buildings, gardens and archaeological sites, which are elements within the cultural landscape. The NSW Office of Environment and Heritage now advocates for a change in the management of landscapes from a site-based approach to a landscape approach and have implemented this in the National Parks of NSW.¹ This approach recognises the landscape-scale of history and connectivity between people, places and heritage items – the continuity of past and present. Culture and nature are interconnected. We have found, however, applying this philosophical shift to the State Heritage Register listing of cultural landscapes is less straightforward.

The principal aims of the study are to build awareness of landscape heritage issues for the AILA membership and to develop a foundation approach to identifying significant landscapes. This is the first project for the Australian Institute of Landscape Architects (AILA) NSW in an endeavour to redress the lack of landscapes listed as heritage on the State Heritage Register (SHR). The study is the first step

¹ www.environment.nsw.gov.au/chresearch/ResearchThemeCulturalLandscapes.htm

towards an ongoing program by AILA NSW to identify cultural landscapes and landscape conservation areas, which should be nominated for listing on the SHR.

An aim for the project was to articulate an approach to the identification, assessment and conservation of significant cultural landscapes and landscape conservation areas. The study is also intended to redress the gap found in local and state heritage listings, which have an imbalance towards architectural and built items and little recognition for landscapes. A third outcome was to initiate a non-statutory database of significant landscapes for AILA NSW as well as a bibliography of cultural landscape references.

In accepting the Heritage Council grant AILA NSW was challenged with the complexities associated with listing cultural landscapes, the agreed outcome being ten nominations for the SHR. This required the AILA NSW study team to work within the existing heritage assessment methods and identify nuances within them to influence good, most effective landscape heritage outcomes. To do this it was necessary to embrace the principles of the Burra Charter, the Heritage Council NSW SHR criteria and those associated processes supported by the Heritage ACT 1977. Although it appears that the SHR criteria for nominations do not necessarily fit with the core approach of the landscape architectural profession, the process is adaptable and accommodates the physical attributes and sense of place of landscapes. The study team formulated a 'big picture' apparatus inclusive of the SHR criteria, with a landscape lens to capture the values, language, and qualities of landscape heritage significance.

Landscape conservation areas, heritage curtilages, and the possibilities of expanded curtilages to capture viewsheds intrinsic to the significance of a place beyond property boundaries were found to be central to the argument for listing and conserving large cultural landscapes.

The team identified the bioregions of Australia and NSW and catchments as the natural systems basis to understand the human response to landscape. The study area was narrowed to the Sydney Basin bioregion. A high priority was to include

places where there is a confluence of Aboriginal and European values and another priority was to recognise the work of Australian landscape architects. A further consideration was to seek input from the AILA membership to find out which landscapes they considered significant. Although the Royal National Park, on the National Heritage List, was immediately identified as an omission from the State Heritage Register, the primary focus was narrowed to Sydney Harbour:

The harbour is more than a jewel – it is Sydney’s heart. Framing the waters of Sydney Harbour are its headlands and islands, bays and beaches. These special places contain a wealth of heritage resulting from the custodianship of Aboriginal people and the early phases of the harbour’s development for maritime industries, quarantine, defence and recreation. The resilience of nature and the survival of this rich heritage in such close proximity to the city is truly inspiring.²

The entire Harbour is a significant cultural landscape and the members of AILA’s Heritage Group are of the opinion that the entire area should be listed as a significant cultural landscape on the State Heritage Register. However, achieving such a complex SHR listing was considered as not practical by the Study team within the allocated time frame. Although there is little doubt that what is required is a **whole** of landscape approach, not just parts of it selected for listing, this has been a challenge to achieve within a short time frame.

The vision for the project was to outline a landscape heritage assessment method to conserve the ‘green necklace’ of Sydney Harbour as a significant cultural landscape.

The ‘green necklace’, a series of parks, government institutions and Crown land, fragments of open space and revegetated bushland, around the Sydney Harbour foreshore, was perceived as coming under increasing pressure as Sydney’s

² NSW Office of Environment and Heritage, Plan of Management Sydney Harbour National Park, December 2012, Sydney, Foreword

population grows. Those landscapes, which are not already part of the State Heritage Register and excluding Sydney Harbour National Park, were identified as a priority for AILA nominations. As the study's 'gap' analysis of the State Heritage Register and LGA Heritage Schedules progressed, the priority shifted to land to the west of the Sydney Harbour Bridge where foreshore land was historically linked to the 'working Harbour.' An outcome of the study was the generation of an AILA 'green necklace' database of important Sydney Harbour landscapes (Figure 1).

The big picture for the project is that it provides a process for landscape architects to establish 'why' a place is of state heritage significance through a methodology to identify and assess significant cultural landscapes values that may lead to a SHR nomination. The study began with an examination of the Sydney Basin Bioregion and then focused on Sydney Harbour as a case study. Although there is no proposed listing for the entire harbour, it generates a nucleus of nominated places around headlands and the water plane that connect its northern and southern shores.

Landscape nominations for the State Heritage Register

The nominations (see below), carefully selected, collectively represents a variety of approaches and strategies. Nomination 1, although Nationally listed is not on the SHR and is located as the first nomination to reflect the broader Sydney Basin. Nominations 2-7 are significant components in a highly threatened cultural landscape. Potentially, they will make a substantial contribution to the 'green necklace', a further consolidation towards the conservation of the Sydney Harbour foreshores and its natural and cultural significance particularly Aboriginal significance. Nomination 2 is the least modified landscape. Nominations 9 and 10 are precious fragments of early Sydney and first European responses to the Australian landscape. Nomination 8, links to the 'green necklace' but is also one of several care institutions / health sites under threat. The scale and intactness of this place and its representative qualities are worthy of consideration.

The ordering of the nominations is discussed in Section 7.2

1	Greater Royal National Park
2	Berry Island Reserve
3	Wollstonecraft Foreshore Reserves
4	Balls Head Reserve
5	Berrys Bay Precinct (Carradah Park)
6	Ballast Point Park
7	Yurulbin
8	Gladesville Hospital Landscape
9	Lang Park
10	Elizabeth Bay House and Landscape Setting

Conclusion

Further work is required to implement a *whole of landscape approach* to the listing of cultural landscapes, particularly landscape conservation areas. Community and owner engagement with the process in larger areas would ensure the sensitive conservation and management of the heritage values of cultural landscapes.

Table of Figures

No. Title

Volume 1

- Figure 1: Sydney Harbour, 'green necklace': mapping of current green space surrounding the harbour, MHQ, February 2018
- Figure 2: Map of NSW bioregions.
- Figure 3: Map of New South Wales River Systems.
- Figure 4: Map of Sydney Basin Biogeographical Region (IBRA).
- Figure 5: Detail of Aboriginal Australia Map, illustrating a reconstruction of Aboriginal groups in the vicinity of Sydney by David R. Horton, 1996.
- Figure 6: Map illustration reconstruction of vegetation communities ca.1788.
- Figure 7: Map of Port Jackson's drainage catchment – geology.
- Figure 8: Map of Port Jackson's drainage catchment – remnant vegetation.
- Figure 9: Map of Port Jackson's drainage catchment – harbour and riverine spaces.
- Figure 10: Image of Balls Head rock shelter, general view from east.
- Figure 11: Plan of 'Places around Port Jackson and Botany Bay with recorded Aboriginal names from historical sources'.
- Figure 12: Detail from 'Places around Port Jackson and Botany Bay with recorded Aboriginal names from historical sources'.
- Figure 13: Sketch of New South Wales settlements 20 August 1796 by Governor Hunter.
- Figure 14: A map of the County of Cumberland in the Colony of New South Wales in 1840, compiled by W H Wells, a land surveyor, which shows the extent of the alienation of land.
- Figure 15: Map of County of Cumberland Planning Scheme 1948
http://www.dictionaryofsydney.org/entry/county_of_cumberland_planning_scheme; Sydney Regional Outline Plan
- Figure 16: Heritage map within the Strategic Foreshore map of Sydney Harbour REP.
<http://www.planning.nsw.gov.au/~media/Files/DPE/Maps/map-sheet-1-heritage-map-2005.ashx>
- Figure 17: Map of Sydney Harbour Landscape Conservation Area - the red line forms the boundary of the National Trust Sydney Harbour Landscape Conservation Area listing.
- Figure 18: Map of the World Heritage Listing buffer zone for Sydney Opera House
- Figure 19: Map of Scenic Protection Zones for Manly and Mosman LGAs
- Figure 20: Curtilage map (v3) for proposed State Heritage Register listing of Brett Whiteley House and Visual Curtilage.

Figure 21: Capture from the NSW Planning Portal for the LEP review, The State Heritage Landscape Conservation Area, outlined and hatched in blue, for the site, extends over a portion of Tarban Creek and its broader waterway.

Figure 22 Map of Sydney Harbour, SHR nominations AILA NSW: Visual Catchments, by MHQ

Volume 2

Figure 23: The AIATSIS Map of Indigenous Australia, illustrating a reconstruction of Aboriginal groups in the vicinity of Sydney by David R. Horton, 1996.

Figure 24: The Interim Biogeographical Regionalisation for Australia (IBRA) Version 7. The arrow indicates the Sydney Basin bioregion (purple tone).

Figure 25: Australian Hydrological Geospatial Fabric (Geofabric) Describes drainage divisions and river basins.

Figure 26: Map of New South Wales annotated to demark the 15 regions identified by Finn Thorvaldson.

Figure 27: Finn Thorvaldson's Characteristic Landscapes and Visual Landscape Regions:
1 - 4 Coastal; 5 - 9 eastern uplands; 10 - 15 western lowlands

Figure 28: The Penrith 1:100 000 Geological Sheet 9030 (1991) and Sydney 1:100 000 Geological Sheet 9130 (1983).

Figure 29: Overlay diagram: Aboriginal clan lands / Visual regions by Finn Thorvaldson and the bio regions of NSW.

Figure 30: A snapshot of the BETA Planning viewer / NSW Planning Portal, 2016.

Figure 31: Map of New South Wales with the LGAs outlined in pink, as of April 2016.

Figure 32: Screen shot December 2015 - from a preliminary search of Campbelltown LGA website for - schedule 5 (s5) environmental heritage that highlighted the protection afforded by listing was being reassessed and possibly removed.

Figure 33: Screen shot early 2016 - of Campbelltown LGA - schedule 5 (s5) environmental heritage indicated all protection was removed.

Figure 34: Map indicating the LGA boundaries of the Sydney Metropolitan areas as of April 2016.

Figure 35: Portion of the first desktop review of the s5 for Mosman LEP 2012, April 2016.

Figure 36: Map of Sydney Harbour National Park.

Table of Contents

Executive Summary	3
VOLUME ONE	14
1 Introduction.....	14
1.1 Background.....	14
1.2 Purpose and Requirements of the Brief.....	14
1.3 Approach.....	16
1.4 Study Limitations	16
1.5 Report Structure	17
1.6 Authorship	18
1.7 Acknowledgements	18
1.8 Naming Protocols.....	18
1.9 Terminology	19
Article 1. Definitions	19
1.10 Report outline.....	22
1.11 Vision.....	23
2 What are cultural landscapes?	24
2.1 Introduction.....	24
2.2 Definitions.....	24
2.3 Overview.....	25
3 Cultural landscape assessment criteria.....	27
3.1 Introduction.....	27
3.2 The development of criteria for cultural landscape assessment.....	27
3.3 Application to AILA cultural landscape study	29
4 Methodology	30
4.1 Introduction.....	30
4.2 Method summary	30
4.3 The collection and analysis of available data and research material	30
4.4 Refinement of the assessment methodology.....	31
4.5 Application of the study methodology	34
4.6 Desktop review of LGAs in Sydney Harbour catchment	35
4.7 Final refinement of the heritage study focus	36
4.8 Comparative studies and databases	38
4.9 Emerging frameworks.....	38
5 Landscape Context.....	40

5.1	Introduction.....	40
5.2	NSW Bioregions and catchments.....	40
5.3	The Sydney Basin Bioregion.....	41
5.4	Historic overview - Study Area.....	44
6	Opportunities	86
6.1	Introduction.....	86
6.2	Sydney Harbour World Heritage nomination	86
6.3	National Trust Sydney Harbour Landscape Conservation Area listing	88
6.4	Sydney Harbour and its Tributaries, s.170 Maritime NSW SHR nomination... ..	88
6.5	Scenic Protection Land.....	88
6.6	AILA SHR nomination.....	90
7	Conclusions and Recommendations	97
7.1	Key Conclusions.....	97
7.2	SHR Nomination Selection.....	98
8	Recommendations	99
8.1	Proposed SHR nominations	99
8.2	Further Recommendations	99
8.3	Future Studies.....	100
9	Bibliography	101
VOLUME 2		115
APPENDIX A Development of AILA landscape heritage assessment method		115
	Introduction	115
1	Landscape heritage assessment – existing models to identify tangible and intangible landscape heritage aspects of place.....	115
2	Aesthetic Assessment of Cultural Landscapes.....	119
3	The foundation documents of the AILA method.....	122
APPENDIX B Landscape Heritage Assessment Methodology		135
	Refinement of the Heritage Study methodology	135
	Desktop review of LGAs in Sydney Harbour catchment.....	139
	Desktop review conclusion	150
	The development of the AILA custom database.....	150
	Landscape Heritage Lens (AILA NSW Non-statutory database of landscapes)	151
	OEH heritage data form and landscape nomination.....	151
	Workshops.....	152
APPENDIX C Statement of Tuhbowgule Nangamay		153

APPENDIX D Statutory authorities and legislation governing Port Jackson, specifically Sydney Harbour and Parramatta River.	154
APPENDIX E What is the process of a Desktop review?	157
APPENDIX F Lessons from the Colonial Cultural Landscapes of the Cumberland Plain and Camden and other Studies.....	159
APPENDIX G Extract from Colonial Cultural Landscapes of the Cumberland Plain and Camden by Colleen Morris and Geoffrey Britton.....	163
Preamble.....	163
The First Land Grants.....	163
APPENDIX H National Trust of Australia (NSW) Register	191
APPENDIX I List of Significant Landscape Design including some people of importance of New South Wales by Craig Burton	198

VOLUME ONE

1 Introduction

1.1 Background

The Australian Institute of Landscape Architects NSW (AILA NSW) engaged heritage consultants MHQ to prepare a study to identify ten state significant landscapes for nomination on the NSW State Heritage Register (SHR). The study, funded by the NSW Heritage Grants program (OEH), has been guided by AILA NSW Chapter, Landscape Heritage Group (ALHG).

The principal aims of the study were to build awareness of landscape heritage issues for the AILA membership and to develop a foundation approach to identifying significant landscapes suitable for conservation. A pro-active action by AILA to initiate the study arose from pressures for urban expansion and recent planning decisions in favour of extensive urban growth. This planning approach has placed many listed and unlisted significant natural and cultural landscapes at risk.

1.2 Purpose and Requirements of the Brief

AILA's initiative represents a significant contribution to the field of landscape heritage conservation in NSW in collaboration with OEH, with valuable benefits for the community. It is proposed as a model of excellence within the profession of landscape architecture.

The report aims to be pragmatic, feasible and useful for future studies.

The study, with its landscape approach, presented an opportunity for AILA to take a leadership role in the conservation of landscape heritage within the heritage profession. It provides tangible evidence, and recognition, of landscape architecture as a contributing discipline within the heritage conservation field; particularly in the identification, assessment and the processes of listing state heritage landscape places onto the SHR.

The study redresses the gap found in local and state heritage listings, identified as having a bias towards architectural and built items and little recognition of landscape places. The nominations, while based on the NSW State Heritage Criteria, use a landscape lens developed for the study to emphasize, natural and cultural landscape conservation values, threatened landscapes, and landscapes which have characteristics and aesthetics drawn from visual analysis. The recognition of community values and cultural landscape diversity are fundamental to the study.

The project aims to identify significant cultural landscapes. It addresses heritage conservation areas, heritage curtilages and contributory items that may be suitable for listing on the State Heritage Register. This has been achieved with the assistance of the AILA NSW membership.

The study scope of works includes:

- Research and review existing landscape listings and databases in state and local government registers;
- Review landscape reports, academic papers, planning and landscape studies including the list of reports and papers provided by ALHG;
- Develop a methodology – ‘a landscape lens’ – for this study;
- Investigate a broad range of landscapes including those associated with Aboriginal interaction with the land, geological and geographical influences, threatened ecosystems, cultural plantings, visual corridors and potential heritage curtilages for cultural landscapes;
- Using the landscape lens identify up to 20 significant landscapes/sites for listing, focusing on sites in the Sydney Region. This focus was determined in consultation with the ALHG committee;

1.2.1 Consult with the ALHG to prepare 10 nominations to the Heritage Division from the shortlist of 20 sites; and

1.2.2 Prepare a robust case for each nominated landscape/site to be listed on the SHR.

1.3 Approach

The study adopted a holistic analytical approach to the Australian landscape and particularly New South Wales. Bioregions and catchments of specific landscape character were used as a foundation to understand the human response to landscape. Pertinent research into Aboriginal sites within NSW was reviewed with an emphasis on those Aboriginal and European places which demonstrate continuous human use. European land use and first responses to catchments were examined. Based on the scope, the study focused on the Sydney Basin and, in particular, Sydney Harbour and Parramatta River.

During the project, relevant research material was compiled into a library for easy access and analysis. The methodology of the study, critical to its success, was refined to capture significant landscape places. Further sites were also identified by the AILA NSW membership. Sites were collected onto a database according to bioregions and 'a whole of catchment' method (refer 1.10.2), some were highlighted for potential SHR nomination.

1.4 Study Limitations

No major difficulties were experienced, however, being AILA's first study for OEH the development of its methodology has been challenging and taken considerable time to test and finesse. As discussed above, the approach proposed was more complex than many previous cultural landscape studies.

MHQ discussed with OEH officer, Tanya Koeneman, the potential for a serial listing of rock art sites. The team understood that an 18-month lead time might be required to allow for consultation with relevant Local Aboriginal Land Councils prior to a nomination being prepared. This probable lead-time, and the restriction of a 2-year study program, precluded a full investigation into this nomination - though preliminary work has been commenced.

In initial meetings with the Heritage Division listing team, the difficulty of translating a cultural landscape listing nomination that crosses multiple property boundaries into a SHR listing was discussed. The experience from an earlier study of the *Colonial*

Cultural Landscapes of the Cumberland Plain and Camden 2000 was raised (Volume 2, Appendix F and G), in which, one exceptionally significant colonial landscape: Pitt Town Bottoms, comprising a line of contiguous early land grants on flood prone land (therefore not developable land), is still not SHR listed 17 years later. Negotiations with multiple owners proved to be a highly complex and lengthy process, which was not suitable to the timeframe of the study.

Another limitation has been that over the course of the study the status of LGA council boundaries changed with the amalgamation plan initiated by the NSW State Government. Some councils have merged while others remain in flux.

A final limitation occurred due to a computer glitch on the Heritage Division's SHR database website. Numerous heritage items were shown as newly listed on the SHR when in fact they were not. This issue, though it lasted briefly, overlapped with MHQ's desktop review of heritage schedules specifically that for Auburn Council. Potential sites, listed incorrectly, therefore were not considered for the shortlist of 20 sites. The problem was identified too late in the study process to be rectified.

1.5 Report Structure

Volume one: AILA NSW Landscape Heritage Report and Case Study: Sydney Harbour;

Volume two: Appendices A – I;

Volume three: the 10 nominations;

Volume four: the 'green necklace' database for Sydney Harbour.

1.6 Authorship

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1.7 Acknowledgements

Members of ALHG: D. Matthew Taylor (Chair), Dr Helen Armstrong AM Professor-Emeritus in Landscape Architecture QUT, Craig Burton, Oi Choong and Annabel Murray.

Heritage Officers of OEH: Stuart Read, Christina Kanellaki Lowe, Mary Anne Hamilton, Dr Siobhan Lavelle OAM, Tanya Koeneman, Stewart Watters, Susan Duyker, Lucy Hampton and Katrina Stankowski.

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Aboriginal Heritage Office staff: Phil Hunt.

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All those who supported and assisted the project.

1.8 Naming Protocols

AILA Australian Institute of Landscape Architects

AILA NSW AILA New South Wales State Chapter

ALHG AILA NSW Chapter, Landscape Heritage Group

OEH Office of Environment and Heritage, NSW State Government

SHR State Heritage Register

SHI State Heritage Inventory

LEP s.5 Local Environment Plan, Environmental Heritage schedule 5

1.9 Terminology

The terminology used throughout the report is defined in Article 1 of the Burra Charter,³ particularly terms such as place, cultural significance, fabric, conservation, maintenance, preservation, restoration, reconstruction, adaptation, compatible and use.

1.9.1 Burra Charter Articles relevant to the study

All Articles outlined in the Burra Charter 2013 are relevant to the study. Some definitions and conservation principles have been highlighted for their landscape emphasis. Explanatory notes have been included where pertinent.

Article 1. Definitions

Place: means a geographically defined area. It may include elements, **objects**, spaces and views. Place **may** have tangible and intangible dimensions (explanatory note) Place has a broad scope and includes natural and cultural features. Place can be large or small: for example, a memorial, a tree, an individual building or group of buildings, the location of an historical event, an urban area or town, a cultural landscape, a garden, an industrial plant, a shipwreck, a site with in situ remains, a stone arrangement, a road or travel route, a community meeting place, a site with spiritual or religious connections.

Setting: means the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character. ⁴

Article 8. Conservation Principles

Setting: Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.⁵

³ The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

⁴ Australia ICOMOS Burra Charter, 2013, pp.2-3.

⁵ Australia ICOMOS Burra Charter, 2013, p.9.

1.9.2 Significant landscape terms in the report

AILA NSW landscape heritage database: also known as the Landscape Lens AILA NSW Non-statutory Database (LLANND) is a dynamic catalogue of significant landscape heritage places, managed by AILA NSW, as a tool to assist the community and heritage managers to achieve good landscape heritage outcomes.

Good landscape heritage outcome: means a successful change that respects and responds to the defined landscape heritage values of a place with an acceptable impact and a clear benefit to the heritage item.

Item: means a statutory or non-statutory listed 'place, building, work, relic, moveable object or precinct'.⁶

Heritage curtilage: 'the area of land (including land covered by water) surrounding an item or area of heritage significance', it applies to both:

- 'Land which is integral to the heritage significance of items of the built heritage,
- a precinct which includes buildings, works, relics, trees or places and their setting'.
- Heritage curtilage in regards items on the State Heritage Register relates specifically to the item's property boundary.

Heritage Conservation Area (HCA): A statutory listed heritage precinct or item that protects a cultural landscape, that is more than its 'collection of individual heritage items'. It is an area in which 'the historical origins and relationships between the various elements create a sense of place that is worth keeping.'⁷

Landscape Conservation Area (LCA): A statutory listed or non-statutory heritage listed precinct or item that protects a cultural landscape; an area shaped by the ongoing relationship between people and the environment. It's historical layers of human response to catchments, landforms, geology and soil, ridgelines, creeks and rivers, ecological patterns and natural processes, and to the sensory, visual and spatial qualities of these, tell the story of human interaction with the land over time.

⁶ Heritage Act 1977 No 136

<http://www.legislation.nsw.gov.au/#/view/act/1977/136/part1/sec4>

⁷ Heritage Office and Department of Urban Affairs and Planning, NSW, Conservation Areas, guidelines for managing change in heritage conservation areas, 1996.

Drainage catchment, landscape catchment or catchment: a natural system of water runoff over a landform, of swales, creeks and rivers, that typically flows from highpoints such as ridgelines, down slopes, to the lowest points in the landscape. In its broadest sense, it includes all other interrelated natural and ecological systems.

Landscape lens: the landscape approach adopted by the study as an apparatus for the focused identification of potential places of landscape heritage significance.

Landscape planning: the evaluation of large scale tracts, using natural science research, together with cultural and geographical assessments, to manage and conserve big picture landscapes. Broadscale landscape design principles and guidelines synthesize this data according to land use, and ecological systems such as drainage systems, riparian corridors, and greenways.⁸

The report: the background paper documenting the historical overview, the process of engagement and the development of a methodology to support the AILA NSW nomination of ten places to the State Heritage Register (SHR).

Scenic protection area: mapped foreshore areas, zoned by council that protect visual aesthetic amenity and, in the case of Sydney Harbour, views to and from Sydney Harbour, the Pacific Ocean and the foreshores. These zones were largely disbanded with the standardisation of LEPs in 2012.

The study: the overarching mechanism that demonstrates a big picture approach for identifying, analyzing and listing landscape heritage places on statutory and non-statutory databases for the purposes of conservation.

1788: what was observed at 1788 by Europeans, 'also shorthand for the beliefs and actions of Aboriginal people at the time of first contact.'⁹

Whole of Landscape Approach: see Landscape planning. The landscape scale of cultural heritage is similar to 'whole-of-landscape' in ecosystem conservation; just as there is connectivity between all parts of ecosystems (e.g., plants, animals, soils and water) there is connectivity between cultural objects and places through past human behaviour patterns (e.g., the homesteads, shearing sheds, camps, stockyards, paddocks, mustering routes and ground tanks in a pastoral landscape).¹⁰

⁸ Hay, Christine, *The Governor's Gift, Phillip's Landscape Vision*, 2015.

⁹ Gammage, Bill, *The Biggest Estate on Earth, How Aborigines Made Australia*, Allen & Unwin: Sydney, 2011, p xviii.

¹⁰ <http://www.environment.nsw.gov.au/chresearch/culturallandscapesguide.htm>

Viewshed: see *visual catchment*

Visual catchment: the full visible extent of area or landscape, that can be observed from one, or multiple vantage points, usually from a catchment highpoint or ridgeline, intrinsic to the significance of a place.

1.9.3 Geographic terms

Port Jackson: includes the waterways of Sydney Harbour, Middle Harbour and North Harbour, and The Sound, the port's mouth between South and North Head. It extends upstream to Cockatoo Island, where the Parramatta River ends. Its major tributaries include Parramatta River, Lane Cove River and Middle Harbour Creek.¹¹

Sydney Basin: a major structural basin containing a thick Permian-Triassic (290 Ma - 200 Ma (million years old) sedimentary sequence that is part of the much larger Sydney-Gunnedah-Bowen Basin. This extends all the way from Durras Lake (near Batemans Bay), in the south of New South Wales, north to Bowen (just south of Townsville) in Queensland; a distance of several thousand kilometres. The Sydney Basin is economically important as it contains all the known large coal-fields in New South Wales and Queensland.¹²

1.10 Report outline

The study that follows begins with a question, what are cultural landscapes? It is followed in chapter two by a review of current methods for assessing their heritage significance. These background chapters are an introduction to our own methodology and to the particular assessment method resulting from this study. Further detail regarding the development of the methodology is found in Volume two of the report. Volume one importantly outlines the contextual history for the study which supports the historical values outlined in the ten nominations. Conclusions and recommendations synthesised from the study process are outlined in its final section. Volume 3 contains the 10 nominations proposed for the SHR.

¹¹ Attenbrow, Val, *Sydney's Aboriginal Past, Investigating the archaeological and historical records*, UNSW Press, Sydney, second edition, 2010, pxiii.

¹² <http://australianmuseum.net.au/the-sydney-basin>, downloaded 10/11/2016.

Volume 4 is the 'green necklace' database of landscapes within the Port Jackson catchment generated by the methodology formed for the study.

1.11 Vision

The vision for the project is to articulate an approach to the identification, assessment and conservation of significant cultural landscapes and landscape conservation areas.

Although urban design has grown to be an important strength of the landscape profession, its 'placemaking' emphasis often modifies cultural landscapes and the ideas that formed them. The vision of the study is to strengthen the awareness and advocacy for cultural landscape conservation within the profession and broader community.

2 What are cultural landscapes?

2.1 Introduction

Cultural landscapes are all around us and they reflect human relationships with the landscape. They can tell us about our history and the values of our predecessors. It is important that we learn to interpret cultural landscapes as living history and as part of our national identity.¹³

2.2 Definitions

The simple and broadly accepted definition is that cultural landscapes are the result of the interaction of humans with their environment over many years. Dr Jane Lennon AM, specialist in the assessment of cultural landscapes, defines what this means in Australia:

*Cultural landscapes are physical areas with natural features modified by human activity resulting in patterns of evidence layered in the landscape. These layers, along with the natural features, give a place its distinctive spatial, historical, aesthetic, symbolic and memorable character. Australian cultural landscapes range from the designed landscapes of public gardens and private estates to public lands reserved as national parks or conservation reserves, and rural farmlands and Aboriginal lands.*¹⁴

ICOMOS International Scientific Committee on Cultural Landscapes and Routes designates three major categories of cultural landscapes:

- i) **Designed landscapes**, those that are created intentionally such as gardens, parks, garden suburbs, city landscapes, ornamental lakes, water storages or campuses.
- ii) **Evolved landscapes**, those that display a system of evolved landuse in their form and features. They may be 'relict' such as former mining or rural

¹³ Ken Taylor and Landscan Pty Ltd, 'Historic, Cultural Landscape Assessment for Wingecarribee Shire, NSW,' February 1992 with Supplementary Report, September 1993

¹⁴ Jane Lennon 'Cultural Landscape Management Practice, Some Australian Case Studies', Ken Taylor, Archer St Clair and Nora J. Mitchell, *Conserving Cultural Landscapes, Challenges and Directions*, Routledge, London, 2015, p. 219.

landscapes. They may be 'continuing' such as modern active farms, vineyards, plantations or mines.

iii) **Associative landscapes**, that are landscapes or landscape features that represent religious, artistic, sacred or other cultural associations to individuals or communities.

It is noted that a cultural landscape may represent more than one of these three groups and it is important to recognize the evolving inter-relationships between past ecosystems, history and cultures. Cultural landscapes can provide the framework for understanding all heritage items within a particular landscape catchment.

2.3 Overview

2.3.1 A recent paper by eminent landscape architect and research scholar Dr Helen Armstrong AM Professor-Emeritus in Landscape Architecture QUT ¹⁵ outlined the gradual awakening to heritage in a global context and the formation of ICOMOS in 1965:

Developments such as high rise towers in older cities and the impact of highways and industrial infrastructure in rural areas continued to cause concern. By 1968, UNESCO responded to this by broadening concepts of heritage places to include settings of monuments and historic buildings. Thus by the 1970s heritage places were seen as rare and inspiring monuments, historic buildings and antiquities; all located within sufficient setting to sustain their sense of history.

2.3.2 At the same time, United Nations called for a World Heritage Trust because of the damaging impacts on nature and scenic areas due to large scale industrial development. This resulted in the International Union for Conservation of Nature (IUCN) in 1968. Both the ICOMOS and the IUCN proposals were presented to a United Nations conference in Stockholm in 1972. Concern was expressed about the two separate proposals, as a result

¹⁵ Armstrong, Helen (2014) Tongji Lecture Series, Lecture 1 'Shifting Concepts of Landscape as Heritage', delivered in November 2014, WHITRAP Centre, Tongji University, Shanghai, China

they were combined into a single proposal for the Convention concerning the Protection of the World Cultural and Natural Heritage. This tended to result in heritage landscapes being mainly considered as scenic or natural areas; cultural landscapes were not considered as heritage until a decade later.

2.3.3 Historically in Australia the evaluation of landscapes as nature conservation has predominated and cultural values in landscapes have not been widely appreciated. Often there has been a program of removing evidence of human interaction with the land to return it to a more 'natural' landscape, as demonstrated by past management practices within national parks. Aboriginal heritage value is commonly assessed separately from European values.

2.3.4 It is now accepted by practitioners in cultural landscape assessment that all Australian landscapes might be considered to be cultural landscapes due to the millennia of Aboriginal interaction with the land. This report aims to broaden the understanding that Australia is a patchwork of cultural landscape bioregions and catchments. Often the natural systems of the land underlie how humans, both Aboriginal and European, have interacted with it and have a direct relationship with the significance of that landscape. Dr. Steve Brown, a specialist in the management of heritage landscapes, states: "The interactions between people and landscape are complex, multi-layered and are distinctive to each space and time."¹⁶

¹⁶ Steve Brown, 'Landscaping heritage: toward an operational cultural landscape approach for protected areas in New South Wales,' *Australasian Historical Archaeology* 25, 2007, p. 35.

3 Cultural landscape assessment criteria

3.1 Introduction

The accepted overarching heritage values adopted by the ICOMOS IFLA International Scientific Committee on Cultural Landscapes in the evaluation of landscapes are broadly described as historic, aesthetic, scientific and social. Scientific values include natural and environmental values. Spiritual values are also often associated with cultural landscapes. For the sake of a consistent language, these terms have been adopted in this AILA approach.

However, there are subtleties that require addressing in the application of these broad terms. Often, these terms have been associated with the assessment of historic rural landscapes, rather than landscapes in general. Historically in Australia, these terms have not been used in the evaluation of landscapes until recently, as nature conservation has predominated and cultural values in landscapes have not been widely appreciated.

3.2 The development of criteria for cultural landscape assessment

Within the profession of landscape architecture, visual assessment prevailed in landscape evaluation for many years, while historical geographers promoted the vehicle of regional histories and the use of the land in their evaluations. Work by Finn Thorvaldson was an early attempt by a landscape architect in NSW to look at landscape catchments and character and move toward a hybrid system of understanding the landscape.

In the 1990s a number of cultural landscape studies used the history of an area combined with landscape character to inform the assessment of significance, eg: Ken Taylor's *Historic Cultural Landscape Assessment for the Wingecarribee LEP*, 1993. The three year *Colonial Cultural Landscapes of the Cumberland Plain and Camden Study* completed in 2000 aimed to identify and list the remnant landscapes of colonial estates across the Cumberland Plain on the State Heritage Register [Volume 2, Appendix F], although only a handful of these were progressed to a SHR listing.

The early European settlement patterns and interactions with the landscape through agriculture and gardening informed this study. As a cultural landscape approach was developed the following became essential, including that:

- An analysis of historical geography is critical to the understanding of a cultural landscape;
- An emerging understanding of Aboriginal land use including the manipulation of vegetation communities and fire stick farming should be included where possible;
- Geology and soils directly influenced European settlement pattern;
- Rivers and waterways are important cultural routes; and
- Early land grants created patterns in the landscape.

In 2003 the NSW Heritage Office held a cultural landscape charrette. Among the aims of the charette was to discern how an awareness and recognition of significant cultural landscapes could be raised in the planning system. This is still unresolved. Consultant Meredith Walker collated the approach used by current professionals with the aim to move toward a generally accepted assessment method for NSW.

Following recommendations from the charrette in 2007, the Heritage Council of NSW resolved to adopt the guidelines for cultural landscape assessment developed by Heritage Victoria. Heritage Victoria has since further developed guidelines and the most recent version was published in 2015.¹⁷ This report emphasises the importance of distinguishing the assessment of cultural heritage significance from landscape character assessment. Traditionally landscape character assessment has been a descriptive process that records present-day features of a landscape whereas cultural heritage significance of a landscape focuses on the way people have interacted with the physical environment over time. The 2015 guidelines place a great emphasis on community consultation. Although this can be a protracted process, in the long term, the best way of protecting a landscape is for it to have strong community identification and engagement.

¹⁷ <http://heritagecouncil.vic.gov.au/research-projects/landscapes-of-cultural-heritage-significance-assessment-guidelines/>

Assessment models and the development of methods in the assessment of cultural landscape are outlined in Volume 2 Section 11. The NSW State Heritage criteria are set out in Section 4.4.

3.3 Application to AILA cultural landscape study

The methods and approaches outlined in Section 12, Volume 2 for cultural landscape assessment have commonalities. The highly complex nature of these places, their variety and in cases a need to emphasise specific qualities has created diverse methods. For example, it should be noted the Aesthetic Assessment method encompasses World Heritage sites. For the AILA study, these approaches were considered, modified and adapted, however extensive.

The study utilised government heritage and planning data available in the public domain as well as stakeholder and expert consultation. A desk top review as outlined in Section 4.5.1 identified gaps in the recognition of potentially state heritage significant landscapes.

As with the Historic Urban Landscapes approach (Section 12) this study is based on the recognition and identification of a layering and interconnection of natural and cultural values.

4 Methodology

4.1 Introduction

The approach proposed for the study at its inception by MHQ and the ALHG was largely adhered to, however prior to its commencement this methodology had not been trialed. Therefore, the guidance of the experienced members of the ALHG and OEH staff was essential. Throughout the process the MHQ team drew upon the guidance of team member Colleen Morris, an expert in the assessment of landscape heritage places for the SHR in NSW.

The international and Australian landscape heritage studies, discussed in Section 12.0, also influenced the foundation methodology. The latest findings and conclusions of the ICOMOS IFLA International Scientific Committee on Cultural Landscapes (ISCCL) specifically underpinned our approach.

4.2 Method summary

The study focused on three areas:

- the collection and analysis of available data and research,
- the refinement of the assessment methodology, and
- the application of the methodology to reveal potential landscapes for nomination on the SHR.

4.3 The collection and analysis of available data and research material

Prior to securing funding from the Heritage Council, the ALHG had identified five documents deemed important to AILA membership. These documents were reviewed and analyzed by MHQ (Volume 2, Appendix A). The initial findings discussed with the Heritage Division at two meetings.¹⁸ The maps and documents included:

- Horton's Map of Aboriginal Australia 1996;
- Biogeographic Regionalisation Map of Australia 2012;

¹⁸ 29 September 2015, with the Heritage Division Listing Team 29 October, 2015, with the Senior Team Leader Heritage Databases and team members.

- Thorvaldson’s Characteristic Landscapes and Visual Landscape Regions of NSW, 1996 (and 2015 interview);
- Geological maps of NSW, Sydney and Penrith; and
- The preliminary landscape overlay diagram or landscape lens.

The development of the AILA method in relation to these is in Volume 2, Appendix A. This and other documents, including the ‘List of Significant Landscape Design, including some people of importance in New South Wales’, by Craig Burton, eminent landscape architect and landscape heritage consultant, also inform Volume 2.

4.4 Refinement of the assessment methodology

4.4.1 Criteria for the assessment of cultural landscapes

As discussed in section 1.2, proposed SHR places must meet the thresholds of the NSW State Heritage Criteria.¹⁹ Within these parameters, the study was required to develop a targeted means of identifying and conserving suitable landscapes. The landscape heritage assessment methods outlined in chapter 3 guided the emergence of such a landscape approach; a focus lens for use within the SHR Criteria to assist in the identification of significant landscapes (Volume 2, Appendix A).

In this method, an emphasis was placed on a site’s natural history, evidence of human response to landscape, landscape character, spatial qualities and visual structure. This approach provided a depth of understanding and consistency to finding potential listings, and a robust argument that would serve to protect places, once SHR listed. The natural and aesthetic characteristics of a place and the quality of landscape design were also of importance; while these aspects are accommodated within the SHR Criteria some values particular to landscape required more emphasis to meet the study’s aims.

The SHR Criteria, listed below, are largely self-explanatory; nevertheless, some criterion in regard to the study aims have been discussed in further detail.

¹⁹ <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/listings/assessingheritagesignificance.pdf>

The NSW State Heritage Criteria:

a) *an item is important in the course, or pattern, of NSW's or natural history;*

Discussion: while this criterion includes 'natural history' the Heritage Division's NSW Heritage Manual No. 2, Assessing Heritage Significance, does not expand on this aspect. For this study, and within this criterion, the natural landscape history of a place, its local geology and relationship to topography, natural systems and scenery, are fundamental and valued aspects of landscape that underpin patterns of human response. Therefore, it is essential that the natural history of a heritage item be explored as part of the assessment process. This understanding is emphasised in the important '5 documents' of the ALHG (Volume 2, Appendix A).

b) *an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;*

Discussion: this criterion, particular to the study includes designers and people important in the history of the landscape profession.

c) *an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;*

Discussion: this criterion covers important works of landscape architecture; landscapes that are aesthetically distinctive or with landmark qualities; and works of design that exemplify a particular style.

d) *an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons;*

Discussion: this criterion, particular to the study includes the landscape profession and Aboriginal associations and relevant migrant groups.

e) *an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history;*

Discussion: in a similar approach to an archaeological one, this study considers objects provide evidence of a human response to topography, catchments, natural resources, and spatial qualities of a landscape.

f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;

Discussion: this criterion allows for the inclusion of rare geological formations and vegetation - both plant communities and individual species - as well as important works of landscape design that may be one of the few examples of its kind.

g) an item is important in demonstrating the principal characteristics of a class of - cultural or natural places; or cultural or natural environments of NSW's - cultural or natural places; or - cultural or natural environments;

Discussion: this includes landscapes representative of a type or design style.

Another criterion 'examples of items exhibiting multiple criteria' is outlined in the publication *Assessing Heritage Significance*²⁰ but not in the standard Criteria list above. The world heritage Willandra Lakes and Parramatta Park are showcased, each having met 4 of the 7 criteria. Interestingly, the Lakes meets criterion (a) twice, and the Park, three times. The significance of the natural landscape history of each however is not addressed. These examples, given they meet multiple criteria, do demonstrate however the layered historical complexity of cultural landscapes and the aesthetic appeal of views, scenery and spatial qualities, that they imbue.

²⁰ Assessing Heritage Significance, Heritage Council publication, 2001. <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/listings/assessingheritagesignificance.pdf> accessed 8 December 2017.

4.4.2 The AILA *landscape lens* themes:

As discussed above, places nominated by the study must have heritage value for the State of NSW. As part of the SHR nomination procedure, comparisons with similar places to evaluate eligibility for listing is required. With these stipulations in mind, a list of themed requirements was developed to steer the selection of places. This process is outlined in Volume 2 of the study.

The summary of these requirements, termed the landscape lens, were presented at the workshop of 14 March 2016, as follows:

- places of confluence of Aboriginal and European landscape use;
- places that meet the State Heritage Register criteria thresholds for: a) historic, b) associational, c) aesthetic, d) social, e) scientific, f) rarity, g) representative;
- landscape heritage places under threat;
- serial or group listings (to enable the listing of items that of themselves may fall short) / a world heritage approach. This can include a number of landscapes with non-continuous boundaries where a number of landscapes, which are part of a biophysical region, are amalgamated; and
- achievable listings of significant landscape heritage places // significant work by landscape practitioners.

4.5 **Application of the study methodology**

4.5.1 Desktop review of LGAs in NSW (Volume 2, Appendix B).

A departure from the cultural landscape assessment methods proposed in chapter 3.0 was a desktop review of state, local and non-statutory groups heritage registers to locate potential listing sites.

The desktop review in its early phase aimed to capture all significant landscape places across the 153 LGAs of NSW. As the council desktop review process advanced this task was decided to be too large an undertaking (See Appendix E for the desktop review process).

4.6 Desktop review of LGAs in Sydney Harbour catchment

After further trialing of the desk top review the study focus settled on Sydney Harbour catchment [Volume 2, Appendix B]. Together with the SHR Criteria, this generated key themes for the study that addressed landscape specifically, some overlapped with those outlined in Section 4.4.2:

- the confluence of Aboriginal and European site use of landscape;
- Aboriginal and European landscape use of high points, ridges and rivers, and particularly headlands;
- human response to topography and soil;
- drainage catchments, visual catchments and view corridors;
- Sydney Harbour landscapes; highly valued areas of remnant and regrowth vegetation around the Harbour, along with the public parks and foreshores reserves that may form a serial listing proposal; and
- the history of AILA NSW (landscape architecture), significant work by landscape practitioners, particularly mid-century work of the emerging profession or outstanding examples of landscape architecture.

After reviewing 15 LEP heritage schedules of local government areas in NSW it was revealed there were proportionally fewer landscapes listed than other heritage item types.

The principal investigation considered the Harbour's catchment, both its natural drainage boundaries and visual structure, however the study focus narrowed to examine the Harbour's foreshores and headlands to best meet the study aims for identifying large cultural landscapes as places for nomination (Volume 2, Appendix B). Important pockets of revegetated landscape, national park and local parks and institutions are dotted around the Sydney Harbour foreshore like a 'green necklace', loosely joined by publicly accessible strips of foreshore land or within each other's visual catchment.

4.7 Final refinement of the heritage study focus

The final list of sites for SHR nominations were developed by the consultants under the direction of ALHG. The ‘green necklace’ of parks, government institutions and Crown land of the Sydney Harbour foreshore (**Figure 1**) were perceived as coming under increasing pressure as Sydney’s population grows. These sites were identified as a priority for AILA nominations. Despite the *landscape lens* seeking to establish coherence between the collection of places, in discussion with staff of the Heritage Division, a decision was made to exclude Sydney Harbour National Parks from the nominated sites²¹ although it is considered that these are of State significance in the life and appreciation of the Harbour. As the study’s ‘gap’ analysis of the State Heritage Register and LGA Heritage Schedules progressed, the priority shifted to land to the west of the Sydney Harbour Bridge where foreshore land was historically linked to the ‘working Harbour.’

²¹ OEH were already in discussion with NPWS in regards these nominations.



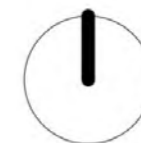
SYDNEY HARBOUR • THE GREEN NECKLACE

Base map SixMaps overlay of Sydney Harbour National Park: land-use context survey (courtesy CAB consulting)

Figure 1: Sydney Harbour, 'green necklace': mapping of current green space surrounding the harbour

- Trust lands / Defence
- National Park
- Open space Park

Christine Hay
Colleen Morris
James Quoye



4.8 Comparative studies and databases

Comparative studies of broad cultural landscape areas assist in determining the values of a place. For cultural landscapes in NSW comparative studies include:

- Greater Blue Mountains World Heritage Area Nomination File, 2000.
- Colonial Cultural Landscapes of the Cumberland Plain and Camden, Colleen Morris and Geoffrey Britton, prepared for National Trust of Australia, NSW, final draft 2000. For an extract refer to Volume 2.
- Castlereagh Cultural Landscape Study, Geoffrey Britton and Colleen Morris, 1998.
- Hunter Estates, A Comparative Heritage Study of pre-1850s Homestead Complexes in the Hunter Region, prepared by Clive Lucas, Stapleton and Partners for Heritage Council of NSW, NSW Office of Environment and Heritage, 2013. Add link.
- Illawarra Escarpment Studies including Illawarra Escarpment Heritage Assessment Mayne Wilson Associates and Heritage Futures in association with Godden, Mackay Logan (2007) and Shellharbour Natural Heritage Study by Mayne Wilson Pty Ltd, 2004.
- Braidwood and its setting, SHR listing, 2006.
- Colonial Sydney Study Area: Town Planning and Aesthetic NHL Assessment, Context in association with Robin Crocker, Ian Jack and Colleen Morris, 2011.

An example of a non-statutory database is the Australian Institute of Architects (AIA) database of historic buildings. Another example is the National Trust of Australia (NSW) list of non-statutory database, which includes numerous landscape conservation areas (Appendix H).

4.9 Emerging frameworks

A framework or context for the listings emerged as the study evolved: Possible frameworks included,

- Important natural and cultural landscapes of the Sydney Bioregion.
- Ideas regarding a Triassic National Park encompassing the harbour / Sydney Harbour as a world heritage site.

- A 'green necklace' of Sydney Harbour including remnants of colonial villas and historic institutional landscapes as a significant cultural landscape.
- Greater recognition of Aboriginal cultural values within the Sydney Bio-region. In May 2016 plans to hand Goat Island or Mel Mel, which has a prominent and strategic position in Sydney Harbour, back to Aboriginal people were announced. Mel Mel relates to headlands in its vicinity- Yurulbin, Berry Island, Balls Head and Ballast Point where there is a confluence of Aboriginal and European values.

5 Landscape Context

5.1 Introduction

The following chapter outlines the natural, Aboriginal and historical context for the study area. It supports the landscape heritage values of the 10 nominations in volume 3. The chapter begins with a concise review of its broadest context, that of the Bioregions within NSW. Its focus narrows to the Sydney Basin, and finally the *landscape lens* highlights Sydney Harbour within Port Jackson. The broader Australian landscape context has been considered for the report in Volume 2 as a reference point for future studies.

5.2 NSW Bioregions and catchments

The land of NSW totals 80,160,000 hectares (or 801,600 square kilometres). It contains 17 of the 89 bioregions within Australia (**Figure 2**). Those towards the west of the state include deserts, riverine plains, rocky ranges and downs. Towards the east, landscapes of rainforests, undulating ranges, rocky mountains and wooded grasslands are more representative. A brief overview of the landscape regions, climate, topography and geomorphology, biodiversity, conservation mechanisms and regional history of NSW can be found [here](#).²²



Figure 2: Map of NSW bioregions: <http://www.environment.nsw.gov.au/bioregions/BioregionOverviews.htm> downloaded 27 May 2016.

²² <http://www.environment.nsw.gov.au/bioregions/BioregionsNswoutline.htm>

Relevant to this study are the river catchments or systems of NSW (**Figure 3**). The most extensive, extending into Queensland, South Australia and Victoria is the Murray-Darling Basin. Secondary to this is the South-East Coast NSW river system (SEN) in which the study area for the report lies. This system is the Sydney Coast-Georges River system.

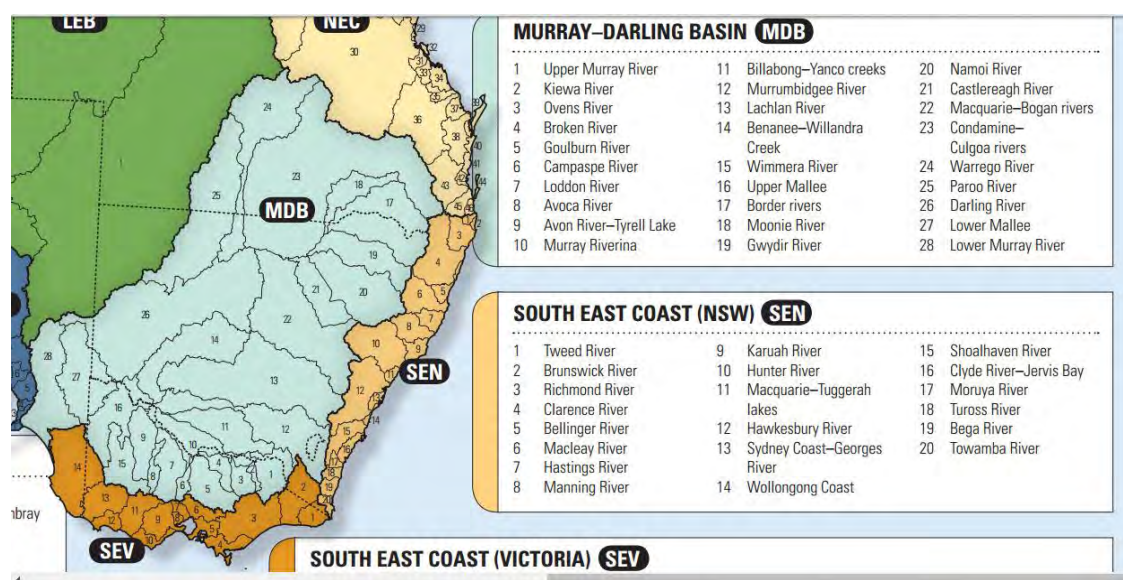


Figure 3: Map of New South Wales River Systems
http://www.bom.gov.au/water/geofabric/documents/BOM002_Map_Poster_A3_Web.pdf

5.3 The Sydney Basin Bioregion

The Sydney Basin Bioregion (**Figure 4**) is one of only two bioregions contained wholly within the state. Extending north to Nelson Bay, south to Batemans Bay, and west almost to Mudgee, its area is approximately 3,624,008 hectares. Specific details about the Sydney Basin’s climate, landform, biodiversity, regional history, bioregional scale conservation, subregions, references and maps can be found [here](#).

Located centrally on the coastline of the Bioregion within the Cumberland sub-region is the focus area of our study, Sydney Harbour. The regional history of the Basin, in the link above, provides background evidence of Aboriginal occupation and European colonisation and in particular tells the story of the harbour; the setting of much first contact with Indigenous groups. Horton’s Aboriginal Australia Map reconstructs the Aboriginal groups in the vicinity of Sydney at this time (**Figure 5**). Paul Irish (2017) indicates an affiliated coastal zone for the Aboriginal people of

coastal Sydney. This correlates well with the Sydney Basin bioregion map's coastal range.²³



Figure 4: Map of Sydney Basin Biogeographical Region (IBRA). The black boundary indicates the extent of the Region, and the tan lines are its catchments or more accurately its catchment management areas. The arrow shows the location of Sydney Harbour. (Source: NSW NPWS 2003).

²³ Paul Irish, *Hidden in Plain View, The Aboriginal People of Coastal Sydney*, New South Publishing, Sydney, 2017, p.vi-vii.



Figure 5: Detail of Aboriginal Australia Map, illustrating a reconstruction of Aboriginal groups in the vicinity of Sydney by David R. Horton, 1996. The red line denotes a major boundary between different regions; the black arrow indicates that this boundary follows the Great Dividing Range (GDR).

5.4 **Historic overview - Study Area**

5.4.1 Preamble

To understand the significance of Sydney Harbour as a cultural landscape it is necessary to first examine its natural landscape, and the natural systems that have shaped it over time. The human response to this landscape by Aboriginal groups and Europeans, and the overlap of meaning associated with this place, provides the cultural emphasis for this study. The landscape context, in this chapter however begins with a review of the Royal National Park, a place identified in our emerging frameworks as an important natural and cultural landscape within the bioregion.

5.4.2 The Sydney Region, Sydney Basin and Sydney Harbour Landscape Description

Royal National Park, (RNP) approximately 22 km to the south of the city of Sydney and on the southern rim of the Sydney Metropolitan area is situated south east of the deepest part of the Sydney Basin. Within the Sydney Basin Bioregion, the RNP forms part of the Hacking River drainage catchment. It is approximately 16000 ha, the majority of which is bushland.

Almost all the rocks at the surface of the park date from the early to the mid Triassic period. The youngest rocks are the Wianamatta shales, much of which has been eroded, and like Sydney Harbour the park is dominated by Hawkesbury Sandstone. Beneath the Hawkesbury Sandstone lie the varied rock types of the Narrabeen Group which crop out along the coast from Garie southwards, and along the valley of the upper Hacking River. The soils derived from the Narrabeen group are richer in nutrients. The more luxuriant vegetation in the RNP corresponds to the areas where the Narrabeen Group outcrop e.g. rainforest bands in its upper Hacking River valley.

On the coastal strip and central to the Sydney Basin is Sydney Harbour, one of three waterways that comprise Port Jackson. Its landscape origins, and that of the Sydney area began some 300 million years ago (Ma) in the Permian Period, when it was a wide basin of swampy lush vegetation. During the Triassic Period that followed, 230 – 190 Ma, an ancient delta deposited vast amounts of eroded inland sediment which covered the vegetation and filled the basin. The upper deposits formed the

Wianamatta Shale and Hawkesbury Sandstone layers, the dominant geology of the harbour's catchment (Volume 2, **Figure 28**). Over the 50 Ma that followed, during the Tertiary Period, the Parramatta River system sliced its way through these layers, to shape deep sandstone valleys on its way to the coast.²⁴ Today the harbour is the drowned river valley (ria) of the Parramatta River. The formation of this ria and of its associated waterways occurred 8000 - 6000 years ago when the ice caps thawed in a post glacial, warm environment. This change marked the Holocene Epoch, a relatively stable climatic period within the earth's geological time scale.

In 2011, Dr William Steffen Professor-Emeritus, climate change expert and Earth System Scientist, contested that the Holocene Epoch has ended, and that we are now in the Anthropocene, a new time scale. This is defined by evidence measured since the 1950s called the 'Great Acceleration'. It demonstrates: 'The human impact on the global environment has now become so large that it rivals some of the great forces of nature in its impact on the functioning of the earth's systems.'²⁵

Typical of the Sydney Region, the harbour's drainage catchment is characterised by its topography: gentle shale crests and ridgelines; and, in contrast, rocky sandstone country comprising long narrow ridges, headlands, cliff lines, steep slopes, stepped terraces and eroded gullies. Other geological processes have contributed to the character of the Sydney Region. The distinctive Prospect Hill, made of dolerite; and dykes, scattered through the Harbour's catchment, these erupted from volcanic activity beginning in the Jurassic 200 Ma.²⁶ Recent Quaternary deposits of sands, muds and silts from 10,000 years ago up to the present, have influenced the configuration of estuaries in the waterways of Port Jackson. Human influence on the catchment, marked on the 1983 geological map (Volume 2, **Figure 28**) as man-made fill, indicates its extensive Anthropocene landscapes.

²⁴ Benson, D, & Howell, J, *The Sydney City area 1788', Taken for Granted, the bushland of Sydney and its suburbs*, Kangaroo Press: Sydney, 1995, pp7-8.

²⁵ 2016 INTERNATIONAL FESTIVAL OF LANDSCAPE ARCHITECTURE: NOT IN MY BACKYARD http://www.aila.org.au/iMIS_Prod/AILAWeb/2015_News/2016_Festival.aspx?WebsiteKey=44fe2fe0-5560-4283-981a-c15fe691b1d1

²⁶ Sutherland, Lin, *Geology of the Harbour*, Australian Museum, <https://australianmuseum.net.au/geology-of-sydney-harbour> accessed 13/08/2017

It is the erosion of the above landscapes, etched by long term weather patterns that has shaped the intricate nature of the harbour's landform. The microclimates and soils formed, and the moisture they trap has sustained the unique ecological environment of the Sydney Region, and specifically that of Sydney Harbour and its marine life.

The soils of the harbour are typical of their parent material: those from shale and alluvium deposits form fertile clay or loamy soils; those from sandstone however form a sandy, shallow soil generally of low fertility. On slopes, in pockets and at the bottom of valleys these soils interact to form podzols. The soils from the volcanic diatremes and dykes, though not extensive, are generally the most fertile. At the heads of bays and rivers and along the shorelines of estuaries are those soils derived from sands and muds. The Sydney Region's natural soils are generally acidic, and, especially sandy soils, are mostly low in phosphorous.²⁷ Anthropocene soils, large areas disturbed by humans since the 1950s, are characterised by the removal of the original topsoil and replacement with introduced soils, building rubble or garbage.



Figure 6: Map illustration reconstruction of vegetation communities ca.1788.

(Source: Benson, D. & Howell J., 'The vegetation of your district, 1 The Sydney City area 1788', *Taken for Granted, the bushland of Sydney and its suburbs*, Kangaroo Press: Sydney, 1995, front endpaper.)

²⁷ Benson, D. & Howell, J., *The Sydney City area 1788', Taken for Granted, the bushland of Sydney and its suburbs*, Kangaroo Press: Sydney, 1995, pp8-11.

The distribution of vegetation types in 1788 across the Sydney area reconstructed by Dr. Doug Benson, a plant ecologist specializing in the vegetation of the Sydney Region (1995) is shown in **Figure 6**. When compared with **Figure 28** the geological patterns and vegetation types demonstrate correlations e.g. the 'Eastern Suburbs Banksia Scrub' aligns with the dunal system; and the 'Blue Gum High Forest' with the Ashfield Shale that follows the main North Shore ridgeline.

Benson describes eight bushland plant community types: Blue Gum High Forest, Turpentine-Ironbark Forest, River-flat Forests, Cumberland Plain Woodlands, Eastern Suburbs Banksia Scrub, Estuarine and freshwater Wetlands, Castlereagh Woodlands, and Sandstone Heaths, Woodlands and Forests. It is the latter of these, the Sandstone Heaths, Woodlands and Forests, that has the widest distribution along the sloped foreshores of Port Jackson. Despite the low nutrient value of the soil, it supported a rich array of plant species adapted to the conditions of its landscape; open forests in sheltered spots with deeper fertile soils, woodlands along ridges and upper slopes, and heath on shallow, poorly drained, soils.²⁸

The following Port Jackson catchment maps by Burton (**Figures 7, 8 and 9**) provide detail regarding the study area's geology, remnant vegetation, and its harbour and riverine spaces.

²⁸ Benson, Taken for Granted, the bushland of Sydney and its suburbs, front endpaper, p23.

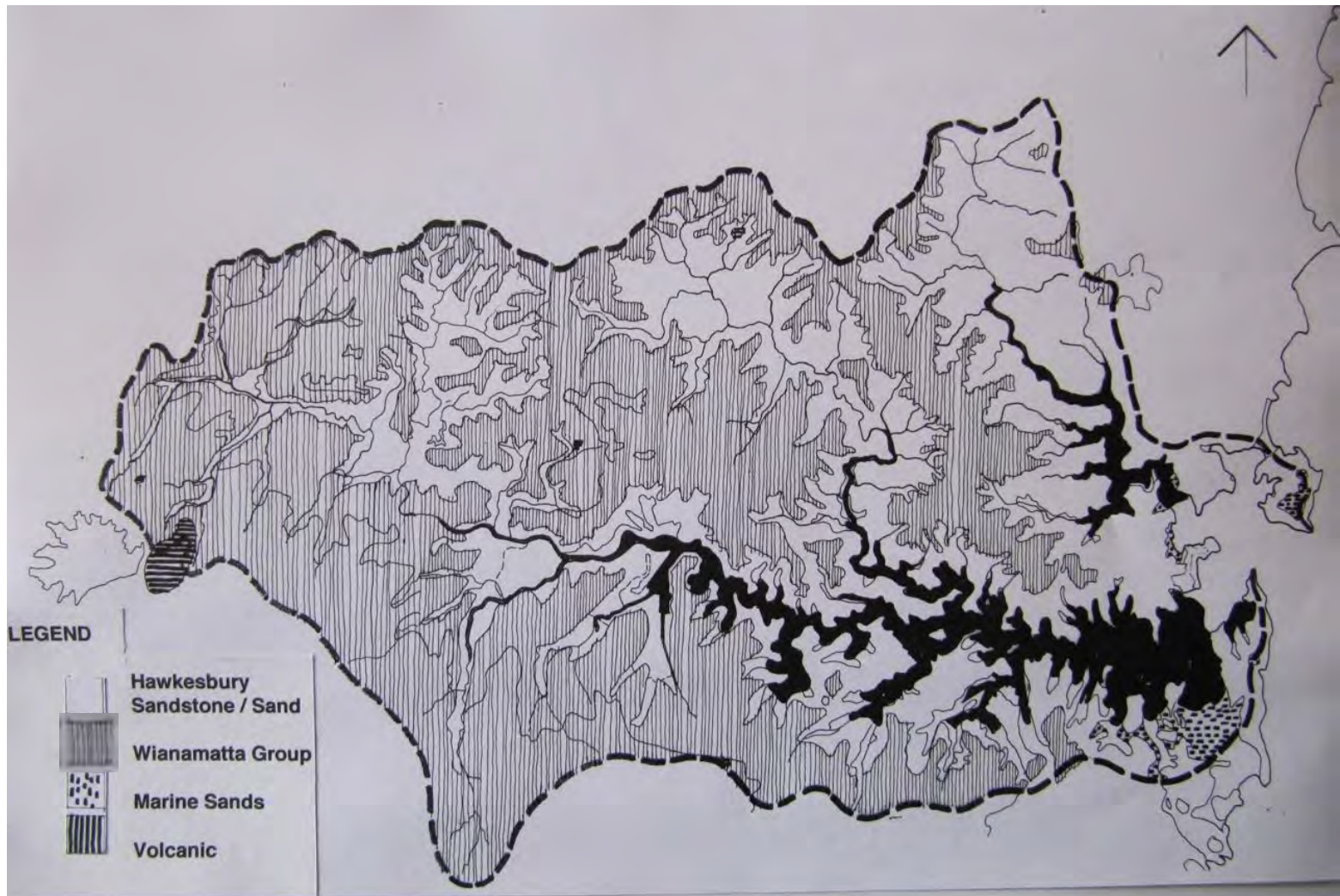


Figure 7: The geology of Port Jackson's drainage catchment, Craig Burton

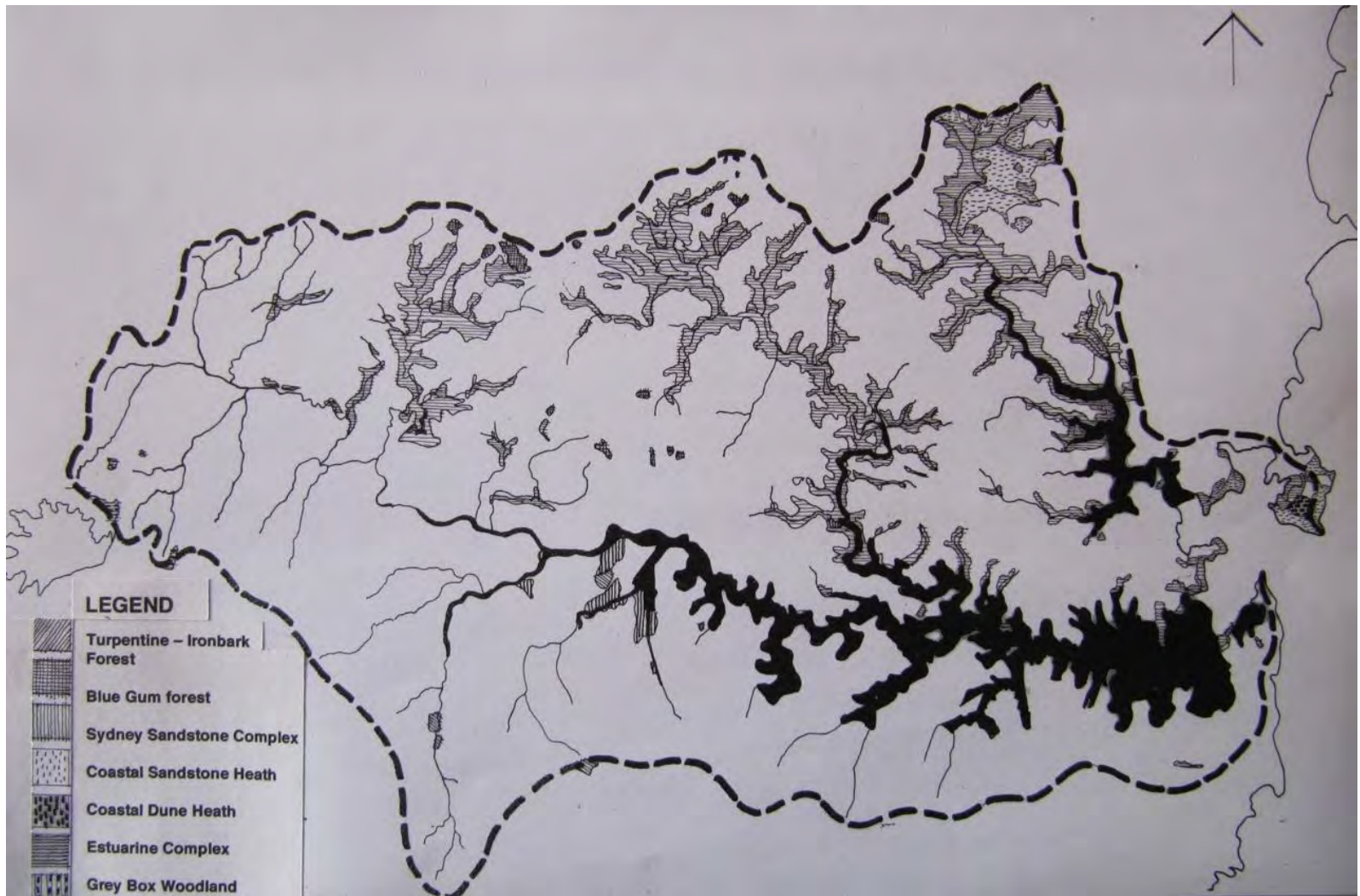


Figure 8: The remnant vegetation of Port Jackson's drainage catchment, Craig Burton

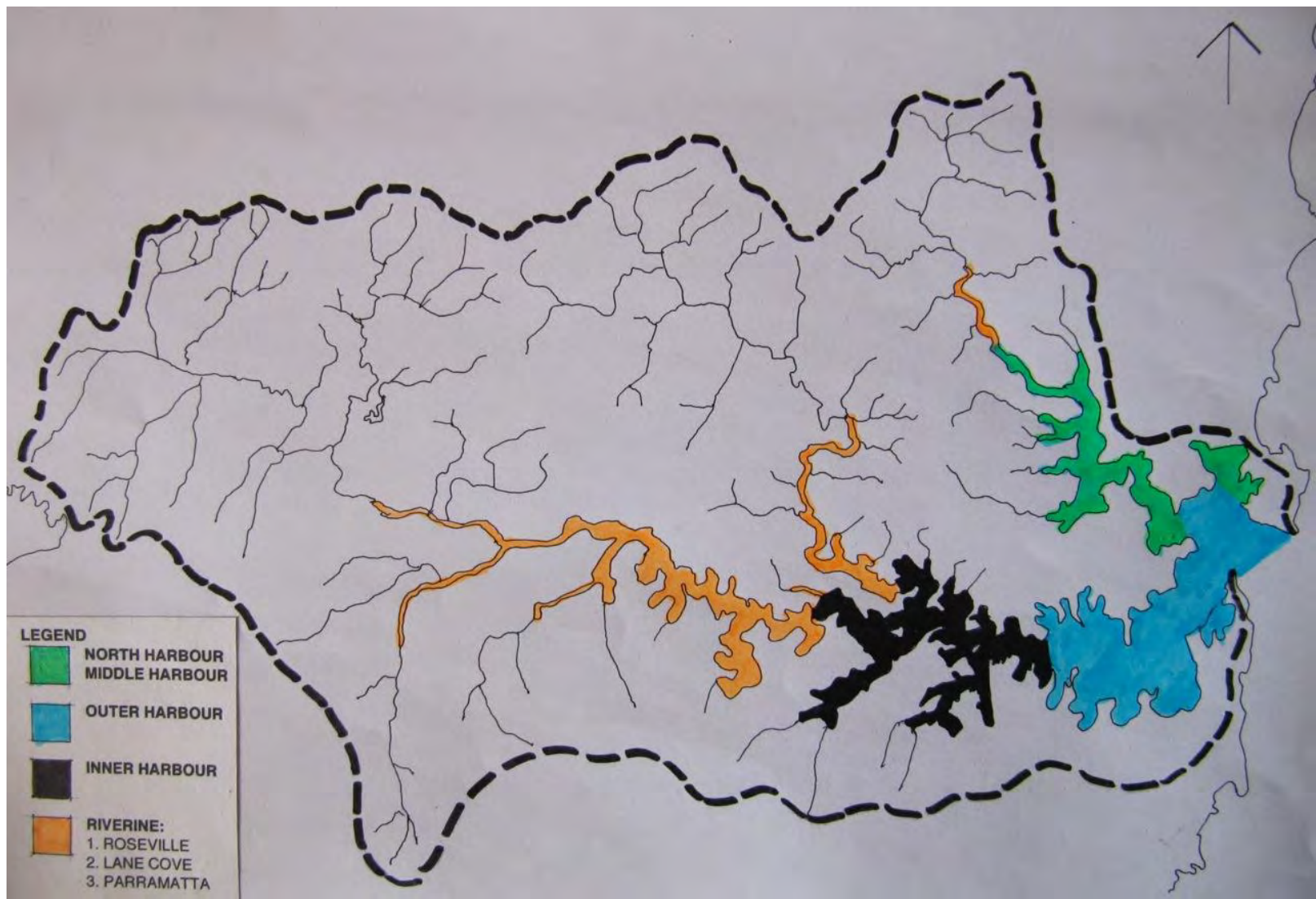


Figure 9: Map of Port Jackson's drainage catchment - harbour and riverine spaces, by Craig Burton

5.4.3 Aboriginal Connection with the Landscape

Knowledge of the earliest Aboriginal people from the Sydney Region and their history, and Sydney Harbour, is largely limited to the work of Dr. Val Attenbrow, archaeologist and Principal Research Scientist, at the Australian Museum, and more recently, Dr. Paul Irish, a historian specialising in the history and heritage of Aboriginal Australia. Attenbrow's discussions and conclusions are drawn from several sources: late 18th and early 19th century colonial writers and artists, beginning with Cook; archaeological investigations and research of varying quality in the late 19th and early 20th century; and recent rigorous archaeological investigations and research, including her own studies.²⁹ The recordings of the First Fleet people especially, provide fresh accounts and a collective historical snapshot of the landscape and its Indigenous people at a time of immense change. Archaeologist Paul Irish's recent research, which included working with the La Perouse Aboriginal community, has considerably enhanced Attenbrow's earlier work and interpreted Sydney's Aboriginal heritage for non-Aboriginal people.³⁰

The Sydney Region, in 1788, was home to the people of 'the Sydney language'³¹: The Eora 'of the Gweagal, Gadigal, Gameygal, Wangal and Wallumedegal and other clans, and inland the 'woodland' Dharug, Gandangarra, Dharawal and Darkinyung language groups, and many others, each inhabited a territory, bounded by a stream, mountain ridge or headland.'³²

Ancestral spirits, many Aboriginal people believe, created the natural, physical and social world in the Dreaming. They also accept as true that Aboriginal people have always been in Australia. Attenbrow (2010) suggests that the south-eastern coast of Australia could have been colonized by Aboriginal people as early as 60, 000 years BP (before present). Since that time the landscape they inhabited has altered due to

²⁹ Attenbrow, Val, *Sydney's Aboriginal Past, Investigating the archaeological and historical records*, UNSW Press, Sydney, second edition, 2010, pp52-153.

³⁰ Paul Irish, *Hidden in Plain View, The Aboriginal People of Coastal Sydney*, New South Publishing, Sydney, 2017.

³¹ Thieberger, Nick and McGregor, William, *Macquarie Aboriginal Words*, Macquarie Library Publishing, 2005, p61.

³² Perkins, Rachel, & Langton, Marcia, with Atkinson, Wayne (eds), *First Australians: an Illustrated History*, The Miegunyah Press, Victoria, 2008, p7-15.

glacial cooling and melting, particularly the sea level has fluctuated, and changed the coastline extensively. Occupation of the Sydney Region, which may be earlier than evidence indicates, required ongoing human adaptation to these changes.

Archaeological sites show that fish and shellfish were the main Indigenous diet when the sea-level was high. When it was low, the coastal edge being kilometres further east, they would have adapted to hunting land animals in 'forests and woodlands'.³³ Evidence for early occupation of the area around Sydney during glacial periods was probably erased when inundated during the warmer and wetter periods that followed.

From 18000-11700 years ago (ya), the records for Aboriginal sites in the Sydney Region are more continuous, the earliest being 17800 ya for the occupation of a rockshelter near the Nepean River. In the early Holocene, 11700-5000 ya the sea level rose to levels higher than today and flooded the steep river valleys where they had lived and drove the relocation of waterside campsites onto ridge slopes and plateaus.³⁴ A renegotiation of Aboriginal group, clan and cultural boundaries would have occurred.

By the Late Holocene, from 5000 - 1500 ya, the sea-level began to fall. Stone tools called 'backed artefacts' (Bondi points, geometric microliths and Elouras), used for incising, drilling or scraping, associated with 'bone-working, wood-working and non-woody plant processing', became prevalent in the Sydney Region, large numbers of these tools particularly found along the coast. Also 'silcrete, tuff, chert and silicified wood,' used to make these tools, occur more frequently than say quartz and quartzite, and tools for grinding start to show up in this timeframe. An occupation rock shelter at Balls Head on the foreshores of the harbour contains artefacts of toolmaking, geometric microliths and a Bondi point connecting Aboriginal habitation to this Late Holocene Epoch.³⁵

³³ Attenbrow, Val, *Sydney's Aboriginal Past, Investigating the archaeological and historical records*, UNSW Press, Sydney, second edition, 2010, pp152-153.

³⁴ Attenbrow, *Sydney's Aboriginal Past*, p154.

³⁵ Bowdler, Sandra, 1971. Balls Head: the excavation of a Port Jackson rock shelter. *Records of the Australian Museum* 28(7): 117-128, plates 17-21. [4 October 1971].

A reason for these technological changes can be explained by the influence of the El Niño–Southern Oscillation (**ENSO**) pattern that took effect in this Late Holocene era ‘producing an increasing variability in seasonality and precipitation.’ As the region and coast altered, and ecological systems were again impacted, Aboriginal people adapted: ‘Fish, as well as shellfish, formed an important part of the diet which also included land animals (kangaroo or wallaby, potoroo, possum, bandicoot, rat and possibly dingo.’³⁶ With these changes came the need for new tools. Attenbrow links the ENSO phenomenon, and the development of backed tools, as a human ‘technological response to environmental changes’. The Late Holocene was a period when Aboriginal people, over time, modified their ‘patterns and movements’ due to climate change to focus on obtaining, perhaps new types of raw materials, for their diet and cultural practice, from their environment.³⁷

In the time from 1500 ya until 1788, the climate of today became recognisable, however ‘evidence indicates subsistence as well as land resource use patterns changed.’ Strong evidence for the processing of plants such as for Burrawang *Macrozamia sp.*, appear in this time, also fishing using shell hooks and a line, useful for ‘deep estuaries, bays, and lagoons of the Sydney region.’ Their appearance indicates the ‘marine economy and tool-kit’ first documented by Europeans in the environs of Sydney Harbour.³⁸ Evidence of this lifestyle can be found once again at the Balls Head rock shelter (**Figure 10**), while shell hooks are not present there is ample evidence of a shellfish diet.³⁹

5.4.4 The Aboriginal cultural landscape and people in 1788

The Coastal Eora were saltwater people. Trade routes had established between the Sydney Region people on the coast and those inland, and to groups beyond its boundaries (**Figure 5**). The closest connections however ran north-south along the coast. Here ‘rivers and creeks, where food was more abundant, were the places of more dense occupation, while high places were for ceremonial times. Rivers served as boundaries and corridors... coastal peoples seemed to know the central

³⁶ Attenbrow, *Sydney’s Aboriginal Past*, pp154-155.

³⁷ Attenbrow, *Sydney’s Aboriginal Past*, p156.

³⁸ Attenbrow, *Sydney’s Aboriginal Past*, pp156-157.

³⁹ Bowdler, *Balls Head: the excavation of a Port Jackson rock shelter*, 1971.

Cumberland Plain as far as the head of the harbour – the Parramatta River, at Parramatta.’

The country, interwoven with sacred and ordinary meanings was ‘invested with myth and law legends.’ Some places it is proposed were organized into separate ‘sacred, secret, and learning places for both men and women. The high rocky outcrops with their compelling grooved images facing the sky seem to have been men’s places...the female geography...is very likely focused on the harbours and foreshores.’⁴⁰ Little is known of these places, however, those known Aboriginal places and place names in the region, identified from historical records, are shown recorded in **Figure 11**, and for the Harbour in **Figure 12**. Both Waverton Peninsula and Berrys Island retain embellished sandstone with carved figures thought to have spiritual meaning for Indigenous people.

The Aboriginal people of the Sydney Region lived in clans (or groups) of about 50-60 people. Smaller communities that hunted, fished and gathered together were called bands.⁴¹ Larger groups are thought to have gathered seasonally, and dispersed during the cooler months.⁴² Broad cultural divisions are believed to have existed, for the Sydney area it extended from the Georges River, near Botany Bay, north, to the Hunter River.⁴³

⁴⁰ Karskens, Grace, *The Colony, A history of early Sydney*, Allen & Unwin: Sydney, 2009, pp42-44.

⁴¹ Attenbrow, *Sydney’s Aboriginal Past*, p17, p22.

⁴² Attenbrow, *Sydney’s Aboriginal Past*, p81.

⁴³ Attenbrow, *Sydney’s Aboriginal Past*, p126.



Figure 10: Image of Balls Head rock shelter, general view from east.
(Source: Bowdler, Sandra, 1971. Balls Head: the excavation of a Port Jackson rock shelter. *Records of the Australian Museum* 28(7): 117–128, plates 17. [4 October 1971]).

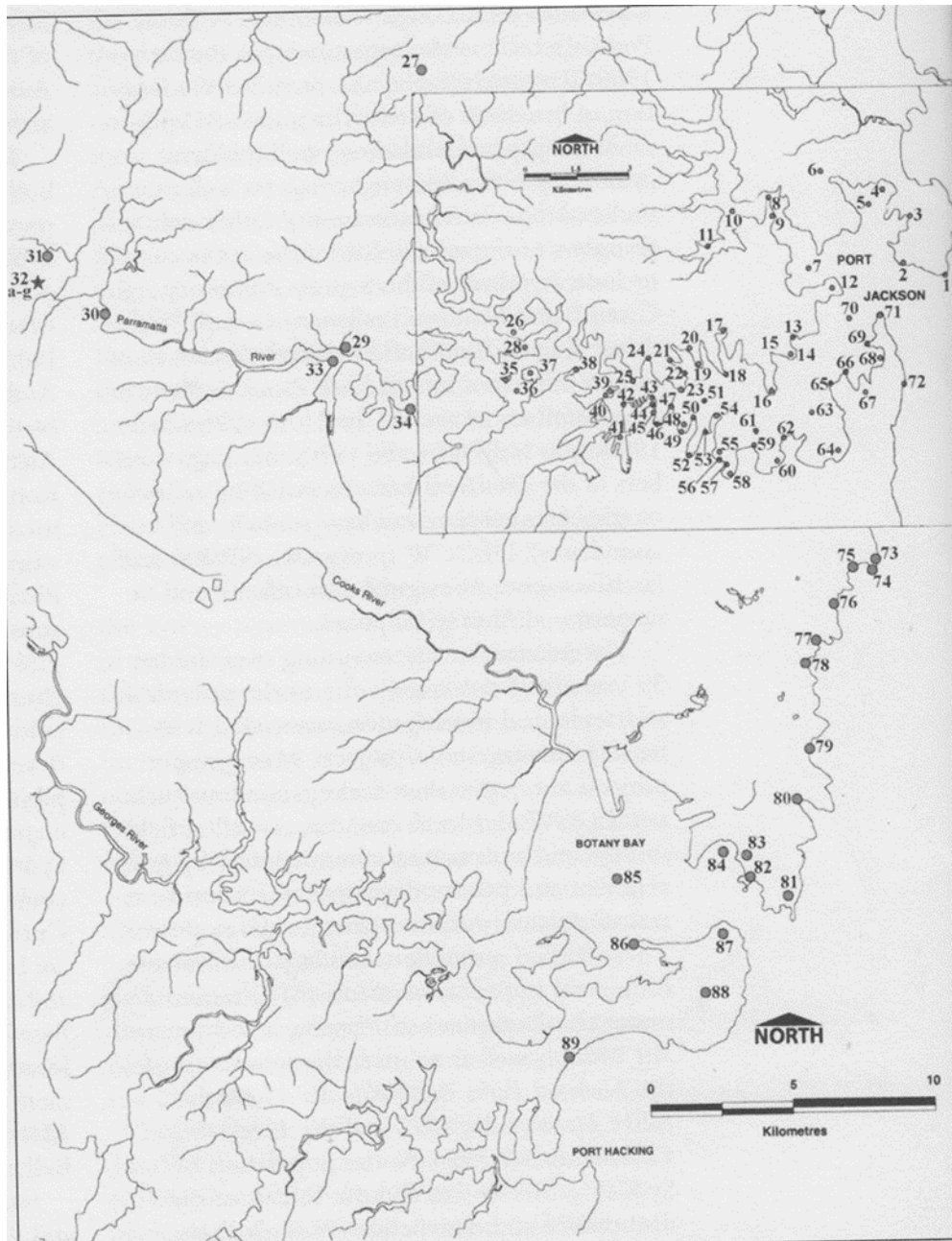


Figure 11: Plan of 'Places around Port Jackson and Botany Bay with recorded Aboriginal names from historical sources'. Although no legend is provided, the diagram indicates a cluster of places around the harbour with Aboriginal names in comparison to the broader region. (See **Figure 12** for detail of the harbour). (Source: Attenbrow, *Sydney's Aboriginal Past*, pp 8-13.)

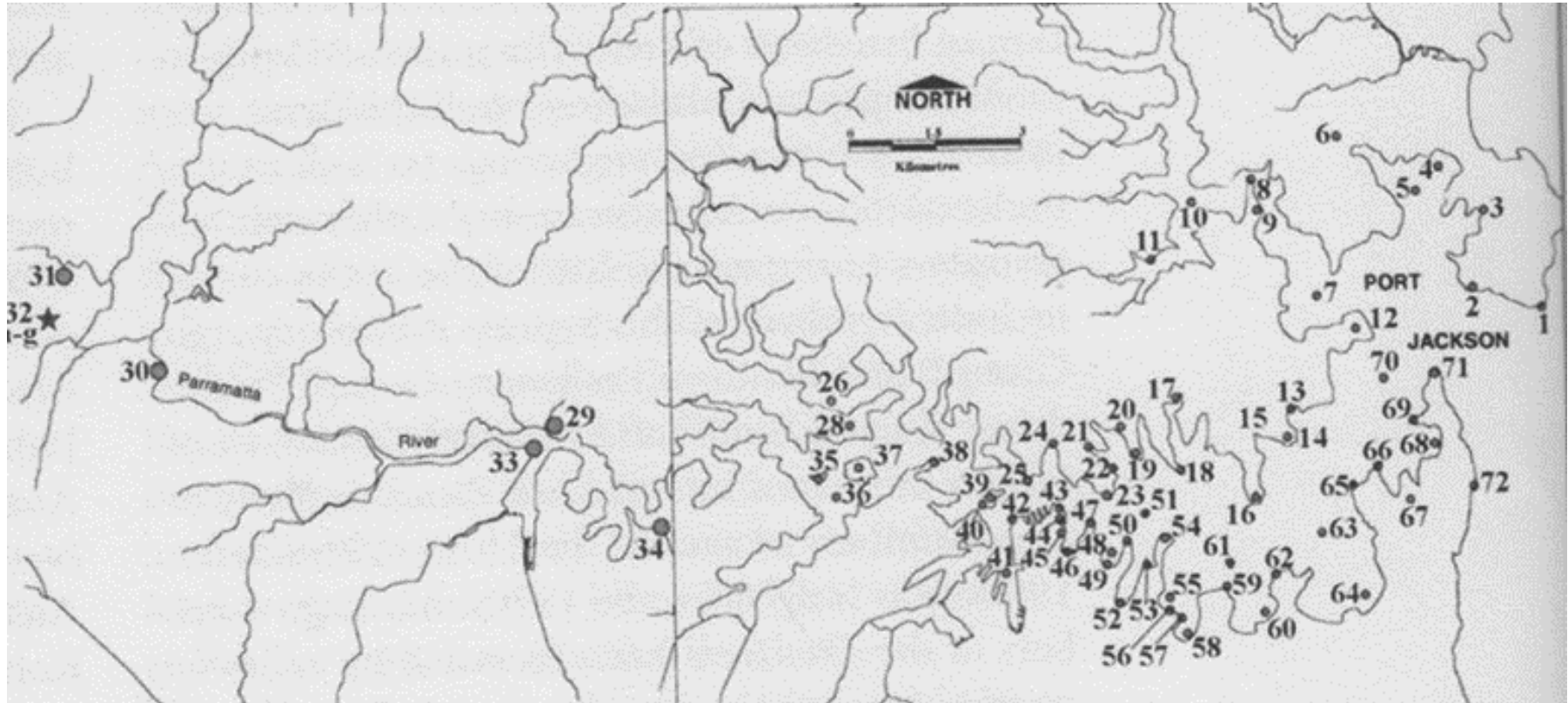


Figure 12: Detail from Attenbrow's Figure 2.1 'Places around Port Jackson and Botany Bay with recorded Aboriginal names from historical sources'. Although no legend is provided here, the diagram indicates there is an intensity of places around the harbour with Aboriginal names - one of the proposed nominations Yurulbin is number 38 - towards the centre of the map. (Source: Attenbrow, *Sydney's Aboriginal Past*, pp 8-13, outlines the names and references relating to the numbers).

The evidence that underpins these land use patterns, supports the idea that Aboriginal people along the coast camped, ate and fished near open shorelines, along estuaries and riverbanks and used rock shelters nearby. Colonists noted that when following the waters edge 'traces of natives appeared at every step'- huts, traps and 'marks on trees.' They frequented places where steep slopes and deep soil provided habitat for animals, and so good hunting; where creeks opened to rivers and widened, these resulted in good spots where oysters and shellfish were plentiful. The archeological evidence that support these patterns include shell middens, archeological deposits, engraved images, pigment images, grinding grooves, abraded channels, water holes, a stone quarry or source, and scarred trees (site traits).

In the Sydney area about half of the total 4880 archaeological 'site traits' are middens and deposits, these are found in the open and near rock shelters. These campsites may reflect seasonal availability of food, evidence of use of raw materials, or overnight transient places. In Port Jackson, middens and deposits occur largely on Hawkesbury Sandstone in the ocean and estuarine zones. These sites survive, particularly near the estuary mouths, within fragments of bushland in national parks and council reserves. The lack of evidence of land use by Aboriginal people on other geology however may be for many other reasons. Similarly, the deposits found in archeological sites, due to decomposition rates of different organic material, do not always give a true picture.⁴⁴ Though little evidence is found in these deposits, plant foods were an important part of the Indigenous diet; 'roots of ferns and orchids, yams, a poisonous nut/kernel, figs and other fruits referred to as berries and cherries, and banksia flowers' are mentioned (without much detail) in the early records.⁴⁵ Balls Head and Berry Island both on Hawkesbury Sandstone typically display evidence of Aboriginal occupation however there is little that relates to plant use.

⁴⁴ Attenbrow, *Sydney's Aboriginal Past*, pp47-51, p76.

⁴⁵ Attenbrow, *Sydney's Aboriginal Past*, p77.

Sydney Harbour includes a number of islands. Early colonial records of the principal islands suggests that the Aboriginal names were Boambilly (Shark Island), Billongolola/Be-lang-le-wool (Clark Island), Ba-ing-hoe/Booroowang (Garden Island), Matte-wan-ye (Pinchgut/Fort Denison), Me-mel/Milmil (Goat Island), Wa-rea-mah (Cockatoo Island), Ar-ra-re-agon (Snapper Island) and Gong-ul (Spectacle Island).

Based on the early colonial records knowledge of Aboriginal beliefs and rituals are little known for the Sydney Region and Sydney Harbour, an initiation ceremony at Farm Cove is an exception. Although there is no evidence of ceremonial grounds recorded in the Sydney area they did occur in surrounding regions, and therefore it is surmised that they existed in the Sydney Region. These grounds typically were an arrangement of circles, paths, sculptured earth mounded figures, and etched earth figures, of animal totems and supernatural beings, and carved trees.

There are no references to these ceremonial places being associated with the etched figures on rock platforms typical of the sandstone country in Sydney Harbour such as Waverton Peninsula. However, because some of the animal totems and supernatural being figures are similar they may be associated with male initiations. Queen Gooseberry (wife of Bungaree) ca.1844, inferred that rock engraving places she was shown around North Head were places where dances, fights, festivals and mystical events occurred.⁴⁶

When European colonization commenced on the foreshores of the Harbour in 1788 dispossession of Aboriginal people's land began. This rupture resulted in the loss of their animal and plant food resources, landscape resources, fresh water resources, and sacred places. At this time, it is estimated that there were 2000-3000 Aboriginal people living near Sydney, the true figure however will never be known. Only three people of the Gadigal clan, on whose lands Sydney sits, were said to have survived the epidemic that decimated the Indigenous people in 1789. Attenbrow attests that 'Regardless of events of the late 18th and 19th century, the Aboriginal community maintained its cohesion and identity, and today Aboriginal people are an integral

⁴⁶ Attenbrow, Sydney's Aboriginal Past, p134.

part of Sydney's diverse society.'⁴⁷ The research of Paul Irish identifies post-contact Aboriginal archeological sites and provides tangible evidence of continuous culture and survival, and supports the incorporation of Aboriginal history, its spatial and physical aspects, into broader historical narratives. This is to balance the pre-contact emphasis on Aboriginal history. Balls Head rock shelter contains artefacts of European origin that supports this. Glass from an early colonial period and lead, both being adapted and manufactured into new tools.⁴⁸

5.4.5 The Aboriginal Cultural Landscape

'The underlying geology of the Cumberland Plain and its immediate surroundings is the primary determining factor in the development of the landscape that exists today. These Indigenous landscapes have influenced the nature of human occupation, which in turn has constantly modified them to suit their purposes.'⁴⁹ Burton's observation can be applied to the Aboriginal management of the Australian landscape. This caring for country approach is also argued by Gammage (2011) who discusses the use of fire in the 1788 landscape, as part of Indigenous farming practices, managed on a regional, and Australia-wide scale, across a collective of associated plant communities. It is the current generations that ultimately hold the responsibility and honour of maintaining Aboriginal culture around Sydney Harbour. The Statement of Tuhbowgule Nangamay (**Appendix C**) outlines the Aboriginal policy for the Harbour.

5.4.6 First European responses to the Sydney area, 1788

The Aboriginal cultural landscape when reconfigured into the 18th century European mindset presented a different set of values than that of its Indigenous people. This modified landscape influenced the European settlement pattern of the Sydney Region, and Sydney Harbour. The confluence of these responses to landscape today can be identified as big landscapes or fragments of these, within Sydney Harbour.

⁴⁷ Attenbrow, Sydney's Aboriginal Past, p17, p21.

⁴⁸ Bowdler, Balls Head: the excavation of a Port Jackson rock shelter, 1971, pp.124-125.

⁴⁹ Burton, Craig, 'Sydney: Nature, Place and Landscape' in Philip Thalys, Peter John Cantrill; Peter Mould (et al), *Public Sydney: drawing on the City*, Sydney, Historic Houses Trust NSW & Content, Faculty of Built Environment, UNSW: Sydney, 2013, p184.

Captain Arthur Phillip, in 1788 brought 11 small ships carrying mostly convicts, to kick start the westernization of Australia on behalf of the British empire. Phillip rejected Botany Bay, the pre-determined destination as having moderate to low suitability for settlement. He was successful however in establishing a camp at Sydney Cove (Warrane) - a small sub-catchment of Sydney Harbour with a fresh water supply - the Tank Stream. He organized gangs to clear land, plant crops, erect shelter and to unload supplies. Two weeks later, in accord with his orders, he sent a party under Philip Gidley King to settle Norfolk Island.

Phillip and his First Fleeters were initially enamoured with Port Jackson, however they misconstrued its park-like picturesque foreshores, 'covered with an exuberance of trees', a landscape managed by its Eora custodians for thousands of years, as having good soil. Perhaps Phillip had come across the deep, and richer soil pockets at the base of the sandstone slopes and thought this typical. In fact, Phillip had set up on sandstone country where the soils were generally shallow, acidic and lacked nutrient. Conversely its vegetation was rich and diverse, an adapted landscape of heaths, woodlands and forests. He searched north for better land with his naval officers including one Lieutenant Henry Lidgbird Ball, with no result. The poor soil around the harbour saw limited agricultural success, likewise the farming attempts on Clark and Garden Islands in the harbour. Phillip cut his losses and months later began a new settlement on more fertile soils at Parramatta, the furthest navigable point up the Parramatta River.

In exploring the country, Phillip strained to reach high points obvious in the terrain to gain a bird's eye view over the region. From these panoramic outlooks, he scoped the limits of the Sydney region calling it the County of Cumberland, identifying its central feature, Prospect Hill, and its western boundary, today's Blue Mountains.

Phillip assessed the capabilities of the broad landscape to meet settlement requirements. An unusual combination of practical thinker and imaginative landscape planner, Phillip envisioned a future city set within the dramatic scenery of Sydney Harbour's topography. He laid out unrealised designs for a civic plaza and

grand buildings atop the Tank Stream catchment's western ridgeline for dramatic effect. His passion for grand schemes sadly for Sydney was overturned by the greater needs and plight of the colony for basic food and survival. Fragments of his 1788 vice-regal plan can be detected in the city current day associated with Lang Park.

After five years Phillip chose to return to England in 1792. As a measure of his success in his endeavour to establish a colony, he had under cultivation over 1500 acres of land. Although his envisaged grand plan for Sydney did not eventuate, Phillip's landscape planning had a lasting impact within the Sydney Region and particularly on the cities of Sydney and Parramatta.⁵⁰ His parting gift was to set aside land attached to First Government House which extended to Woolloomooloo for the Crown. In 1807, under Governor Bligh, this came to be known as 'The Domain'.

As a legacy of Phillip's first understanding of the Sydney Harbour foreshores, its unsuitability for agriculture, inadequate soils and rocky terrain, much of the original Sydney Harbour landscape remained substantially undeveloped although its picturesque qualities were much appreciated. As Sydney expanded, settlement concentrated on the shale based forest lands, as illustrated in a sketch by Governor Hunter (**Figure 13**). The sandstone hills north and south of Sydney and the dunes of Botany Bay were avoided. Further inland, in some parts of the Cumberland Plain, large-scale vegetation clearing had a devastating impact on the landscape.

The main riverine transport routes and the fertile soils of the associated floodplains determined the early settlement pattern within the Sydney Basin. Settlement concentrated on the areas of fertile soil around the Hawkesbury and George's Rivers and the basalt derived soils of Prospect Hill. By 1800, there had been 1920 acres alienated at Prospect Hill - refer **Appendix G** for a detailed overview of the Cumberland Plain.

⁵⁰ Hay, Christine, *The Governor's Gift, Phillip's Landscape Vision*, 2015, unpublished research paper, University of Sydney.

Boats plied up and down the Parramatta River to Sydney Cove and, from the harbour, up the coast to the Hawkesbury River: the rivers and the harbour were the lifeblood of the colony. Between the 1790s and 1831, when granting of free land ceased, thousands of hectares of land in NSW were given to ex-convicts, military men and free settlers although civil and military officers were the main beneficiaries, displacing the original inhabitants of the land.

Large grants of land adjacent to the Harbour and Parramatta River were granted to a handful of people, who were to own what are now suburbs. Balmain takes its name from the surgeon, William Balmain's grant of 550 acres, almost the entire peninsula except for a grant of 30 acres to George Whitfield around Snail's Bay. The Reverend Richard Johnson was granted the 400 acres of Glebe, Captain John Piper, as well as owning the Point Piper Estate, with his brother Hugh, held much of present day Leichhardt. On the Parramatta River at Concord a land grant of 50 acres was given to ex-convict Isaac Nichols in 1797. Nichols' grant included what is now Yaralla.

In the 1790s farms were established in the area that is now Ryde and Gladesville and were known as the 'Eastern Farms.' The first grants in Gladesville were to John Doody, a convict artist, William House and George Fieldhouse in 1795.⁵¹

Often pre-existing aboriginal tracks became the overland routes used by European settlers – these remain subtly evident in parts of Sydney such as Balmain Road, Leichhardt and its continuation Darling Street, a route that follows a ridgeline and then along to the spine to the tip of the Balmain peninsula. There were few places where the Europeans acknowledged any sense of Aboriginal ownership of property. The exception was Bennelong, who was captured and befriended by Governor Phillip. He was associated with Mel-Mel (meaning 'eye') or Goat Island in the Harbour. David Collins recorded that Bennelong said that the island belonged to his father.⁵²

⁵¹ B Sherry and D Baglin, *Hunter's Hill Australia's Oldest Garden Suburb*, Allen and Unwin, NSW, 1988^[1]

⁵² David Collins, *An Account of the English Colony in New South Wales*, ed. By Brian Fletcher, A H and A W Reed, Sydney, 1975, p.497



Figure 13. Sketch of New South Wales settlements 20 August 1796 [by Governor Hunter] (State Library of NSW a1528991) This map was published in David Collins, *An Account of the English Colony in New South Wales*, London, 1798).

5.4.7 The age of Macquarie

The tenure (1810-1821) of the fifth governor, Lachlan Macquarie, and his employment of convict architect Francis Greenway brought about a more ordered town plan for Sydney with realigned and widened streets for the 'Convenience and Ornament' of the town and the expansion of settlement beyond the Sydney Basin. To the north-west of Sydney along the Hawkesbury River, where farms supplied approximately half the grain for the colony, new planned towns of Richmond, Windsor, Pitt Town, Castlereagh and Wilberforce were surveyed on a grid layout.

Macquarie envisaged a more ornamented city with broad streets and garden spaces. His early edict of 1810 determined the future shape of Sydney when he dedicated the former common as Hyde Park and declared old buildings be removed to form Macquarie Place. The alignment of Macquarie Street along the ridgeline from the high point of Hyde Park to its south, the ambition to line the street with impressive public buildings and its eventual linking with the harbour with the development of Government House; the Domain and Botanic Garden to its east, provided Sydney with its most inspired civic precinct.

The Macquarie lighthouse was constructed on South Head and the (Old) South Head Road completed in 1811, 'well-built, the resort of the fashionable, on horseback or in Palaquin carriages and Bang-ups, and largely useless' provided access to it from Sydney town.⁵³ The road provided vantage points for views over the harbour and Macquarie re-named one spot, ignominiously dubbed Vinegar Hill, as Bellevue Hill for the beautiful views from the peak of the hill (now Bellevue Park). Despite the paucity of the soil, the wealthier of the colony soon recognised the opportunities for siting picturesque marine villas around the harbour.

In 1814 Macquarie established the Native Institution, aimed at educating Aboriginal children, at Parramatta. In an effort to 'domesticate and civilise' Aboriginal people from the 'Broken Bay tribe' among them Bungaree, Macquarie settled them on land

⁵³ James Broadbent and Joy Hughes, *The Age of Macquarie*, Historic Houses Trust of NSW, 1992, p.10

at George's Head in 1815.⁵⁴ Macquarie also set aside Elizabeth Bay for 'a model fishing village' for the Aboriginal people but although visited by the local clans it is unsurprising that Macquarie's plan for a spot of permanent habitation failed. It should be noted, however, that Macquarie was the first governor to give land back to the Aboriginal people.⁵⁵

5.4.8 Sydney 1820s -40s

By 1821 approximately half a million acres were owned by private settlers in the colony. Macquarie's successor, Governor Brisbane, chose to live at Parramatta, where he admired the park-like qualities of the landscape. He made significant changes to the Parramatta Government Domain, experimented with acclimatising potential commercial plants and willingly added five acres of the Sydney Domain for the expansion of Sydney Botanic Garden. Many wealthier free-settlers and government officials had taken up land in the Cumberland Plain and they found the proximity of their estates to Parramatta an advantage for informal meetings with the governor.⁵⁶

Governor Sir Ralph Darling chose to reside in Sydney and it was Darling who vastly improved and expanded the civil service to an integrated and efficient administration. His appointments included Colonial Secretary Alexander Macleay, who established himself at Elizabeth Bay and Surveyor General Thomas Mitchell, under whom he expanded the surveyor general's department and exploration. Governor Darling officially opened the Botanic Garden and Outer Domain to the general public and his introduction of a 100 foot-wide public foreshore reserve to land grants kept large areas of harbour foreshore and coastline in public ownership.⁵⁷

⁵⁴ Gavin Souter, *Mosman*, Melbourne University Press, 1994, p.27;

⁵⁵ Patricia Hale and Tanya Koeneman, *Governor Macquarie's Aboriginal Policy*.<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/govmacquarieaboriginalpolicy.pdf>

⁵⁶ Terry Kass, Carol Liston, John McClymont, *Parramatta, A Past Revealed*, Parramatta City Council, 1996, p.92.

⁵⁷ Robert Freestone, *Urban Nation, Australia's Planning Heritage*, CSIRO Publishing in association with the Department of Environment, water, Heritage and the Arts, 2010 p.104

Despite the large scale granting of land, development on the northern side of the harbour was limited. 'Large areas of present-day North Sydney were granted, and sold, to a few individuals in the first half of the 19th century. Former convict Billy Blue received all of present-day Blues and McMahons Points. James Milson received land around present-day Milsons Point and bought elsewhere in Kirribilli. In the early 1800s the merchant Robert Campbell acquired land granted to the convict Samuel Lightfoot, and Robert Ryan of the New South Wales Corp as early as 1794. John Piper, who was in charge of Customs, bought all present-day Neutral Bay around 1817. With his bankruptcy in the late 1820s this huge parcel of land, sometimes called the Thrupp Estate, was bought by the Cooper family who retained most of it through to the 1900s.'⁵⁸

In 1822, Edward Wollstonecraft who settled in Sydney in 1819, received the last of the large North Sydney grants given away before 1831. His estate comprised 524 acres of coastal woodland and heath, sandstone closed forest and Blue Gum high forest in what today are the suburbs of North Sydney, Wollstonecraft, Waverton and Crows Nest.⁵⁹ During the 1820s, Wollstonecraft and his brother-in-law and business partner Alexander Berry exploited cedar-getting opportunities on their south coast properties. They built small ships in the Shoalhaven (first one 1824) for the transport of timber and farm produce to Sydney.

The Crows Nest farm grant was crucial to these operations particularly its waterfront land so near to Sydney's port facilities and trade markets. The grant predated the 1828 reservation of 100 feet of foreshore land and so included all waterfront from Gore Cove to Berrys Bay, specifically Berrys Creek was its western boundary and east the creekline boundary of Billy Blue's land (in Waverton Park). This single land parcel owned and managed by its entrepreneurs was to have a long-term impact on its natural landscape. Areas of the grant remained untouched, Crows Nest cottage treated as a country farm included an orchard, but its surrounding heaths, woodlands and forests were retained, a buffer to the world and business

⁵⁸ <http://www.athomeinnorthsydney.com.au/estates.html> accessed 24 Nov, 2016.

⁵⁹ <http://www.athomeinnorthsydney.com.au/berry-estate.html> accessed 24 Nov, 2016.

concerns. The functional and practical side to the grant selection however was its available waterside access near to the hub of Sydney and its harbour port, the focus of business activities on the western shoreline of Berrys Bay. Although separated from the main colonial hub of Sydney, some settlers of modest means chose to live on the north shore – artist Conrad Martens, who arrived in 1836, was one such person.

From 1822 Thomas Hyndes, who owned a timber mill, leased 2000 acres in present day Wahroonga and added further land in the Hornsby area the following year. The upper North Shore between the Lane Cove River and Middle Harbour was comparatively difficult to access and remained largely unoccupied until the late nineteenth century.⁶⁰

An 1840 survey of the County of Cumberland shows the extent of land alienation **(Figure 14)**.

⁶⁰ Pauline Curby and Virginia Macleod, *Under the Canopy, a centenary history of Ku-ring-gai Council*, Ku-ring-gai Council, 2006, p.10



Figure 14: A map of the County of Cumberland in the Colony of New South Wales in 1840, compiled by W H Wells, a land surveyor, which shows the extent of the alienation of land. (Source: <http://nla.gov.au/nla.obj-229932091>)

5.4.9 The development of the Harbour foreshores and Port facilities.

By the 1830s, which was a period of economic prosperity, the need to expand the wharfage capacity in Sydney Cove was critical. Various plans were proposed for the subdivision of the east side of Sydney Cove, especially those linked to the provision of a new government house, which was built on the ridge to the west of Farm Cove. Changes to this area represented a major replanning of Sydney and were linked to commercial imperatives.⁶¹ The first stage in the transformation of Sydney Cove, a 'Semi-Circular' Quay plan commenced 1837 was completed in 1844. By the 1870s Sydney Cove was a major port.

To the west of Sydney at Cockle Bay, Governor Macquarie had allotted a site to John Dickson, who had imported a steam mill, which opened in 1815. Within ten years many windmills had disappeared from Sydney's skyline and by 1830, when the governor renamed Cockle Bay, Darling Harbour in his own honour, market wharves, flour mills, a brewery, shipbuilding wharves and warehouses were well-established. In 1836 the first gas works were built on the waterfront.⁶² Further west on the shores of Balmain by the 1830s there were shipyards and boatsheds, establishing a tradition that would see Mort's Dock and Cockatoo Island develop into the biggest shipyards in Australia.

In 1873 William Dunn began a boatyard in Berrys Bay on the opposite shore to Berrys wharf on the northern side of the harbour. He was 'possibly the first to establish boatbuilding on the concomitant northern shore of this western harbour. His business specialised in steamers. Among the most notable vessels launched there was the Wallaby (1878), the first double-ended ferry in Sydney Harbour designed by the renowned engineer Norman Selfe.'⁶³ One of Sydney's major timberyards also had its beginnings in 1879 at Berrys Bay.

⁶¹ Context with Robin Crocker, Ian Jack and Colleen Morris, 'Colonial Sydney Study Area: Town Planning and Aesthetic NHL Assessment', Vol 1 29 June, 2011, p.65

⁶² P R Stephenson and Brian Kennedy, *The history and description of Sydney Harbour*, A H and A W Reed, 1980, pp 158-159.

⁶³ Hoskins, Berrys Bay and Harbour Art.

5.4.10 Mental Health⁶⁴

The landscape setting was of major importance for institutions associated with mental health. Macquarie ordered the first asylum be built at Castle Hill and George Suttor, one of Australia's first nurserymen, was appointed its superintendent in 1814. However by 1825 it was woefully inadequate and a decision was made to build a new hospital nearer to Sydney. In the interim, the parsonage of St Luke's, Liverpool and the Female Factory, Parramatta, served as makeshift facilities.

In 1834 Governor Bourke settled on the site for a new lunatic asylum near Tarban Creek and the punt at Bedlam Point on the Parramatta River and ordered the construction of the first purpose-built asylum in the colony in 1837. This period coincided with an extended visit by the Quaker and naturalist James Backhouse. Fellow Quaker Samuel Tuke, of York, had an enlightened approach to the care of the mentally ill and was the foremost advocate of the 'moral' approach to patient care. The siting of the hospital above the Parramatta River obeyed the picturesque principles of landscape design which were prevalent at the time and followed by the initial designer of the Tarban Creek Asylum, Mortimer Lewis, as well as fulfilling one of Samuel Tuke's recommendations that mental asylums be sited so that they command a delightful prospect.

Initially, few funds were available for the adequate care of patients, let alone the establishment of substantial gardens although trees were cleared and some gardens developed. The hospital was overcrowded from the start, lacked an adequate water supply and although the Superintendent, Thomas Digby, knew that changes in care were required, he lacked the facilities to achieve them. Similarly Dr Francis Campbell, appointed in 1848, was hampered in in capacity to effect major improvements to the grounds.

The most active period of major landscaping came after the appointment of Dr Frederick Norton Manning as medical superintendent at Gladesville, and then as

⁶⁴This section draws on material previously prepared for reports by Colleen Morris, in particular Tanner Associates, Rozelle Hospital Conservation Management Plan Draft 2000.

Inspector General for the Insane. During the 1870s large amounts of plants were despatched from the Botanic Gardens to Dr Manning at Gladesville, indicating the extent of work being undertaken there. The propagation of plants at Gladesville was instigated as well. By the 1890s photographs of Gladesville Hospital show well-developed vineyards, vegetable gardens, ornamental gardens and a kangaroo enclosure.

Gladesville Hospital was the first of several large sites within greater Sydney that were established as large mental hospitals, and where the landscape setting was of major importance for functional, aesthetic and philosophical reasons. All of these sites are significant in their capacity as designed landscapes on a grand scale. An ideal aspect of the siting of these institutions in the 19th century was that they could be accessed by water so that patients could be transferred beyond the eyes of the general public.

An article, 'Landscapes for the mind' in the Spring 1998 newsletter of the Garden History Society of Britain highlights the need for a wider appreciation of what these cultural landscapes were - big landscape designs all in the public realm. Lambert and Dingwall write,

*The special nature of the designed grounds of hospitals combined contemporary thinking on work and fresh air, the need to accommodate a self-sufficient community, and the civic pride of provincial public authorities...*⁶⁵

Manning, together with the Government Architect, began searching for new hospital site in the 1870s and Callan Park, an estate on Iron Cove was chosen for the new asylum. Manning had adopted 'moral therapy' principles of psychiatric care for hospital planning. These principles were based on the belief that a positive, caring environment where the patient was involved with nature was beneficial. The landscape played a pivotal role in this method of treatment. Callan Park Mental

⁶⁵ David Lambert and Christopher Dingwall, 'Redundant Mental Hospitals', Garden History Society Newsletter, 52 Spring 1998, The Garden History Society, London, p.10.

Asylum was the first hospital in Australia to be designed, built and opened as a complete hospital using these principles. The development of the gardens and grounds, commenced prior to the construction of the buildings (1880 -1884), was a direct application of the moral therapy principles of patient care in the landscape.

At Parramatta Manning developed the Parramatta Mental Asylum, (Cumberland Hospital) around the early Female Factory building.

5.4.11 Early Sydney Harbour Defences

The first battery was installed on Dawes Point in 1791. In 1801, with Britain at war with the French, Denmark and Sweden, Governor Philip Gidley King ordered a more forward battery be built opposite the entrance to the harbour. Known as the Georges Head Battery and completed in 1803, it was on Obelisk Point near Middle Head. Fort Phillip on Observatory Hill was planned and commenced in 1804 but little progress on it was made, its external wall eventually becoming part of the Signal Station built on the site in the 1830s.⁶⁶ Fort Macquarie, commenced on Bennelong Point in 1817, opened in 1821.

A military gunpowder magazine was commenced on Goat Island (Mel-Mel) in 1833 and the complex completed in 1837. Following the appearance of American ships in Sydney Harbour, Fort Denison was begun in 1841 and finally completed in 1857.

Sydney's defences were expanded following the withdrawal of British soldiers from Australia during the 1870s. This prompted the construction of four sets of fortifications on Georges Heights and around other parts of the harbour, the Middle Head Fortifications, the Georges Head Battery, the Lower Georges Heights Commanding Position and a smaller fort located on Bradleys Head were constructed during this period and upgraded in the 1880s. A Submarine Miners' Depot was constructed at Chowder Bay (Georges Head) in the 1890s and it operated until

⁶⁶ http://www.powerhousemuseum.com/collection/database/theme.1039.Fort_Phillip_Observatory_Hill_Sydney accessed 24 Nov, 2016.

1922.⁶⁷ From between 1878-1890s the NSW Torpedo Corps operated from Berrys Bay.

5.4.12 Quarantine

The Quarantine Station complex at North Head near Manly operated from 1832 until 1984. All people arriving who had the possibility of having a contagious disease were kept in quarantine until it was deemed safe to release them. Its relative isolation meant that the broader natural environs of the station were undeveloped. After its closure it was reserved as part of the Sydney Harbour National Park.

5.4.13 Sydney Harbour Trust 1901-1936

Following Federation in 1901, the Sydney Harbour Trust was formed to manage the public waterfront. It reported to the new State government and assumed responsibility for the Rocks four months after it began work.⁶⁸ When the plague hit Sydney, private wharfs were brought under public control and the Trust supervised the construction of new wharves at Walsh Bay and Darling Harbour. Displaced families and workers were housed in functional terraces constructed in the Rocks and Miller's Point.⁶⁹

'The Royal Commission into the Improvement of Sydney and its Suburbs' was convened in 1909 and as a result improved communication and transport around the waterways became a high priority. It was an era of grand plans for Australia's busiest harbor – schemes were discussed for Circular Quay as the 'principal waterfront' but importantly the Commissioners Robert Hickson and Norman Selfe preferred a separation between the 'picturesque east' of the harbour and the 'working west'.⁷⁰ The working western harbour was a scene of boatbuilding, docks, sawmills, coal loading and gas works and nearby suburbs housed the workers in these maritime industries. Another important aspect of the Royal Commission is that

⁶⁷ <http://www.harbourtrust.gov.au/system/files/pages/8f218079-46e1-0834-6185-c9fe52751d07/files/chpt-7-middlehead.pdf> accessed 28 November 2016

⁶⁸ Ian Hoskins, *Sydney Harbour, A history*, UNSW Press, 2009, p.198

⁶⁹ Hoskins, o. cit. pp 203-204.

⁷⁰ Ibid. p. 209.

it emphasised that privatisation of the foreshore 'on the headlands or along the bays of the harbour' should cease.

Artists had discovered the coves and bays of the north shore in the 1890s and set up camps to paint 'en plein air', the most famous of these being around Mosman.

The Sydney Harbour Bridge Bill was introduced in 1916 and construction of the largest and most impressive structure of the period became a focus of achievement but it came at a cost – hundreds of families were displaced and some 500 buildings around Milson's Point and North Sydney alone were demolished. Opened in 1932, the Bridge revolutionised transport between the north and south of the harbour.

Balls Head, its peninsula and Berrys Bay began to attract other interested parties 'its deepwater frontages considered suitable for industrial or commercial development.'⁷¹ The 'Commonwealth Director of Quarantine', argued in 1911 that 'It is essential for the proper local Quarantine administration at Sydney that a Quarantine Depot with a water frontage convenient to the City be secured.'⁷² Soon after 'The Coal Loader which originally functioned as a steam ship bunkering station,' in 1913-17 had set up on the western side of the Waverton Peninsula, 'delivering Hunter Valley coal to ships in the harbour for fuel and for export. With the demise of steam-powered ships, the loader mainly operated for trans-shipping coal between ships and to road carriers.'⁷³ 'It was in this busy period that Sydney's artists became interested in the 'picturesque' qualities of the working waterfront at Berrys Bay.

By the 1920s, Balls Head had been denuded of vegetation probably by the practice of gathering firewood and the construction of the coal loader. The NSW Government was considering leasing Berry Island in exchange 'for Council's occupancy there with undeveloped land at Balls Head which could be dedicated as public reserve.' Advocacy by members of council and community fought to retain both for 'public

⁷¹ Hoskins, A Short History of Balls Head and Berry Island Reserves 1906-1940, 2016.

⁷² National Trust, National Trust Register Listing Report, Former Quarantine Boat Depot, 2015.

⁷³ State Heritage Inventory for Former Coal Loader
<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2180699> accessed 12/03/17.

recreation.’ Although the Coalition Government at the time did not support this, the Labour Party agreed, when they came to office the two reserves were gazetted for public recreation 25 June, 1926. Premier Jack Lang later ‘reiterated the need to protect public ownership of the Harbour’s foreshore.’⁷⁴

As early as 1927, there was an effort to control the ‘height, materials, stability and design’ around the foreshores of the harbour although this was ineffective.⁷⁵ Concerns about the denudation of Balls Head peninsula culminated in a significant tree-planting event in 1931 that united many like-minded individuals and groups in regards landscape conservation. In 1935, over 6 acres were added to Balls Head Reserve and revegetation was undertaken. In 1938, a lookout at Balls Head was named in honour of entomologist W.W. Froggatt, leader of the Field Naturalists Society.

The changing interest in the areas around the Harbour that occurred in the 1930s represented a slight shift in community attitudes to the Australian landscape. Historian Ian Hoskins summarised the shift in interest from the bush to the Harbour:

*Though much admired for its beauty, there was less artistic and literary interest in the harbour's boatbuilders, wharf workers, sailors and fishers. The colony, then the nation, was defined by the flocks and forests and people of the inland. It was only after the building of the Sydney Harbour Bridge that, from 1932, the waterway represented Australia. The harbour's iconic status was confirmed with the completion of the Sydney Opera House in 1973, the tourist boom that followed and the Bicentenary of 1988.*⁷⁶

5.4.14 Royal Australian Navy

Garden Island had been used as a base by the British Royal Navy since 1859 and Cockatoo Island serviced British ships. The establishment of the Royal Australian

⁷⁴ Hoskins, A Short History of Balls Head and Berry Island Reserves 1906-1940.

⁷⁵ Ian Hoskins, Sydney Harbour, A history, p.219.

⁷⁶ http://www.dictionaryofsydney.org/entry/sydney_harbour_a_cultural_landscape;

Ian Hoskins, Sydney Harbour: A Cultural Landscape, Dictionary of Sydney, 2013.

Navy (RAN) in 1911 necessitated the rearrangement of naval sites around the harbour and Garden Island was transferred to the Commonwealth as the RAN's base. During WWI, work on the construction and refitting of armed transport ships at Cockatoo Island increased. By 1919 nearly 4,000 people worked on Cockatoo Island and there was a close relationship between the islands and the nearby worker's suburbs Balmain and Rozelle.

5.4.15 The Maritime Services Board 1936-1994

The Maritime Services Board (MSB) superseded the Sydney Harbour Trust and the great Macquarie era Commissariat Building on the western arm of Circular Quay was pulled down to make way for the new MSB Building, the head office of the new body. The art deco style of the building was already outdated by the time it was completed in 1949. The function of the Board was to administer ports and port facilities including wharves, piloting and the conservation of navigable waters. It transferred responsibility for Fort Denison and Goat Island to the National Parks and Wildlife Service in 1993.

5.4.16 The County of Cumberland Planning Scheme 1948

This plan was intended to bring integrated development to greater Sydney and was illustrated by a map (**Figure 15**). Around the harbour it recognised that 'life and beauty' had frequently been replaced by 'a discordant mass of buildings, often to the water's edge.'⁷⁷ Hoskins summarised the impact of this plan on Sydney Harbour:

It estimated that about a third of the industry currently located by the harbour did not need to be there and recommended that industrial foreshore areas should be established only if 'the use of waterfront facilities is essential to their operation.' However, although it gave special recognition to Ball Head as a beauty spot, the council generally adhered to the east-west divide that characterised earlier recommendations for harbour development. Industry at McMahons Point was acceptable, presumably because the area had accommodated it for much of the previous century with

⁷⁷ Hoskins, *Sydney Harbour*, op. cit. p. 277

boatbuilders, a timber yard and, more recently, a line of oil tanks set into the sandstone cliffs on the western side of neighbouring Berrys Bay.⁷⁸

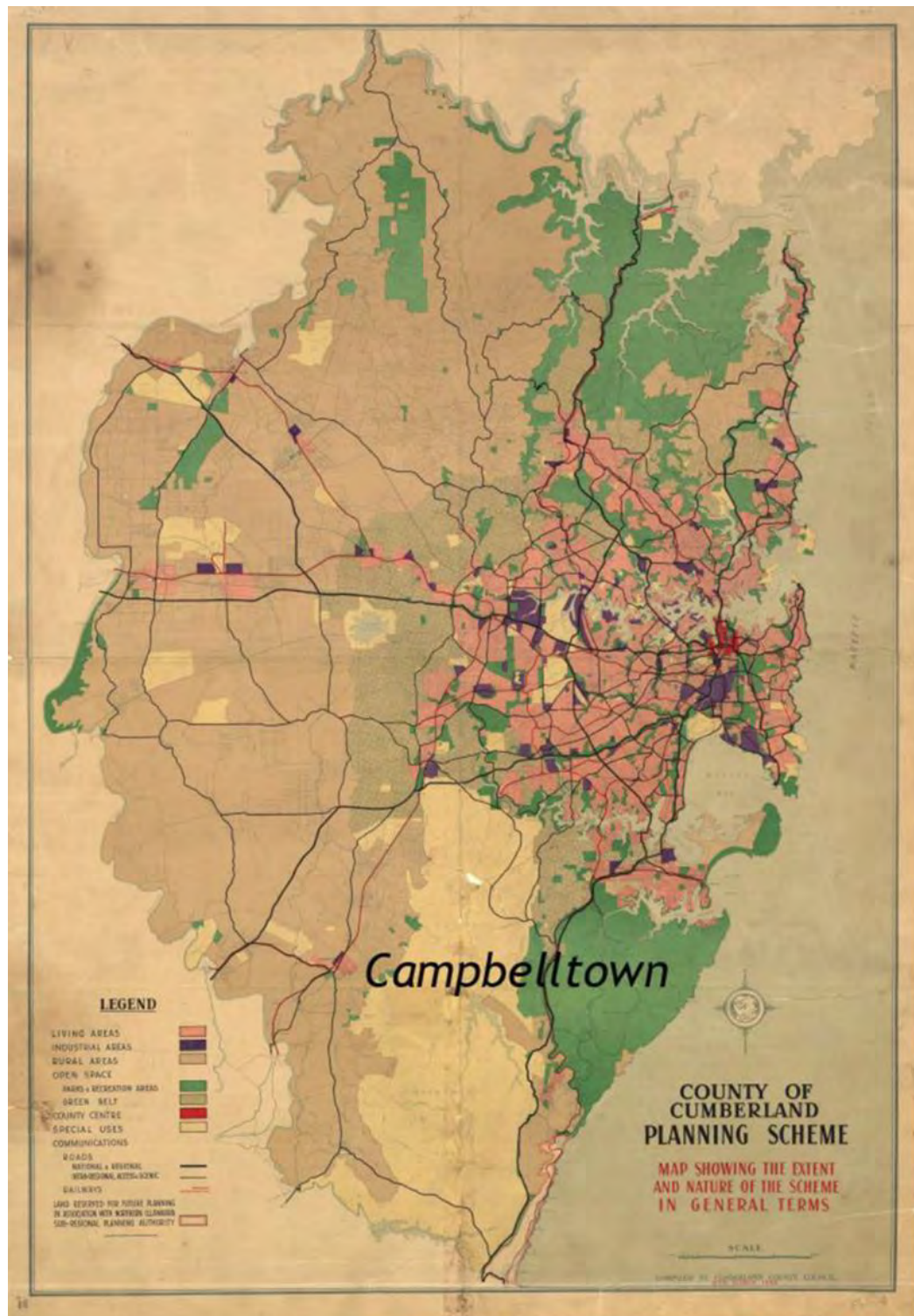


Figure 15: Map of County of Cumberland Planning Scheme 1948
http://www.dictionaryofsydney.org/entry/county_of_cumberland_planning_scheme; Sydney Regional Outline Plan.

⁷⁸ Hoskins, *Sydney Harbour*, op. cit. p.277.

Architect Harry Seidler countered with his own scheme for highrise residential apartments for McMahons Point, which was met with almost universal approval. The first of his towers at Blue's Point was built but it proved difficult to sell the flats and the rest of the scheme remained unrealised.

5.4.17 Royal National Park

A notable feature of the County of Cumberland Plan was the large green area on the coast to the south of Sydney. Under the Crown Lands Alienation Act of 1861, the area had been dedicated for the purpose of a National Park in 1879 and was reserved for 'public health and recreation, convenience, or enjoyment.'⁷⁹ At an international level it was one of the earliest national parks created. By 1880 the area was extended to a total area of 14,164 hectares. It was somewhat revolutionary for the time and conveyed a clear sense that the Government of the day recognised the need for recreation areas and the provision of places where the population could escape the city for clean air. In the years since its inception it had been a place used for passive and active recreation. Parts of the Park were planted with exotic species and landscaped in an ornamental manner and it was used for the acclimatisation of animals – thus deer were introduced and became a pest species. From the early 1900s shacks were erected in parts of the Park as weekenders. During the Depression years of the 1930s many of these became occupied permanently as unemployed miners from the nearby mining areas such as Coalcliff and Helensburgh sought refuge there.

The far-sighted nature of the decision in 1879 is appreciable when the 1948 Plan is considered. The inviolability of the Royal National Park has been constant until recent times, whereas the ambitions to set aside additional green spaces as Sydney expanded, which was enunciated in the County of Cumberland Plan, have been routinely thwarted.

⁷⁹ Dr Geoff Mosley, THE FIRST NATIONAL PARK, A Natural For World Heritage, 2012

5.4.17 Sydney Opera House

The need for a performing arts centre in Sydney had been debated for some decades but this quickened after 1947 when English composer Sir Eugene Goossens took up the position of Conductor of the Sydney Symphony Orchestra. He found support in Joseph Cahill, NSW Premier from 1952, and in 1955 Bennelong Point was declared the site for the proposed Opera House and competition guidelines for its design were released. Construction on Jorn Utzon's winning entry was commenced in 1959 and the building of the twentieth century icon captivated Sydneysiders well beyond its completion in 1973.

5.4.18 Alternative Parkland

By the 1960s the maritime industries were in decline around the harbour, particularly around Balmain: an area that underwent considerable social change as a result. Many shipyards ceased trading such as Morrison and Sinclair on Long Nose Point in 1970.⁸⁰

Under the guidance of modernist architect and planner and Chair of the State Planning Authority, Nigel Ashton (1911-2008), the Sydney Harbour Foreshore Study was completed in December 1967. Ashton and Lindsay Robertson (1936-1974), the first Landscape Architect appointed to the State Planning Authority, played a critical role in identifying and acquiring a number of sites for harbourside parks, including those at Long Nose Point, Birchgrove and Peacock Point, Balmain. Parks at Kurraba and Clarks Points also resulted from Ashton and Robertson's vision. At the time, landscape architect Finn Thorvaldson was designing wharves for the Maritime Services Board and was instrumental in the selection of Bruce Mackenzie to design a new park at Peacock Point.⁸¹ In 1968 the decision to transform abandoned industrial waterfront sites, by reclaiming land for public open space, was a radical one, as was Bruce Mackenzie's design solution for Peacock Point (later Yurulbin). Yurulbin was the forerunner of his Long Nose Point masterplan to transform the tip of Birchgrove. According to Mackenzie, the State Planning Authority NSW, who

⁸⁰ The Balmain Association incorporated news sheet, *The Peninsula Observer*, Vol 36, No5, Issue 273, October 2001, p.1

⁸¹ Information supplied by Craig Burton 21.July 2017.

commissioned the work, was responding to local community needs and, in 1970, celebrations of the bicentenary of Captain Cook's discovery of Botany Bay. Thorvaldson worked with Mackenzie on the design and construction of the park at Peacock Point, bringing his experience with the Maritime Services Board (MSB) to the project.

The budgets for the parks were constrained and the unpretentious nature of the places and changing community attitudes of the early 1970s meant that the parks were built using recycled building stone, wharf piles and discarded telephone poles. Mackenzie's objective was that Peacock Point, renamed Illoura Reserve and the Long Nose Point park, now Yurulbin were a homage to the seawalls and wharves of the 'old' Sydney Harbour. The parks' designs were also innovative for the intention to recreate the Sydney sandstone bushland of nearby Berry Island and Balls Head. Mackenzie later coined the phrase 'alternative parkland' for these designs, which are now considered a significant turning point in Australian landscape architecture.

5.4.19 Sydney Harbour National Park

In the 1960s growing public interest in protecting bushland culminated in the creation of the National Parks and Wildlife Service of NSW in 1967. Further advancements were made around the harbour from 1975 with the formation of Sydney National Park from existing bushland parks (Ashton Park, Bradleys Head, Nielsen Park) with gradual incorporation of former military lands at Middle Head, North Head and South Head, as well as a number of Harbour islands.

5.4.20 The Battle for Kelly's Bush and the first Green Ban

The fight to save 4.8 hectares of land on the southern foreshore of the Woolwich Peninsula was a watershed moment in the history of community action to save foreshore land from development. A smelting works had occupied the site since the 1890s and after it relocated in 1967, a developer took over, much to the disappointment of Hunter's Hill Council, who had hoped to purchase the land to extend an adjacent park.

Thirteen local women formed a committee called Battlers for Kelly's Bush in September 1970 and publicised their 'battle' state-wide. The Battlers formed an unlikely alliance with the avowed communist leaders, including Jack Munday, of the Builders' Labourers Federation, who in 1971 imposed the first Green Ban on any clearance or development of the site. It was not until 1983 that Premier Neville Wran announced that the government has purchased Kelly's Bush for open space, saying 'this represents a victory for environmentalists generally.'⁸²

In 1997 Premier Bob Carr issued a statement:

*As a general objective, the NSW Government hopes to use the disposal of surplus Defence properties around the Harbour to re-establish the Nielsen concept of a green belt around Sydney Harbour.*⁸³

The success of sensitive design in the Harbour's bushland setting was emphasised in the 1998 work for Sydney Harbour National Park at Bradley's Head. Landscape architect Craig Burton, architect Ian Martin and master stonemason George Proudman produced a restrained and acclaimed response to the bushland Harbour foreshore when they designed the Wharf Area Amphitheatre.

As Sydney entered a new millennium Craig Burton raised the following question:

*How do Sydney Harbour National Park's fragments of urban bushland integrate with other fragments in the care of the Commonwealth and local government, in order to weave the natural and built fabric of the city together to the benefit of all?*⁸⁴

5.4.21 Sydney Harbour environs in the 21st century

Efforts to protect and enhance the environs of Sydney Harbour have gained momentum in the 21st century. Increasingly the Sydney Harbour catchment was seen

⁸² http://dictionaryofsydney.org/entry/kellys_bush Terri McCormack, Kelly's Bush, 2008

⁸³ *Sydney Harbour Foreshore* A Statement by Hon. Bob Carr M.P. Premier of NSW, August 1997.

⁸⁴ Craig Burton, Nature as Culture: Sydney Harbour and Water as Place, *Landscape Australia* 4-2000,p.307.

as 'a system, which must be managed as a single complex place.'⁸⁵ Remnant native or regenerated vegetation is increasingly valued in scientific and aesthetic terms.

In 2001 the Sydney Harbour Federation Trust was formed with the aim to restore and return former defence and Commonwealth sites around Sydney Harbour to the people of Australia – these sites were Cockatoo Island and defence lands at North Head, Mosman and Woolwich Dock.

In 2003 the former defence precincts at Chowder Bay, Middle Head and Georges Heights were combined to form Mosman's Headland Park. At Lower Georges Heights a whole new park precinct, designed by CAB Consulting, was created from a former Army Transport base and the Former Marine Biological Station at Camp Cove was transformed to a Park.

At the same time the National Trust of Australia (NSW) raised concerns about the future of Sydney's 'Working Harbour' and convened a 'Summit' in 2003. This was precipitated by the State Government announcement that the leases on the major container terminals at White Bay, Glebe Island and Darling Harbour would lapse in 2006 and not be renewed. Overall, the public was concerned that the foreshore not be developed into luxury housing, declaring a preference for parks. The debate that ensued gave Sydney a naturalistic headland park at Barangaroo, as a trade off for intensive development further south around Darling Harbour.

In 2003 the Auditor-General reported on the *Disposal of Sydney Harbour Foreshore Land* and stated:

Agencies and local councils may legitimately be following different agendas within an overall strategy. Communication is needed of the right sort, at the right time, to the right people, on the right issues. General in-principle understandings would not

⁸⁵'Our Harbour' Agreement between the Minister for Planning, the Sydney Harbour Executive and Sydney Harbour Councils, October 2002.

be sufficient. This requires a dynamic and sophisticated matrix form of governance. The importance of Sydney Harbour demands no less.⁸⁶

In 2005 a Sydney Harbour Regional Environmental Plan was created that included a Heritage map (**Figure 16**). However the principles that underlie the REP are repeatedly challenged by proposals for development that may detract from the scenic qualities of the bays and inlets of the harbour. There is now concern that the area covered under the REP is not big enough to prevent over-scaled, ridge top development.

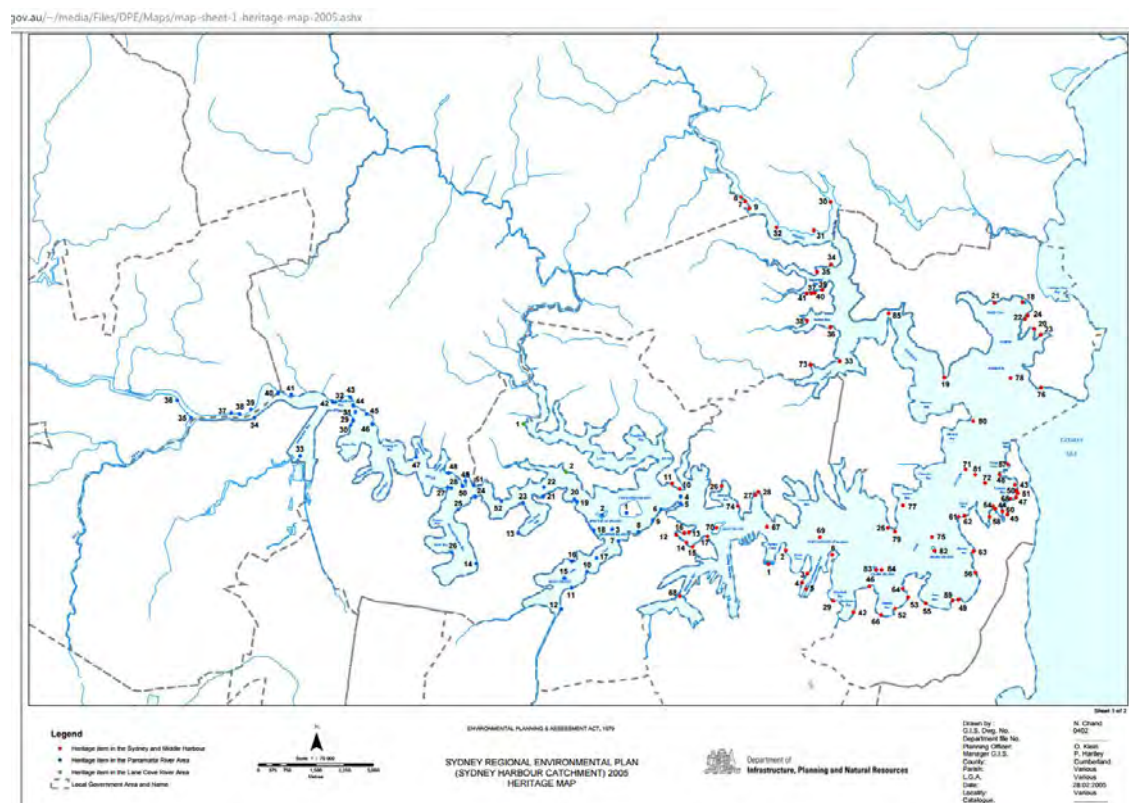


Figure 16: Heritage map within the Strategic Foreshore map of the REP. <http://www.planning.nsw.gov.au/~media/Files/DPE/Maps/map-sheet-1-heritage-map-2005.ashx>

In 2015 the National Trust of Australia (NSW) revised their Sydney Harbour Landscape Conservation Area (**Figure 17**), listed for its extraordinary scenic and social significance.

⁸⁶ Auditor-General's Report Performance Audit, *Disposal of Sydney Harbour Foreshore Land*. November 2003, p. 43.

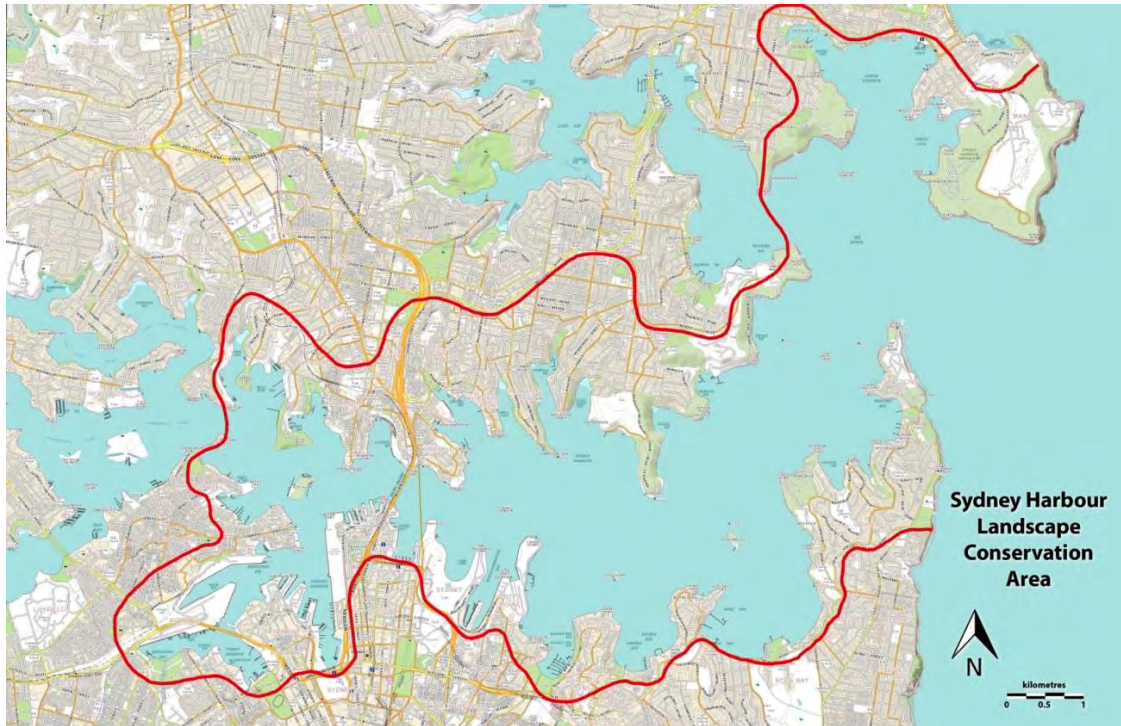


Figure 17: Map of Sydney Harbour Landscape Conservation Area - the red line forms the boundary of the National Trust Sydney Harbour Landscape Conservation Area listing.

Included in this non-statutory listing was the following text:

‘Much has been written about the charm of the harbour landscape and many artists have attempted to capture its beauty. One reference could be quoted, from *Point Piper, Past and Present* by G. Nesta Griffiths’....

But above all, it is always the harbour to which one turns. Blue glistening and sunny, misty or grey, it is always beautiful. On hot summer evenings, when the lights of the ferry steamers are reflected to more than twice their depth, drowning in their own loveliness, and the whole embracing shores of myriad of dancing lights, it is a scene of breath-catching beauty which custom cannot stale. Whether the moon rides high, or winds fill gay white sails, day or night, dawn or flaming sunset, it is no wonder that we delight in our good fortune to live by these waters.

Currently multiple authorities have designated power over areas of the harbour and its foreshore, these are listed in **Volume 2, Appendix D**.

6 Opportunities

6.1 Introduction

Sydney Harbour is a natural, historical and economic asset to New South Wales. Recognition of its national and world heritage significance is argued for by leading landscape architects and heritage practitioners. Three proposals for listing Sydney Harbour, or part thereof, were considered. The final proposal adopted was the most feasible for the study.

Landscape conservation areas, heritage curtilages, and the possibilities of expanded curtilages to capture viewsheds intrinsic to the significance of a place beyond property boundaries were found to be central to the argument for listing and conserving large cultural landscapes.

6.2 Sydney Harbour World Heritage nomination

The concept of nominating Sydney Harbour for World Heritage recognition gained momentum in the early 1990s when work was being undertaken on the World Heritage nomination for the Sydney Opera House. Some practitioners canvassed including the Royal Botanic Garden, Sydney parts of the Harbour and the Sydney Harbour Bridge under the same nomination.

When the Sydney Opera House was included on the UNESCO World Heritage List in June 2007 it included a Buffer Zone of 438.1ha (**Figure 18**). This buffer zone effectively encompasses a 'visual curtilage' of the Opera House.



Figure 18: Map of the World Heritage Listing buffer zone (hatched) for Sydney Opera House.

The AILA Cultural Landscape study team is of the opinion that utilising this mechanism is a worthy means of providing further protection for important landscapes. Although this type of zoning has been used in the past, for example ‘The Priory’ at Gladesville includes the visual curtilage from the bridge over Tarban Creek, it is now generally not encouraged. An exception to this is the recent successful listing of Brett Whiteley’s house and studio at Lavender Bay and its important visual curtilage, which is critical to the appreciation of the paintings rendered in the studio.

Within Sydney Harbour, Cockatoo Island is also part of the World Heritage List of eleven Australian Convict Sites inscribed in 2010.

In 2008 Mike Baird, then a NSW Shadow Minister, suggested that rather than fight piecemeal for nominations, ‘we should link arms and try to world heritage list the entire Sydney Harbour and adjoining public buildings and land.... It meets UNESCO’s World Heritage Committee’s selection criteria, would put pride back into our city and importantly passes the common sense test.’⁸⁷ However there is no indication to what extent Baird pursued this when Premier of NSW 2014-2017.

AILA NSW supports the World Heritage Listing of Sydney Harbour and adjoining public buildings and land.

6.3 National Trust Sydney Harbour Landscape Conservation Area listing

The Sydney Harbour Landscape Conservation Area is a non-statutory listing (Section 5.4.20). AILA (NSW) and ALHG will consider publicly endorsing this listing and joining with the National Trust to use it as the basis for a nomination to the State Heritage Register.

6.4 Sydney Harbour and its Tributaries, s.170 Maritime NSW SHR nomination

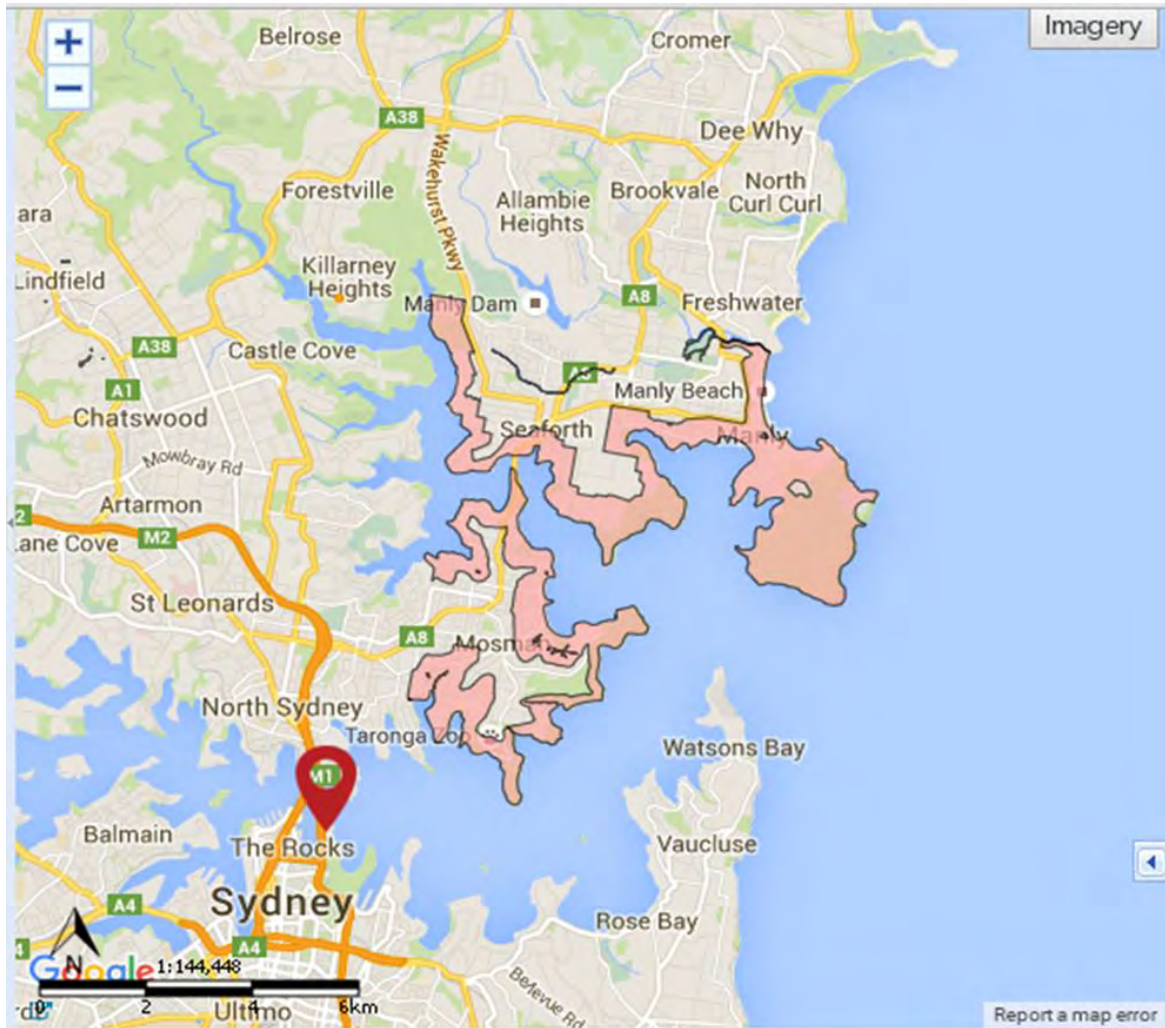
Sydney Harbour is listed on Maritime NSW s.170 statutory Register, which presents another possibility for listing the Harbour as a whole.⁸⁸

6.5 Scenic Protection Land

The use of Scenic Protection Land zones is utilized by local government to assist in the protection of important local landscapes. An important example in the harbour context is illustrated in the zoning maps for Manly and Mosman (**Figure 19**).

⁸⁷ <http://www.realdirt.com.au/2008/07/05/lets-world-heritage-list-sydney-harbour-including-north-head/> Accessed 3 August, 2017.

⁸⁸ <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageltemDetails.aspx?ID=4920065>. Accessed 19 February 2018



Manly Local Environmental Plan 2013

Current version for 5 August 2015 to date (accessed 15 November 2016 at 06:47)
 Part 6 > Clause 6.9

6.9 Foreshore scenic protection area

- (1) The objective of this clause is to protect visual aesthetic amenity and views to and from Sydney Harbour, the Pacific Ocean and the foreshore of Manly.
- (2) This clause applies to land that is shown as 'Foreshore Scenic Protection Area' on the [Foreshore Scenic Protection Area Map](#)
- (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the following matters:
 - (a) impacts that are of detriment to the visual amenity of the harbor or coastal foreshore, including overshadowing of the foreshore and any loss of views from a public place to the foreshore.
 - (b) measures to protect and improve scenic qualities of the coastline.
 - (c) suitability of development given its type, location and design and its relationship with and impact on the foreshore.
 - (d) measures to reduce the potential for conflict between land-based and water-based coastal activities.

Figure 19: Map of Scenic Protection Zones for Manly and Mosman LGAs
 (Source: Planning Portal map) – the definitions and objectives are included (Manly LEP 2013)

6.6 AILA SHR nomination

The study's vision is to provide feasible opportunities for the statutory recognition of significant cultural landscapes. The opportunities for protecting Sydney Harbour discussed above have taken a large-scale approach. Although there is little doubt that what is required is a *whole of landscape approach*, not just parts of it selected for listing, this has been difficult to achieve. The NSW Office of Environment and Heritage now advocates for a change in the management of landscapes from a site-based approach to a landscape approach and have implemented this in the National Parks of NSW. Applying this philosophical shift to SHR listing cultural landscapes is less straightforward. In the past the SHR listing process evolved from a fabric-based approach which focused on significant built elements with landscape as a setting. What is required is to invert the process where landscape is the significant item with the important built structures as elements within and responding to it.

The lessons learnt in the study by Morris and Britton (1997-2000) identified multiple land ownership, and the implications of a protracted process of negotiation required, as a major impediment to SHR listing. However, that process was undertaken when the town of Braidwood and its setting was listed. Many perceived problems could be managed through the exemptions clauses— such as the continuity of use of harbour moorings and the maintenance of structures and parks.

6.6.1 Curtilage types to conserve landscapes

The original purpose of a heritage curtilage was to define and conserve the interpretative area essential to a listed item's significance. It is intended to encompass all components and aspects that contribute to the significance of a place. As most items on the SHR are built items and their history/associations/fabric is generally contained within a historical property boundary, most heritage curtilages align with a property allotment. The effort to gain co-operation from property owners, sometimes results in negotiation over listing boundaries for many larger places. The final listing boundary may not always be the optimum, however it is still intended to encompass the significant components and the ability to interpret that significance. Often the broader landscape setting, or expanded curtilage, is

acknowledged but does not fall within the SHR curtilage boundary as illustrated on its statutory plan or diagram. This boundary rarely extends over waterways.

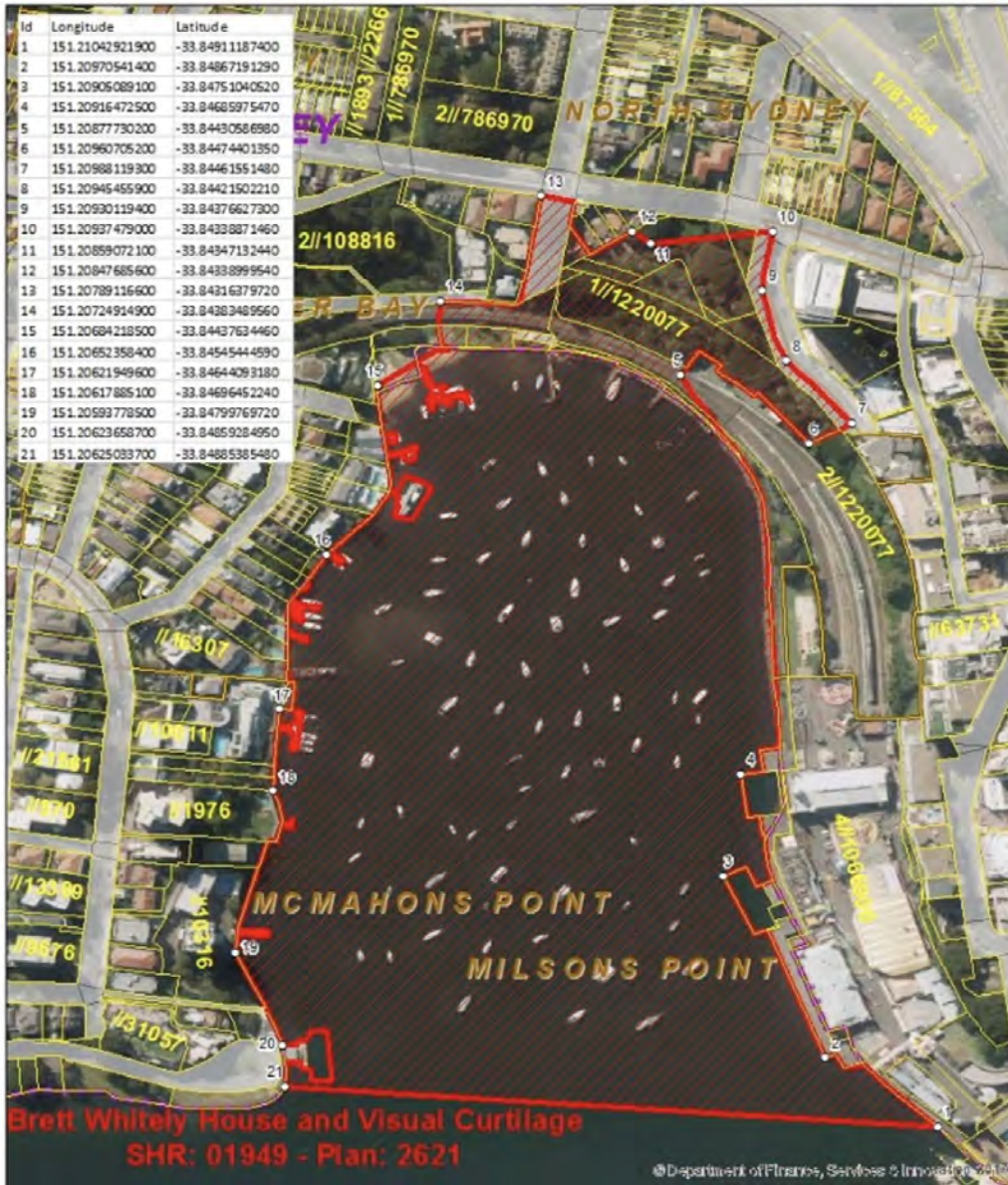
The broader context of a place, its natural systems, drainage catchments, waterplanes, viewsheds and spatial qualities, and human response to these, led to the consideration of other curtilage types as a means to capture and conserve large landscape areas of significance.

There were two types of protection considered below: the 'expanded curtilage' which aims 'to protect the landscape setting or visual catchment of a setting' and 'composite heritage curtilage,' of which the village of Berrima, in country NSW, is an example. This type, it has been stressed, is difficult to define.⁸⁹ The National Trust, since 1974, utilised this latter approach when developing non-statutory listings of valued natural and culturally significant places, these are termed landscape conservation areas (LCA). The example above and the Illawarra Escarpment LCA have become statutory at local level. The National Trust has 101 landscape conservation areas in NSW listed in its database.

The SHR listing of The Priory, Gladesville Hospital north (**Figure 21**), discussed in the Hunters Hill LEP Review (Volume 2, Appendix B), is an important reference for the study because the site, an extensive cultural landscape includes foreshore land, several heritage items and importantly the waterplane associated with Tarban Creek.

The importance of the view catchment encompassed in the paintings by the acclaimed artist Brett Whiteley from his house and painted in his studio at Lavender Bay, and the garden created by Wendy Whiteley on government land (Railcorp) were recognised in the SHR Listing nomination.

⁸⁹ Mayne-Wilson, *Heritage Curtilages*, pp.7-8.



State Heritage Register - SHR 01949, Plan 2621
Brett Whiteley House and Visual Curtilage

Gazettal Date: 23 March 2018

0 30 60 90 120 Meters

Scale: 1:3,750

Datum/Projection: GCS GDA 1994



- SHR Curtilage
- Land Parcels
- Railways
- Roads
- Suburbs
- LGAs

Figure 20: SHR curtilage map for State Heritage Register listing of Brett Whiteley House and Visual Curtilage.

The house, its setting and the views were considered to be of state significance as the inspiration for the considerable body of Brett Whiteley's art undertaken there. These values are protected in the proposed Brett Whiteley House and Visual Curtilage Version 3 (Figure 20).



Figure 21. Capture from the NSW Planning Portal for the LEP review. The State Heritage Landscape Conservation Area, outlined and hatched in blue, for the Priory site in the Hunters Hill LEP, extends over a portion of Tarban Creek and its broader waterway.

The desktop review process highlighted the possibility of connecting identified significant catchment landscape fragments. Using the previous models, the study considered several nomination places as having potential to be listed as composite or serial listings. This opportunity suggested a ‘big picture’ methodology that would in turn satisfy the requirements of the brief to consider and nominate landscape conservation areas.

Under this approach, the following SHR listings or landscape conservation area opportunities were proposed:

- The Berrys Bay Landscape Conservation Area;
- The Berry Island Landscape Conservation Area; and
- The Yurulbin Landscape Conservation Area.

Within each of these areas, specific nomination places, each displaying characteristics of the Harbour's waterways, foreshores, forested ridgelines, rocky sandstone cliffs, shores and Aboriginal heritage and cultural heritage were considered. While the whole is greater than the sum of its parts, it was a challenge to capture this complexity in a single listing.

The defining of landscape conservation areas for the study however exceeded the requirements of the grant. To achieve the listing of these precincts, further detailed mapping of the visual catchment for the proposed nomination places was necessary (**Figure 22**). To a degree this was achieved by the study in the desktop reviews and collective tables of heritage listed landscapes for each LGA. These documents produced enough evidence to support an argument for precinct listing. The purpose of the grant however was to list 10 sites for nomination. The preliminary scoping for these landscape conservation areas and the production of foundation evidence to support their listing at a local or state level is an achievement of the study. This largely came about in the study as a bi-product of the application of the landscape approach or landscape lens.

The results of the project, and its methodology, and the aim of the grant presented the opportunity to list 20 potential landscape sites for the SHR, these are outlined below. The list included places, which were identified before the focus was narrowed to the Sydney Harbour catchment.

Preliminary Listings for consideration

This list includes places identified in the focus workshop, desktop review and ALHG feedback.

Yurulbin

Ballast Point Park

Berry Island Reserve

Wollstonecraft Foreshore Reserves

Balls Head Reserve

Carradah Park

Arthur McElhone Reserve

Gladesville Hospital

Lang Park

Royal National Park

Ashton Park

Sydney Harbour National Park

Richmond Campus

Sawmillers Reserve

Pitt Town Bottoms

Peat Island

McKell Park

Central Magistrates' Courtyard

Bicentennial Park

Mount Tomah

Mount Annan

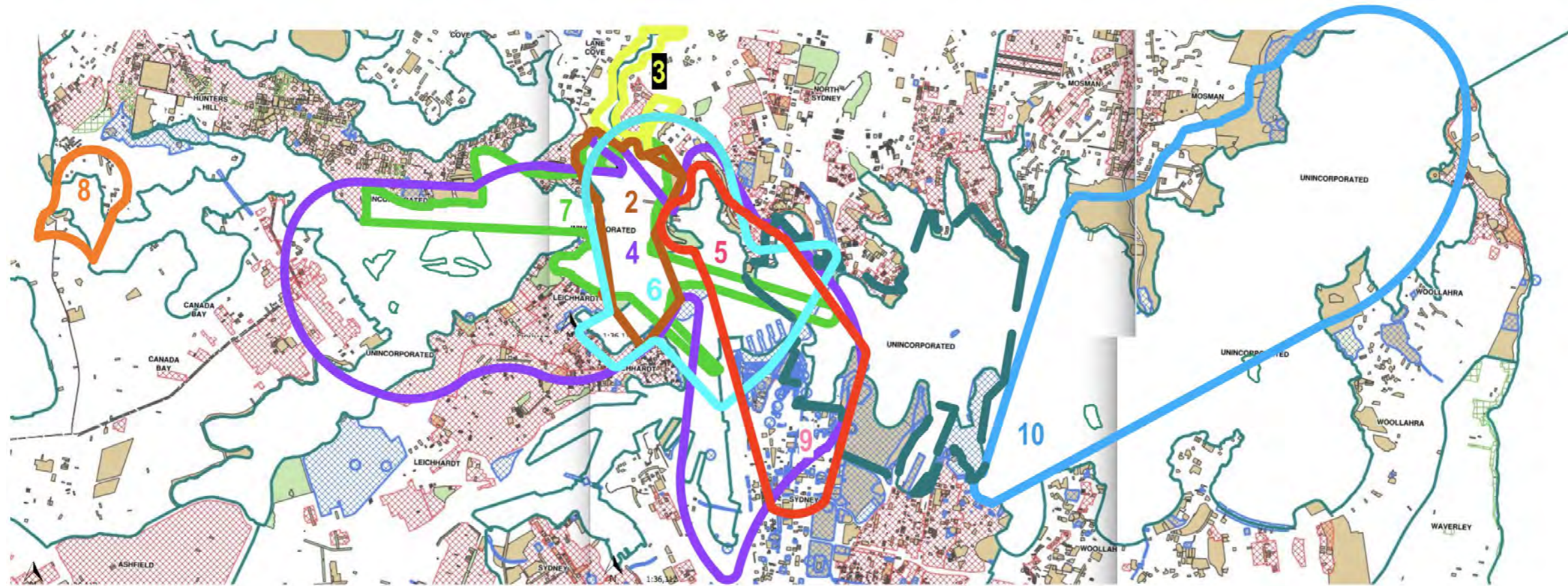
Macquarie University

Sydney – Newcastle expressway

Pitt Town Bottoms

Chinese Friendship Garden + Fred the Fig

Sydney Olympic Park

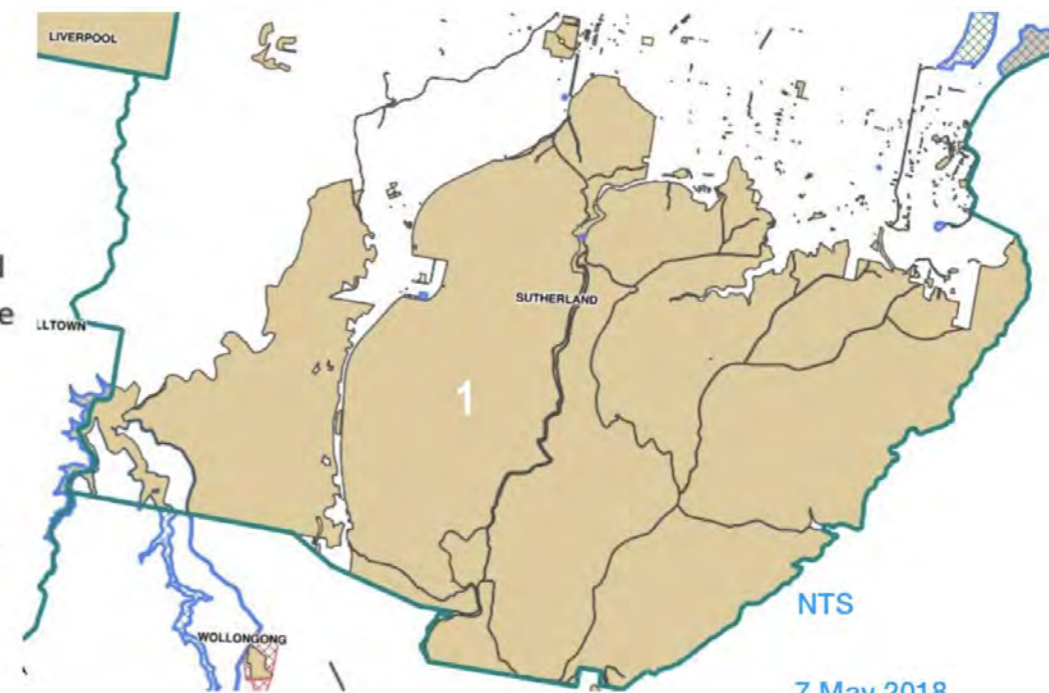


Key

1	Greater Royal National Park (not mapped)
2	Berry Island Reserve
3	Wollstonecraft Foreshore Reserves
4	Balls Head Reserve
5	Berrys Bay Precinct (Carradah Park)
6	Ballast Point Park
7	Yurulbin
8	Gladesville Hospital Landscape
9	Lang Park
10	Elizabeth Bay House and Landscape Setting

Planning Portal Key

Property	□
Heritage	
State Heritage Act	▨
Conservation Area - General	▩
Conservation Area - Aboriginal	▪
Conservation Area - Landscape	▫
Item - General	■
Item - Aboriginal	■
Item - Archaeological	■
Item - Landscape	■
Sydney Opera House - buffer zone	▭



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James Quoye

7 May 2018

note
maps sourced from the Planning Portal NSW
www.planningportal.nsw.gov.au

SYDNEY HARBOUR • SHR NOMINATIONS AILA NSW: VISUAL CATCHMENTS

Figure 22. Map of Sydney Harbour, SHR nominations AILA NSW: Indicative Visual Catchments, by MHQ

7 Conclusions and Recommendations

7.1 Key Conclusions

Various planning strategies and instruments have been used to protect parts of Sydney Harbour's landscape and keep the foreshore in public ownership. In 2003 one of the leading statements of the Auditor-General's report was:

Sydney Harbour is recognised as one of the great harbours of the world. It has a rich cultural heritage, both as the traditional home of the Eora people and as the site of the first permanent Europeans settlement in Australia.

The entire Harbour is a significant cultural landscape and the members of ALHG are of the opinion that the entire area should be listed as a significant cultural landscape on the State Heritage Register. However, achieving this aim was judged as not practical by the study team at this point in time. Difficulties arise from considerations such as budget but timeframe is a major factor impacting the possibility of Sydney Harbour being elevated to SHR status. Though worthy, this was considered highly controversial and unlikely to occur for many years.

The approach utilized in this study was to examine an area with contiguous important precincts that form part of the 'green necklace' of space around the harbour and to assess and recognise the significance of each one through SHR listing. This should be continued for the entire harbor. This would supplement mechanisms such as scenic protection zoning used by local government areas – the foreshore of the harbour at Manly and Mosman is an example of this zoning.

7.2 SHR Nomination Selection

Each nomination, carefully selected, collectively represents a variety of approaches and strategies. Nomination 1, although nationally listed is not on the SHR and is located as the first nomination to reflect the broader Sydney Basin. Nominations 2-7 are significant components in a highly threatened cultural landscape. Potentially, they will make a substantial contribution to the 'green necklace', a further consolidation towards the conservation of the Sydney Harbour foreshores and its natural and cultural significance particularly Aboriginal significance. Nomination 2 is the least modifies landscape. Nominations 9 and 10 are precious fragments of early Sydney and first European responses to the Australian landscape. Nomination 8, links to the 'green necklace' but is also one of several care institutions / health sites under threat. The scale and intactness of this place, and its representative qualities are worthy of consideration.

AILA should actively work to influence a shift in mind-set to a landscape approach to listing. Such listings cross ownership boundaries and are in essence landscape conservation areas. The NSW Office of Environment and Heritage now advocates for a change in the management of landscapes from a site-based approach to a landscape approach and have implemented this in the National Parks of NSW. Applying this philosophical shift to the State Heritage Register listing of cultural landscapes would result in more effective listings for significant landscapes.

Further work is required to implement a whole of landscape approach to the listing of cultural landscapes, particularly landscape conservation areas. Community and owner engagement with the process in larger areas would ensure the sensitive conservation and management of the heritage values of cultural landscapes

8 Recommendations

8.1 Proposed SHR nominations

1	Greater Royal National Park
2	Berry Island Reserve
3	Wollstonecraft Foreshore Reserves
4	Balls Head Reserve;
5	Berrys Bay Precinct (Carradah Park)
6	Ballast Point Park
7	Yurulbin
8	Gladesville Hospital Landscape
9	Lang Park
10	Elizabeth Bay House and Landscape Setting

8.2 Further Recommendations

For the future beyond this study, it is recommended that AILA NSW:

1. Formally adopt and endorse the report,
2. Write to Heritage Council requesting notification on items intended to list. This would demonstrate that AILA (NSW) seeks a more active role, similar to that of the National Trust of Australia (NSW) and the Australian Institute of Architects.
3. Allocate resources to monitor and respond to proposed landscape listings,
4. Undertake an education and awareness program (presentation to Heritage Council, to Heritage Advisors network, to AILA membership; and a publication for Councils)
5. Submit the 10 nominations completed during the study and plan to follow up on progress
6. Establish the AILA NSW Landscape Database. AILA to explore the development and administration of the database beyond the study.
7. Apply for funding to prepare a further 10 nominations or future studies (section 8.3).

8. Further promote the understanding and appreciation of natural and cultural landscape values and the importance of the retention of significant landforms, ground modifications and designs when undertaking new landscape works. This is particularly important in the undergraduate education of landscape architects.

8.3 Future Studies

The study recognised a number of potential places or serial sites that required further work before listing as a SHR nomination could proceed. Identified in discussions with OEH, these items include:

- Castlecrag and the landscape vision of Marion Mahony and Walter Burley Griffin.
- Rock art sites of Sydney Harbour.
- An update of Sydney Basin Bioregion information on line at <http://www.environment.nsw.gov.au/bioregions/SydneyBasin-Biodiversity.htm>
- explore further the statutory listing of Landscape Conservation Areas including the update of the Heritage Council publication: *Conservation Areas*, dated 1996.
- Further work to be pursued in comparing Aboriginal clan lands and boundaries of language groups with European settlement patterns and bioregions.
- Further studies based on the bioregions that continue research for the purpose of identifying potential nominations.

(Refer to Volume 2 for details regarding the study process and to volume 3 for nominations).

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<http://www.aboriginalheritage.org>

First Fleet History and Art

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Cultural landscape research sites

The Cultural Landscape Foundation

<https://www.google.com.au/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=the%20cultural%20landscape%20foundation>

The International Federation of Landscape Architects (IFLA): Cultural Landscape Committee

<http://iflalc.org/>

Sydney Harbour

Geology of Sydney Harbour

<http://australianmuseum.net.au/geology-of-sydney-harbour>

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<http://www.environment.nsw.gov.au/resources/nature/sydneyBasin.pdf>

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Heritage Council, Criteria for listing on the SHR

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/listings/criteria.pdf>

Assessing Historical Importance, A guide to State Heritage Register, Criterion A

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/infohistoricalimportance.pdf>

Historical Research for Heritage

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/infohistoricalresearch.pdf>

Assessing Historical Association, A guide to State Heritage Register, Criterion B

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/infohistoricalassociation.pdf>

New South Wales Historical Themes

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/themes2006.pdf>

ICOMOS IFLA International Scientific Committee on Cultural Landscapes (ISCCL)

<http://australia.icomos.org/get-involved/international-scientific-committees/iscccl-cultural-landscapes/>

The Sydney Basin

<http://australianmuseum.net.au/the-sydney-basin>

The Natural History of Sydney

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NOTE: The bibliography is intended as a reference collection that might guide future studies in cultural landscapes. The preceding sources in the bibliography are referenced in the report where appropriate.

VOLUME 2

APPENDIX A Development of AILA landscape heritage assessment method

Introduction

The principal aims of the study were to build awareness of landscape heritage issues for the AILA membership and to develop a foundation approach to identifying significant landscapes suitable for conservation. This method drew upon the five key documents identified by the ALHG prior to the commencement of the study and outlined in section 3 below.

A comparative analysis of existing assessment methods was undertaken to establish a background understanding before advancing the research. Several approaches are explored and outlined in section 1 and 2 below. The first method was developed in Australia for the Heritage Council of NSW in 2000.

1 Landscape heritage assessment – existing models to identify tangible and intangible landscape heritage aspects of place

The array of both tangible and intangible heritage components of a landscape can be accommodated within the broad assessment criteria if they are used as a guide or a series of prompts in the assessment process.

a. Colonial Cultural Landscapes of the Cumberland Plain and Camden Study
(Volume 1, Section 3, provides a background to the development of cultural landscape assessment criteria that is expanded upon in the following sections.)

When assessing cultural landscapes there are both recognisable, tangible aspects of the landscape and intangible aspects to consider. At the first workshop for this study, aspects of tangible heritage in landscape assessment were presented. These emerged from the landscape assessment of the *Colonial Cultural Landscapes of the*

Cumberland Plain and Camden Study, 2000, by Morris and Britton (See Appendix G), and include:

- Natural systems, geomorphology, hydrology, soils, climate, topography, vegetation and fauna;
- Aboriginal group and clan;
- Relationship to traditional transport routes, circulation;
- Views and vistas (original and current), visual connections and relationships;
- The original land grant;
- Remaining intact elements and their details – buildings, house, garden, fences, outbuildings, paddock plantings, dams, water features, indigenous and exotic vegetation;
- The use of the land, patterns, clusters and spatial organisation;
- Structures- bridges, walls, tunnels;
- Aboriginal sites;
- Designer; and
- Landscape design.

b. Contested Terrains

'Contested Terrains', the work of Dr Helen Armstrong AM and Jeannie Sim's, was a project evaluating important cultural landscapes in Queensland that used a complex landscape character approach arranged in a matrix to assess components of a landscape. Through a landscape architectural lens, this approach analysed the visual and experiential qualities of a landscape and included historical interactions with the land. While the outcome of this study was of great value, the academic terminology and approach does not lend itself to broad application. One concern with adopting a method so divergent from mainstream accepted heritage assessment is that it could marginalise cultural landscape assessment, particularly in a climate where ICOMOS IFLA have adopted the heritage criteria used in World Heritage Area assessment.

Armstrong and Sim's method also evaluated a landscape's integrity and vulnerability. Lennon states: 'Integrity is the extent to which the layered historic

evidence, meanings and relationships between natural and cultural elements remain intact and can be interpreted in the landscape.⁹⁰ To determine the integrity of a cultural landscape Armstrong and Sim first assessed the landscape in terms of the elements of the landscape character and then the landscapes were considered in terms of their heritage significance.⁹¹

Armstrong and Sim's method included a category that explored the intangible qualities of a landscape under the heading INTERPRET EXTANT EVOCATIVE RESPONSES-sight, smell, sound, touch, taste, seasonally, experiential, spiritual.

c. Historic Urban Landscapes (HUL)

In discussing a new UNESCO tool for assessing urban landscapes Patricia O'Donnell, distinguished landscape architect and planner, writes:

'These landscape-rooted intangible heritage elements are expressed in practices such as:

- Spiritual worship, inspiration and pilgrimage;
- Places of memory, marking events, joy and suffering, commemoration of past events;
- Festivals and rituals;
- Traditional music, dance and performance;
- Urban and exurban farming, food plants;
- Local cuisine, harvesting places for native plants; and
- Traditional skills, arts and crafts.'⁹²

The Historic Urban Landscape (HUL) method developed by O'Donnell, is an approach to the management of heritage resources in dynamic and constantly changing environments. It is based on the recognition and identification of the layering and interconnection of natural and cultural, tangible and intangible,

⁹⁰ Lennon, 2015, op. cit. p.220.

⁹¹ Helen Armstrong, Case Study Reports, Cape York Peninsula Case Study, p.i. http://eprints.qut.edu.au/7098/1/7098_1.pdf

⁹² Patricia O'Donnell, 'A New UNESCO Tool for Sustainable Future', Ken Taylor, Archer St Clair and Nora Mitchell (eds.), *Conserving Cultural Landscapes, Challenges and New Directions*, Routledge, New York, 2015, p.169.

international and local values present in any city. According to the HUL approach these values should be taken as a point of departure in the overall management and development of the city.⁹³

The UNESCO Recommendation on the Historic Urban Landscape, Paris, 10 November 2011 included the following definition:

The historic urban landscape is the urban area understood as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of “historic centre” or “ensemble” to include the broader urban context and its geographical setting.

This wider context includes notably the site’s topography, geomorphology, hydrology and natural features, its built environment, both historic and contemporary, its infrastructure above and below ground, its open spaces and gardens, its land use patterns and spatial organization, perceptions and visual relationships, as well as all other elements of the urban structure. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.

This definition provides the basis for a comprehensive and integrated approach for the identification, assessment, conservation and management of historic urban landscapes within an overall sustainable development framework.

The HUL approach is aimed at preserving the quality of the human environment, enhancing the productive and sustainable use of urban spaces, while recognizing their dynamic character, and promoting social and functional diversity. It integrates the goals of urban heritage conservation and those of social and economic development. It is rooted in a balanced and sustainable relationship between the urban and natural environment, between the needs of present and future generations and the legacy from the past.

⁹³ ‘What is a Historic Urban Landscape’, Tongji University.

The HUL approach considers cultural diversity and creativity as key assets for human, social and economic development, and provides tools to manage physical and social transformations. These tools are aimed to ensure that contemporary interventions are harmoniously integrated with heritage in a historic setting and that they take into account regional contexts.

The historic urban landscape approach learns from the traditions and perceptions of local communities, while respecting the values of the national and international communities.⁹⁴

2 Aesthetic Assessment of Cultural Landscapes

A method for aesthetic assessment that goes beyond simple visual evaluation addresses one of the least understood heritage values. Aesthetic value can be open to interpretation but it is a critical value in assessment. Places of outstanding beauty that are well appreciated by the broad community are relatively easy to evaluate – the Three Sisters in the Blue Mountains National Park, and the park itself is one example. During the 20th Century, aesthetic value as a criterion was frequently avoided because of its perceived subjectivity. Early in the 21st century, some pioneering work was done on ‘Inspirational Landscapes’, which used phenomenological, experiential and creative responses to landscapes. In the second decade of the 21st century much scholarly work has been done on aesthetic heritage significance of landscapes; in particular the work of Juliet Ramsay, distinguished cultural landscape expert.

The Australian Heritage Council’s *Guidelines for the Assessment of Places for the National Heritage List* (AHC 2009) provides details of the meaning of the term aesthetics, and the use of criteria and thresholds in determining the level of

⁹⁴
<http://www.historicurbanlandscape.com/themes/196/userfiles/download/2014/3/31/3ptdwsom3eihfb.pdf>

significance of places being considered for the NHL. The Guidelines clarify the meaning of 'aesthetic' and related terms:

- *Aesthetic* (as an adjective) is defined in the *Macquarie Dictionary* (2001) as 'having a sense of the beautiful, characterised by the love of beauty'. The *Macquarie Dictionary* (2005) includes 'relating to the sense of the beautiful or the science of aesthetics' and 'having a sense of the beautiful; characterised by a love of beauty.
- *Beauty* means 'that quality or characteristic which excited an admiring pleasure or delights the eye or the aesthetic sense' (*Macquarie Dictionary*, 4 Ed, 2005).
- *Aesthetic quality* means the particular characteristics of an area that inspire or move people. This is determined by the response from experiencing a place (primarily visual elements but may also include emotional responses, sense of place, sounds, smell or any other factor having a strong impact on human thoughts, feelings and attitudes).

The ICOMOS IFLA International Scientific Committee on Cultural Landscapes (ISCCL) published *The Aesthetic Value of Landscapes: Background and Assessment Guide*, in 2015; the lead author is Australian, Juliet Ramsay.

The guide summarises a history of aesthetic appreciation of landscape internationally and provides a history of approaches. It emphasises that an understanding of aesthetic value of landscapes can be reached without a distinction between the cultural and the natural. It includes the revised definition for aesthetic value in the Australia ICOMOS Burra Charter Practice Notes, 2013:

Aesthetic value refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. Expressions of aesthetics are culturally influenced.

The guide outlines aspects of aesthetic understanding and the steps in assessment but notes that every assessment would need to be adapted for the place being assessed and criteria being applied.⁹⁵ It's method consists of a four-tiered approach:

Preliminary steps for an assessment of aesthetic value of landscapes:

- *Review data from all sources of information relating to aesthetic values of the place or elements within it, such as art, poetry, literature, photography, films, websites and tourism data.* [This builds on the methods used in the Inspirational Landscapes Study.⁹⁶]
- *Prepare checklist of landscape factors such as visual and non-visual features, seasonal changes, scientific features, man-made features and economic aspects.*
- *Scoping for respondents for the study that may include Indigenous groups, descendent communities, regional demography and listing of all stakeholder groups with an interest in the regional landscape.*
- *Listing of local landscape experts such as environmental experts and landscape planners.*
- *Note possible comparative areas that may be considered such as similar biogeographic areas, similar cultural areas or similar cultural landscapes.*
- *Develop thresholds for different stages of the study.*

Data Collection

- In collaboration with landscape experts, document aesthetic experiences, concepts, and associated attributes. A number of meetings may be required. Develop an initial list of geographic areas with values. Determine the threshold to filter identified places, delisting some places. Map the areas with aesthetic values of significance.
- Conduct community workshops with stakeholder groups, Indigenous groups, and descendent communities, document aesthetic experiences, concepts, and

⁹⁵ Juliet Ramsay (lead author), *The Aesthetic Value of Landscapes: Background and Assessment Guide*, ICOMOS IFLA International Scientific Committee on Cultural Landscapes (ISCCL) 2015, pp.34-37

⁹⁶ Context (Melbourne) 'Inspirational Landscapes,' Volume 1: Project Report prepared for the Australian Heritage Commission, 2003.

associated attributes. Several workshops may be needed. Apply the threshold factors and sieve the list of places. Approximately map areas with indicative aesthetic value.

- Correlate information from communities and experts. Selected experts field check sites using checklist. Review group findings, apply thresholds and delist places. Refine mapped areas with indicative significance.

Comparative Review

- Develop method for a comparative review that may be based on one or a combination of factors such as biogeographic type, terrain form, cultural expression or aesthetic conceptual factors. Select a few comparative examples and develop a refined checklist.
- Use experts that are familiar with the examples to review the findings using a common checklist.

Identification of landscape areas with aesthetic value significance:

Refine list of landscape areas. If appropriate, combine areas to finalise the landscape places of aesthetic value that meet the established threshold and clearly delineate the areas on a map(s).

3 The foundation documents of the AILA method

Prior to the commencement of the study, the ALHG identified five documents considered important to AILA membership (Volume 1, 4.3). All five are maps: three are big picture and relate to geophysical patterns, river catchments, and Aboriginal groups Australia-wide; the character and visual regions of NSW; and, the geology relating to the Sydney region. They inform the essential understanding of the methodology and are reviewed and analyzed by MHQ below.

Horton's Map of Aboriginal Australia 1996

Horton's map was developed before native title legislation (1992), and therefore contested, it (**Figure 23**) attempts 'to represent the language, tribal or nation groups of the Aboriginal peoples of Australia. Aboriginal groups were included on the map based on the published resources available between 1988 and 1994 which determine the cultural, language and trade boundaries and relationships between groups.'⁹⁷



Figure 23: The AIATSIS Map of Indigenous Australia, illustrating a reconstruction of Aboriginal groups in the vicinity of Sydney by David R. Horton, 1996.

Source: <http://aiatsis.gov.au/explore/articles/aiatsis-map-Indigenous-australia>, downloaded with zoom in place, downloaded 29 May 2016

Relevant to the study in regard to places of Aboriginal and European confluence, in discussions with OEH, this map highlighted the potential for a serial listing of rock art sites associated with Sydney Harbour. Advice was provided that if a search is

⁹⁷ <http://aiatsis.gov.au/aboriginal-studies-press/products/aiatsis-map-indigenous-australia> downloaded 7 April 2018.

requested for more than 120 sites then an Aboriginal license agreement with the relevant Aboriginal Land Council/s would be required.

Biogeographic Regionalisation Map of Australia 2012

Produced by government, this map of the Australian bioregions represents a landscape based approach to classifying land surface. It uses attributes such as climate, geomorphology, landform, lithology, and characteristic flora and fauna. There are 89 IBRA regions across Australia (**Figure 24**).

Bioregions are relatively large land areas characterised by broad, landscape-scale natural features and environmental processes that influence the functions of entire ecosystems. They capture the large-scale geophysical patterns across Australia. These patterns in the landscape are linked to fauna and flora assemblages and processes at the ecosystem scale, thus providing a useful means for simplifying and reporting on more complex patterns of biodiversity.⁹⁸

⁹⁸ <http://www.environment.nsw.gov.au/bioregions/BioregionsExplained.htm>

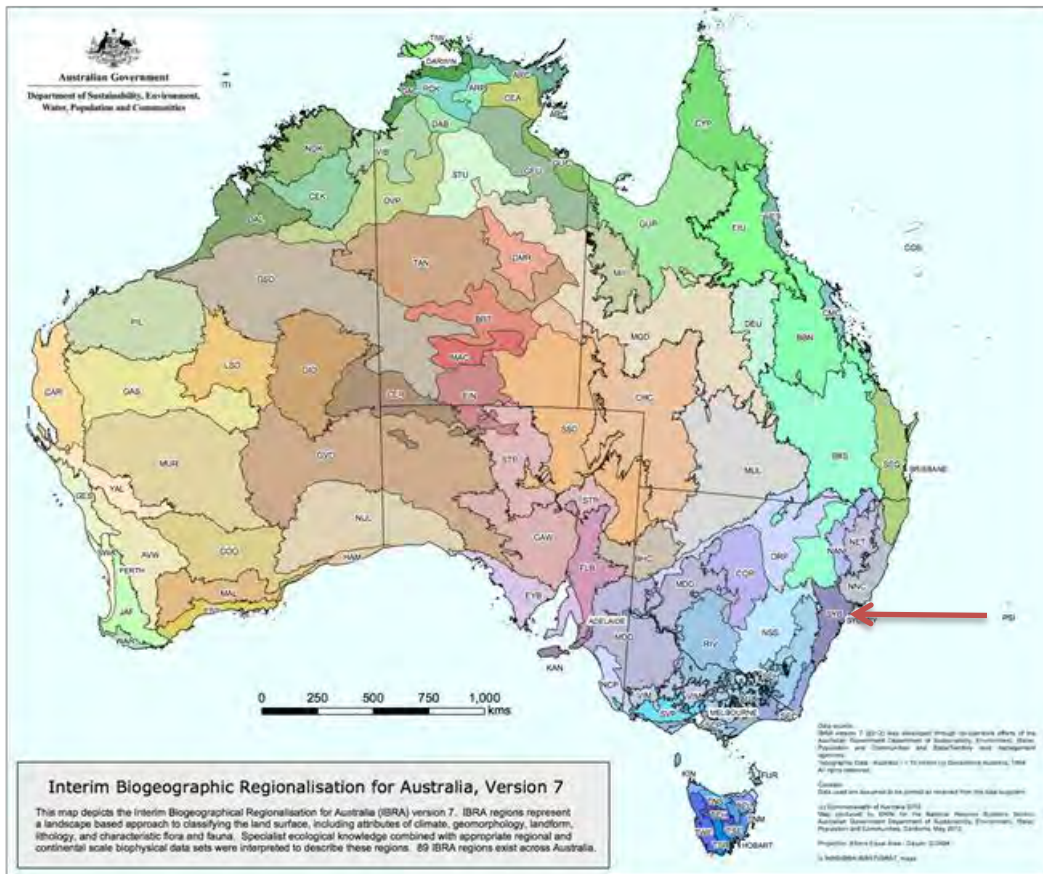


Figure 24 The Interim Biogeographical Regionalisation for Australia (IBRA) Version 7. The arrow indicates the Sydney Basin bioregion (purple tone).
 Source: NSW NPWS 2003, <https://www.environment.gov.au/system/files/pages/5b3d2d31-2355-4b60-820c-e370572b2520/files/bioregions-new.pdf> downloaded 29 May 2016

The value of this mapping for the project is that it outlines a landscape characterization across Australia, including NSW. OEH acknowledged that the bioregion spatial data was not (as yet) utilised on their spatial database.

Further research identified the river systems diagram (**Figure 25**). This was potentially useful for the study because of its approach to drainage catchments as an underlying reference plane. The use of drainage catchments assists in defining the boundaries for the assessment of cultural landscapes as individual units.

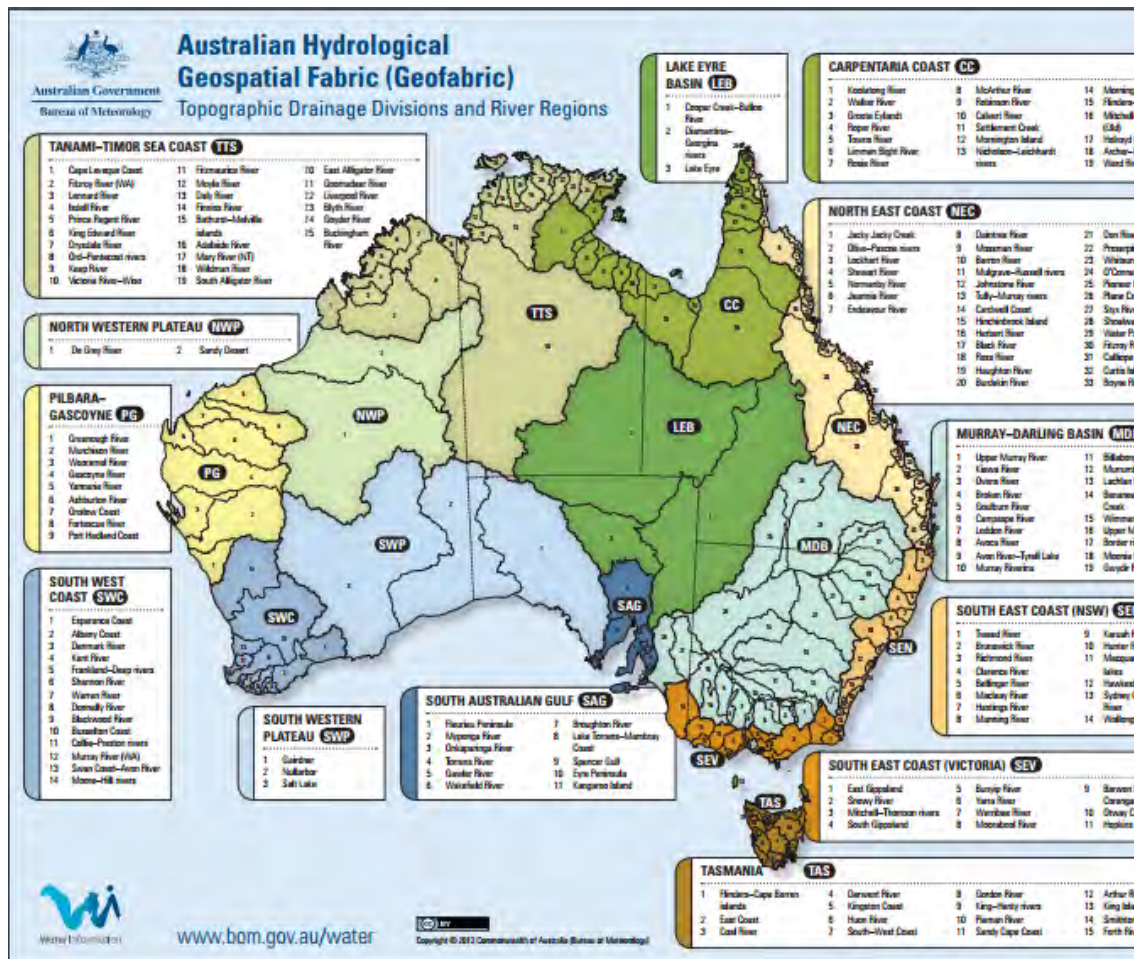


Figure 25 Australian Hydrological Geospatial Fabric (Geofabric) Describes drainage divisions and river basins. http://www.bom.gov.au/water/geofabric/documents/BOM002_Map_Poster_A3_Web.pdf (downloaded 29 May, 2016)

Thorvaldson's Characteristic Landscapes and Visual Landscape Regions of NSW, 1996 (and 2015 interview)

The third document put forward by ALHG was an article published in 1996 in *Landscape Australia: Characteristic Landscapes and Visual Landscape Regions of NSW*, by Finn Thorvaldson.

This large-scale landscape character assessment of NSW was an ambitious visual analysis that identified landscape typologies. The only study of its kind to date it applied a landscape planning approach to the whole State of NSW. Thorvaldson was a lecturer at the School of Landscape Architecture, University of New South Wales, from its inception in 1974. He was instrumental in setting up this course, the first in Australia, with Professor Peter Spooner. Prior to this he had studied under American

landscape architect, Ian L. McHarg, a pioneer in regional planning using natural systems: Thorvaldson's work reflected this influence.

Inspired by other visual analysis mapping in the UK, US, and that done by the Victorian Forestry Commission, Thorvaldson, on sabbatical, became involved with the Soil Conservation Service (SCS). His interest in 'landscape value' identified that much of the data being mapped in the SCS was about physical characteristics; he felt that there was more to understanding the landscape than this – 'it's what people see and appreciate – scale, texture and colour.' Landscape quality he states, 'is directly related to beauty.' Significant landscapes, whether desert, hilly country or rainforest evoke in the observer 'a strong and distinctive emotional experience.'⁹⁹ He developed his model (**Figures 26 and 27**) based on these attributes; soil however was an important determining factor. This approach was also combined with some historical analysis of land use and settlement patterns. The diagram was the culmination of many years' work and the first stage in the development of a proposed visual management system for NSW. It emphasised a stewardship and responsibility, to identify and protect, or guide changes affecting the identified visual values of the landscape of NSW.

⁹⁹ Thorvaldson, Finn, 'Landscape Value', in *50 Years of Caring for The Land 'State of the State 88'*, Soil Conservation Service, Golden Jubilee Conference, Leura, October 1988, p90.

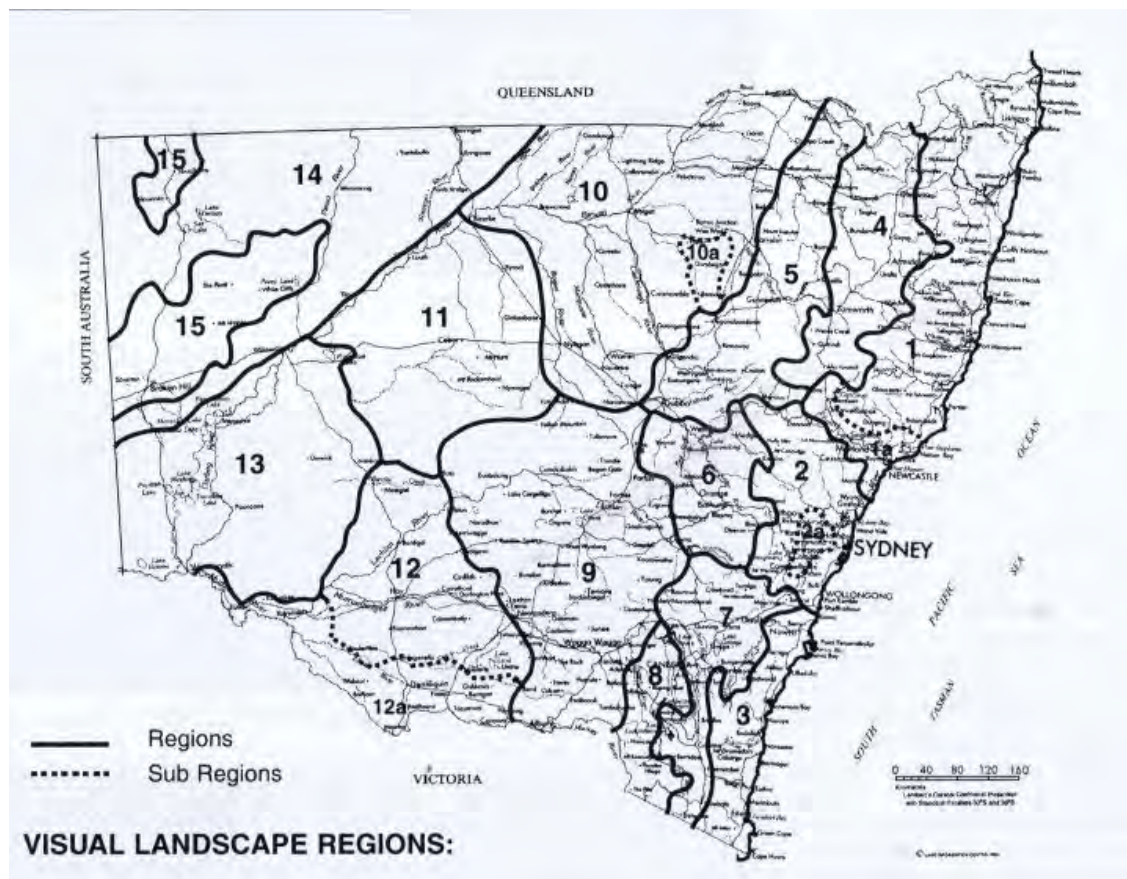


Figure 26 Map of New South Wales annotated to demark the 15 regions identified by Finn Thorvaldson. (Source: Thorvaldson, Finn, 'Characteristic Landscapes and Visual Landscape Regions of New South Wales,' *Landscape Australia* 4/1996, pp 319-322).

A transcript of the Thorvaldson interview was made available to ALHG. The findings from the interview provided an understanding of how the work had evolved, its methodology and particularly how its boundaries had been established. It is now known that this work, in comparison to other visual analysis work in Victoria, was not widely embraced in NSW. During this 1990s period, the emphasis changed, instead of statewide work, a number of rural landscape studies were commissioned confined to local government areas, they applied a similar visual landscape character approach, but with more historical research.

Thorvaldson's visual assessment work was presented to OEHL and its relevance to the AILA heritage study discussed. The conclusion was that this would provide a useful perspective in the analysis of a cultural landscape but would not be a principal component of the study methodology.








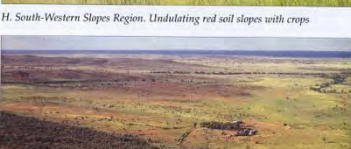
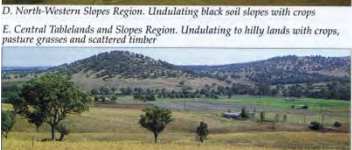

	1	7	
	2	8	
	4	11	
	10	9	
	6	15	

Figure 27. Selected images in Finn Thorvaldson's Characteristic Landscapes and Visual Landscape Regions: 1 - 4 Coastal; 5 - 9 eastern uplands; 10 - 15 western lowlands (Source: Thorvaldson, Finn, 'Characteristic Landscapes and Visual Landscape Regions of New South Wales,' *Landscape Australia* 4/1996, pp 319-322).

Geological maps of NSW, Sydney and Penrith

The fourth document from ALHG was the conjoined geological maps of NSW, Sydney and Penrith (**Figure 28**). While this geological information has been largely integrated into the bioregion mapping, with OEH these maps prompted discussion regarding Aboriginal and European response to geology types. Further work is to be pursued in comparing Aboriginal clan lands and boundaries of language groups with European settlement patterns and bioregions. The map legend is listed below:

- Rwb Wianamatta Group – Bringelly shale (lighter green)
- Rwa Wianamatta Group – Ashfield shale (darker green)
- Rh Hawkesbury sandstone – blue/green
- Jv volcanic breccias – orange / purple
- Qhd Marine sands - yellows
- Qha Silts, peats, sand and sandy mud - pale yellow

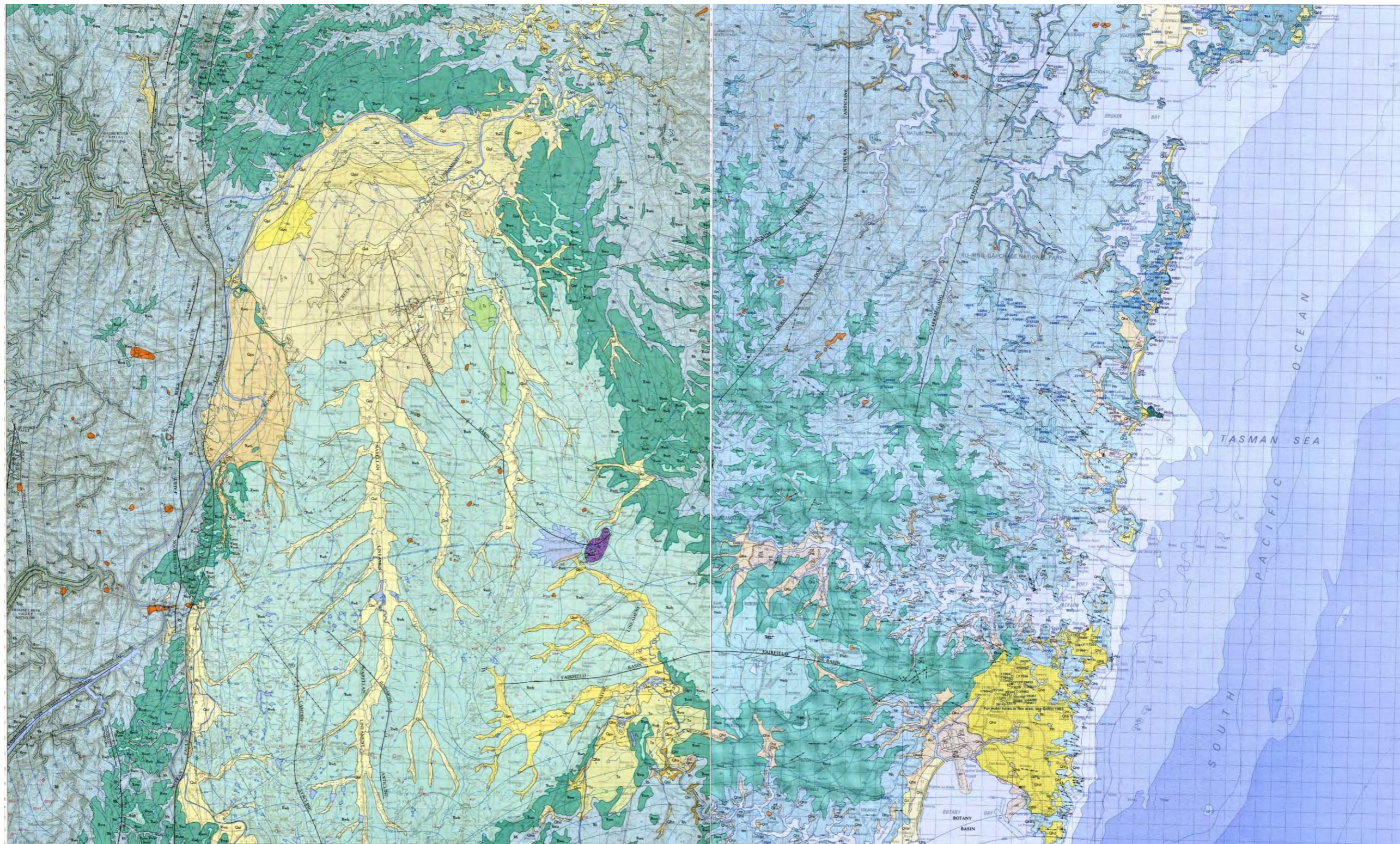


Figure 28. The diagram (NTS) illustrates the joined geology maps of Penrith 1:100 000 Geological Sheet 9030 (1991) and Sydney 1:100 000 Geological Sheet 9130 (1983). The central purple area indicates Prospect Hill. Its volcanic geology, labelled **JP**, consists of picrite, dolerite and minor basalt, its form is described as a basin shaped intrusion. This feature was identified by Governor Arthur Phillip in 1788 as a distinctive landmark within the Sydney region's natural landscape. Select symbols from the geological maps' keys include: **mf** current day modifications; **Qha** (pale yellow / brown) stream alluvial or estuarine sediment. **Qhd** (yellow) dunal systems; **Jv** (orange) volcanic breccias (diatremes); **Jp** (purple, see above) **Jd** ---●--- Basalt dykes; **Rh** (pale blue) Hawkesbury Sandstone; **Rwa** (pale green) Bringelly Shale; **Rwa** (green) Ashfield Shale. Refer links for further detail in regards legend. Note, due to the date difference between the maps their colours and joins are not perfectly matched.

(Source: Christine Hay, *The Governor's Gift, Phillip's Landscape Vision*, 2015, unpublished research paper, University of Sydney. Maps: Penrith

<https://search.geoscience.nsw.gov.au/product/131?q=penrith%20100000&sort=score%20desc&t=gpc&a=true&p=false&s=false> ;

Sydney <https://search.geoscience.nsw.gov.au/product/135?q=9130&sort=score%20desc&t=gpc&a=true&p=false&s=false> accessed 9/05/2018)

Landscape lens

From the four ALHG documents a fifth document was conceived:

ALHG's *preliminary landscape overlay diagram or landscape lens*. This spatial data overlay formed the final document from the ALGH for consideration (**Figure 29**).

One of many approaches to understanding landscape is that of landscape planning which utilizes a system of spatial data overlays. Inspired by the McHarg regional planning method, its current day application has evolved into the widely applied Geographical Information System (GIS). The ALHG's preliminary landscape diagram demonstrated this technique with its overlay of the ALHG documents.

The study found that this synthesis diagram was relevant because it acknowledged historic work in visual analysis over NSW. It likewise aimed to integrate the geological underpinning of a landscape and cultural routes, traditional Aboriginal clan lands and European settlement patterns.

This overlay process also met the particular aim of the ALHG which was for the study to address the issue of catchments, both visual and drainage, and heritage curtilages as settings, as a core component of landscape heritage conservation.

The diagram was received with interest by OEH as a relevant approach to understanding broadscale landscape and the confluence of Aboriginal and European landscape use. The further development of this diagram, itself a preliminary document, however, was not part of the scope of the study.

The term *landscape lens*, however, came to mean the landscape approach adopted by the study as a means of describing its focused method for identifying potential places for nomination (Volume 1, 4.4). It also encompassed a synthesis of the cultural assessment methods described in chapter 3. It mainly came to label the approach of the study in its desktop reviews (Volume 2, Appendix B). What emerged was an arrangement of fragments, connected stories and a pattern of responses to the natural landscape and its systems.

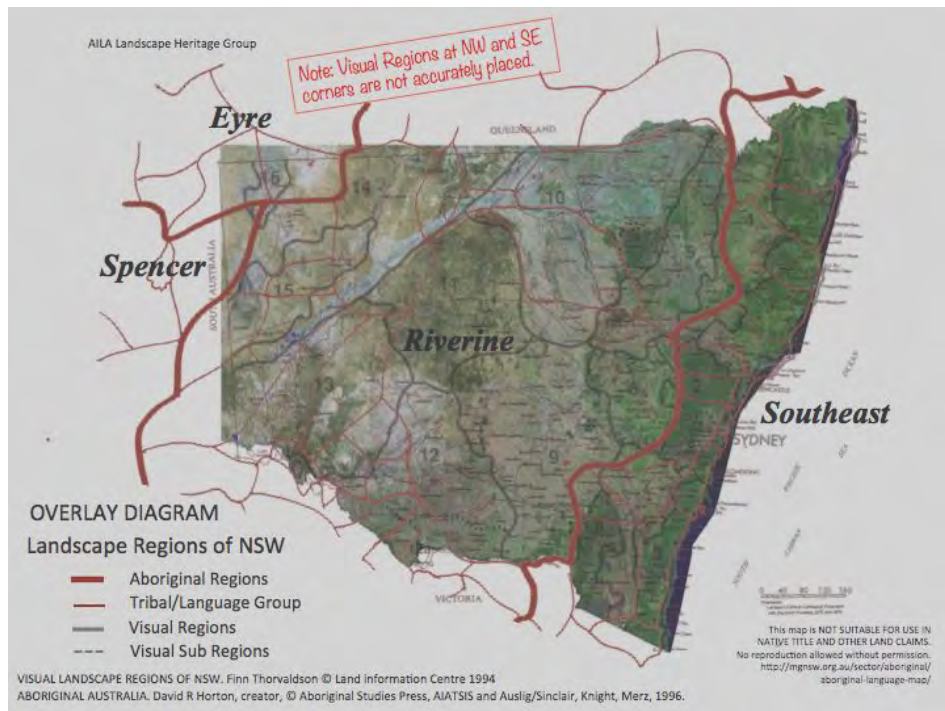


Figure 29. Overlay diagram: Aboriginal clan lands // Visual regions by Finn Thorvaldson and the bio regions of NSW. (Source ALHG)

Further advice from OEH after analysis of the ALHG documents:

Stewart Watters, the data manager at OEH, suggested MHQ explore the BETA Planning Viewer (**Figure 30**), now called the NSW Planning Portal, managed by the NSW Department of Planning and Environment, as a useful tool for our study. He also stated that OEH have a current plan to improve their own portal and he envisaged a version of the ALHG overlay, or landscape lens, being included – stating it might not be a legal document but it would be an authoritative statement.

Property Details

[View council area profile.](#)

Property information

Property Details

Address	Bennelong Point (Headland), Sydney
Lot / Plan no.	5
Council	Sydney

Planning Layers

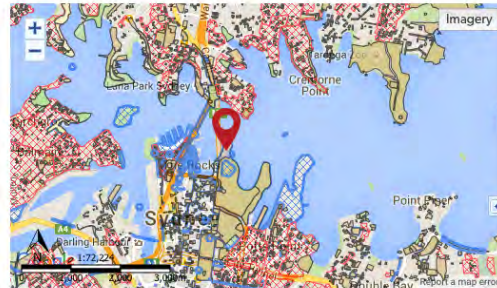
Please select the layer you wish to display on the map

Planning layers associated with property

- Land Zoning
- Acid Sulfate Soils
- Height of Building
- Heritage
 - + State Heritage Act : Man O'War Steps
 - + State Heritage Act : Sydney Opera House
 - + Item - General : Steps & rock face 'Tarpeian Rock' (pub. 2012-12-14)
 - + Item - General : Sydney Opera House (pub. 2012-12-14)
- Land Application LEP
- Local Government Area
- Local Provisions
- Map Tiles
- State Significant Development Sites
- Suburbs

State Environmental Planning Policies (SEPPs)

Planning viewer



Legislation information

Thomson Street Lot 1, DP 199676 Local I484 Darlinghurst Terrace group including interiors 42-86 Thomson Street Lots 22-44, DP 32355 Local I485 Darlinghurst Terrace group including interiors 61-67 Thomson Street Lots 1-4, DP 439559 Local I486 Darlinghurst Terrace group including interiors 69-73 Thomson Street Lot 1, DP 233296; Lot 1, DP 996585; Lot 1, DP 735888 Local I487 Darlinghurst Green Park including bandstand and interior, memorials and landscaping Victoria Street Lot 1, DP 668227; Lot 640, DP 752011 Local I490 Darlinghurst Cottage including interior 265 Victoria Street Lot 1, DP 75646 Local I488 Darlinghurst Terrace group including interiors 271-273 Victoria Street Lots 3 and 4, DP 110677 Local I489 Darlinghurst Green Park Hotel including interior 360 Victoria Street Lot 21, DP 867249 Local I491 Darlinghurst St Vincent's Hospital group including buildings and their interiors and fencing to Victoria Street 394-404 Victoria Street Lot 2, DP 804753 Local I493 Darlinghurst Terrace group "Lanes' Cottages" and interiors 2-14 West Avenue Lot X, DP 442031; Lots 1-6, DP 773250; Lot 1, DP 1002206 Local I494 Darlinghurst Former National School Building including interior 43 William Street Lot 11, DP 588102; Lot 3, DP 1046458 Local I495* Darlinghurst Museum Hotel including interior 47-49 William Street Lots 20 and 21, DP 1045919 Local I496 Darlinghurst Mixed residential and commercial building "William House" (101-111 William Street) including interior 101-115 William Street Lot 42, DP 1047474 Local I497 Darlinghurst Commercial building "Telopea, Merrool & Barlinga" including interior 121-129 William Street Lot 12, DP 1060203 (SP 73189) Local I498 Darlinghurst Commercial building "Chard's Building" including interior 171-175 William Street Lot A, DP 431767 Local I499 Darlinghurst Commercial building "Grenville House" including interior 177-185 William Street Lot 1, DP 1095178 (SP 76869) Local I500 Darlinghurst Flat building "Corinthians" (2 Womerah Avenue) including interior 2-6 Womerah Avenue Lot 100, DP 731754 (SP 30553) Local I501 Darlinghurst Terrace group part of "Barcom Mews" including interiors and fencing 18A-40 Womerah

Figure 30. A snapshot of the BETA Planning viewer / NSW Planning Portal, 2016.

Document research data bank

A data resource document library was established from the onset of the project. It consisted of a number essential documents, other than the ALGH maps, some developed by MHQ as landscape heritage references for the study.

A draft chronology of the history of landscape architecture in NSW has been initiated. Andrew Saniga's 2012 book *Making Landscape Architecture in Australia* was utilised as a baseline. Our review addressed a NSW historical perspective predominantly in relation to AILA practitioners and their work, and the inception of AILA NSW ca.1966. The document is still in development is not a final part of the study.

The references assembled for the study included published and unpublished works, and non-statutory lists of threatened landscapes those compiled by heritage organisations. Documents of note include:

- National Trust of Australia (NSW), listed landscapes, 2015.
- Colleen Morris and Geoffrey Britton, Colonial Cultural Landscapes of the Cumberland Plain and Camden, 2000.
- Andrew Saniga's 2012 book Making Landscape Architecture in Australia.
- Robert Freestone, Australia's Planning Heritage, 2010.
- Helen Armstrong, Environmental Heritage Survey, 1990.
- NSW AILA, Landscape Architecture Projects to See, 1980.
- AILA awards list (incomplete).
- local heritage studies.
- Craig Burton's unpublished historical outline and list 2015 (Appendix I).
- Australian Garden History Society 'Landscapes at Risk', 2015.
- Burra Charter 2013.
- publications from the cultural landscape and cultural routes committee of ICOMOS, and those from IFLA.
- NPWS, Cultural landscapes: A practical guide for park management, 2010.

APPENDIX B Landscape Heritage Assessment Methodology

Refinement of the Heritage Study methodology

Introduction

This is AILA's inaugural study for OEH therefore honing its methodology has been important. Its evolution has been complex.

Consultation with members of Australia ICOMOS National Scientific Committee on Cultural Landscapes and Cultural Routes has been valuable. The outcome of a meeting in Seoul October 2015 assisted the development of the methodology.

The process to achieve identification of potential sites rested, as mentioned above largely on a program of desk top reviews. This involved internet searches through:

- council LEPs;
- government heritage inventories; and especially
- spatial data portals.

This approach was deemed valid by OEH and because of its rigour it was successful at capturing numerous significant landscape sites, particularly those that had potential for nomination on the SHR. The desktop review of NSW council LEP's and the SHI, to identify landscapes and landscape items relevant to the Study, and to inform our gap analysis has been most valuable. The desktop review was trialed using three councils' and MHQ refined our methodology to suit.

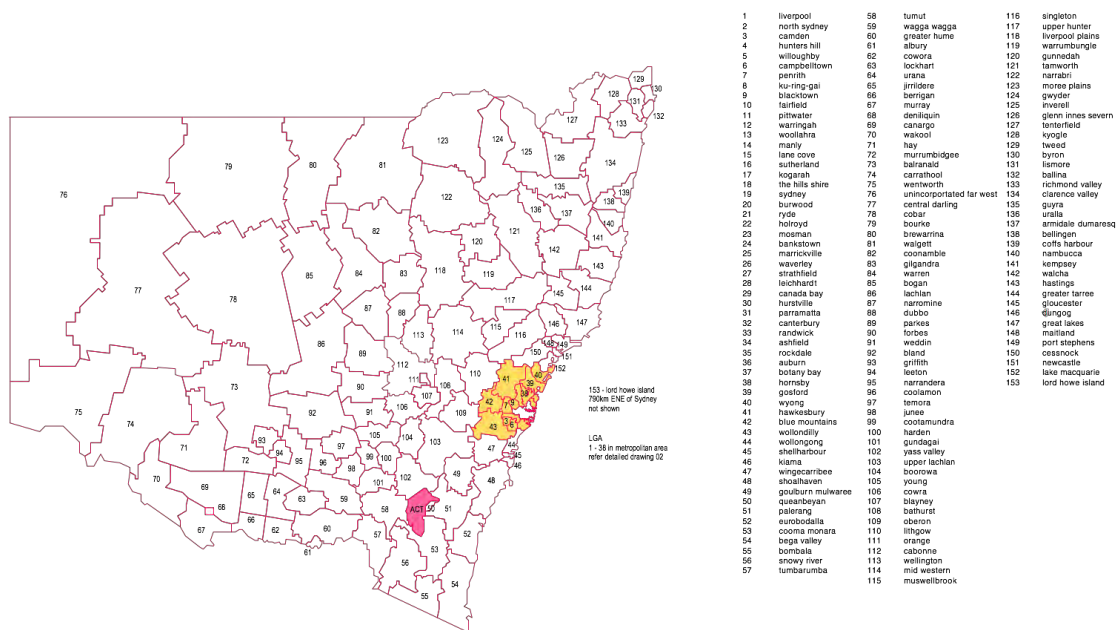
The initial identification of landscapes, for potential listing, valued by the AILA membership, provided useful responses. The MHQ /ALHG workshop 14 March 2016 likewise provided useful feedback regarding the development of the methodology and invaluable its participants made suggestions of significant landscapes for nomination on the SHR (Volume 2, Appendix B).

Desktop review of LGAs in NSW

The state-wide desktop review was time consuming. At first, the process was to perform some spot test analysis of LGAs selected at random and finding our way, we made a start on all the LGAs in NSW (**Figure 31**). Several steps forward we realised the scope was immense and we evaluated our process by a capture of snapshot quantities of items, breaking it down to a manageable task.

The desktop review in its early phase aimed to capture all significant landscape places across the 153 LGAs of NSW. As the council desktop review process advanced this task was decided to be too large an undertaking. The short period spent scoping some of the LEPs across NSW however did reveal some state-wide observations (**Figure 31**):

- The unincorporated far west is the biggest region 93,300 sq km
- Deniliquin is the smallest rural LGA 143 sq km
- Warren had no heritage item on its LEP schedule 5
- Community heritage studies have identified many items on LEP heritage lists
- NSW LEPs and their schedule 5 list of environmental heritage are based on the same template and can be easily found via the internet
- mapping provided a familiarity with the landscape - looking for patterns



AILA LANDSCAPE HERITAGE SURVEY NSW LGA BOUNDARIES

Figure 31. Map of New South Wales with the LGAs outlined in pink, as of April 2016.

Desktop review of LGAs in Sydney Metropolitan Area

The focus of the council desktop review narrowed to the 38 LGAs within the Sydney Metropolitan area to better meet the aims of the brief and the resources available to the study team. The desktop review of LEPs however again proved unsuitable. It did however yield an alert and an awareness of the pressure on landscape heritage from new development.

In December 2015 - a search of Campbelltown LGA website for - schedule 5 (s5) *environmental heritage* identified that the protection afforded by listing was being reassessed (**Figure 32**).

			549482 and Part Lot 5 DP 241539		
Leumeah	Warby's Dams 3 and 4 on Leumeah Creek	Lindesay Street	Lot 48 DP 213178 and Lot 72 DP 863222	Local	80
Menangle Park	"Glenlee", outbuildings, garden and gate lodge	Glenlee Road	Lots 1, 2 and 3, DP 713646	State	00009
Menangle Park	"Riverview"	121 Menangle Road	Lots 1 and 2 DP 589899	Local	82
Menangle Park	"Menangle House", house and outbuildings	170 Menangle Road	Lot 102 DP 776612	Local	83
Menangle Park	"The Pines"	190 Menangle Road	Lot 12 DP 786117	Local	84
Menangle Park	"Menangle Railway Viaduct"	Nepean River	Menangle Rail Bridge over Nepean River	State	01047
Menangle Park	"Menangle Weir"	below Menangle Railway Viaduct	Lot 1 DP 775452	Local	86
Menangle Park	"Menangle Park Raceway" Entry Gate Structure	Racecourse Avenue	Lot 10 DP 1022204	Local	87
Minto	Milestone XXX	Campbelltown Road (south of Ben Lomond	Streetscape elements	Local	88

Figure 32. Screen shot December 2015 - from a preliminary search of Campbelltown LGA website for - schedule 5 (s5) environmental heritage that highlighted the protection afforded by listing was being reassessed and possibly removed.

Leumeah	"Hollylea" and former Plough Inn	185 Airds Road	Part Lot 232, DP 713035 (SP 58562)	State	100343
Leumeah	Milestone XXXII	Campbelltown Road	Streetscape elements	Local	178
Leumeah	Warbys Dams 1 and 2 on Leumeah Creek	Fitzroy Crescent	Part Lot 35, DP 31214; Part Lot 12, DP 228179; Lot 7, DP 232798; Lot 3, DP 549482; Part Lot 5, DP 241539	Local	179
Leumeah	Warbys Dams 3 and 4 on Leumeah Creek	Lindesay Street	Lot 48, DP 213178; Lot 72, DP 863222	Local	180
Minto	Milestone XXX	Campbelltown Road (south of Ben Lomond Road)	Streetscape elements	Local	188
Minto	Milestone XXXI	Campbelltown Road (west of Airds Road)	Streetscape elements	Local	189
Minto	Eagleview House	107 Eagleview Road	Lot 105, DP 260047	Local	190
Minto	Campbellfield or Redfern's Cottage	Lind Street	Lot 50, DP 1028174	Local	191
Minto Heights	Stone cottage	Ben Lomond Road	Lot 315, DP 253229	State	101388
Minto Heights	"Kiera-ville"	20 Hansens Road	Lot E, DP 162716	Local	195
Minto Heights	Hansen's Cottage site	23 Hansens Road	Lot 7, DP 548554	Local	194
Minto Heights	Etchells Cottage	40 Hansens Road	Lot 22, DP 710600	Local	192

Figure 33. Screen shot early 2016 - of Campbelltown LGA - schedule 5 (s5) environmental heritage indicated all protection was removed.

Desktop review of LGAs in Sydney Harbour catchment

Refer Volume 1, Section 4.6 for desktop review themes.

Snapshots

The 15 councils along the harbour foreshores were identified for analysis. The LEP for each council was combed for heritage landscape items and checked against the State Heritage Inventory (Volume 2, Appendix B). The aim was to identify landscape heritage items suitable for nomination. The **figure 34** outlines the councils that were tested implementing the methodology and **figure 35** illustrates the preliminary results of the first desktop review which was of Mosman LGA. The legends for the reviews were to become more sophisticated. Ten (10) of the 16 LGA's are discussed in more detail below.

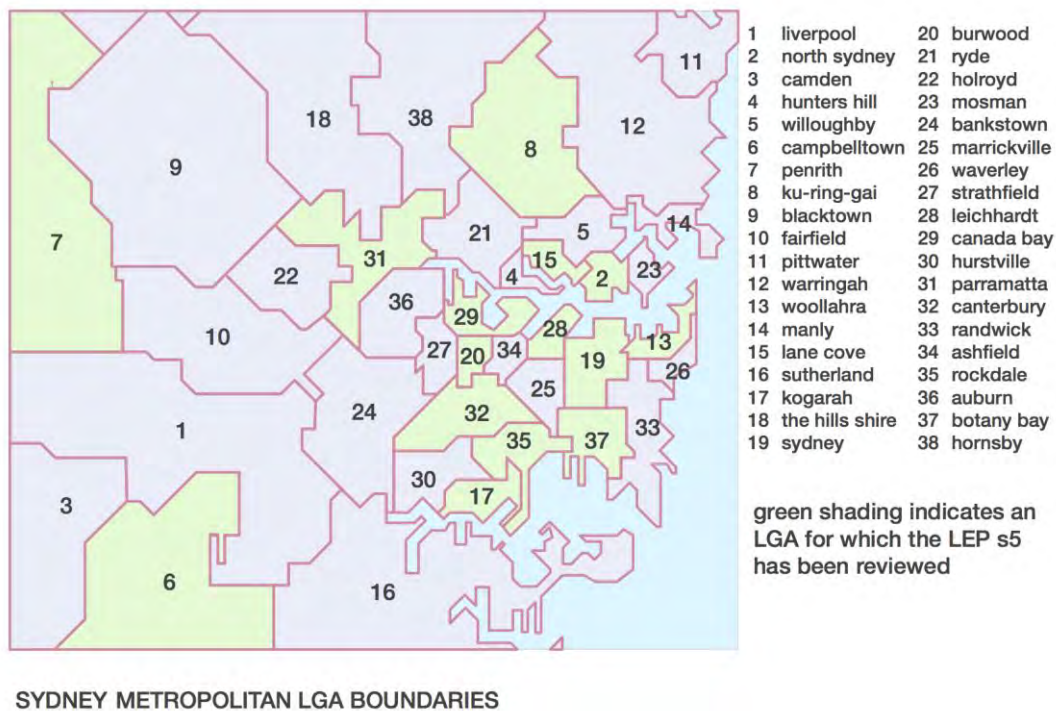


Figure 34. Map indicating the LGA boundaries of the Sydney Metropolitan areas as of April 2016. In May of the same year there were amalgamations. The AILA methodology was trialed on the LGAs shaded green.

Mosman, LEP 2012

Schedule
5 Environmental
heritage

(Clause 5.10)

	Potential for SHR
	Item nominated as landscape on LEP s5
	Item not nominated as landscape on LEP s5 but may be listed elsewhere
	items listed as built but that collectively impact the broadscale landscape // contributory item

(Clause 5.10)

Part 1 Heritage items									
Suburb	Item	Address	Property description	Significance	Item No	SHI Item type (relevant to AILA study)	SHI complex/group (relevant to AILA study)	SHI category (relevant to AILA study)	comments (relevant to AILA study)
Mosman	Reid Park	Avenue Road, Centenary Drive, Hamett	Reid Park	Local	E315	Landscape	not identified	not identified	Harbourside park on reclaimed land, AoS: local representativeness
Mosman	Street trees	Ballantyne Street	Ballantyne Street road reserve between Avenue Road and the northern end of Ballantyne Street	Local	E320	Landscape			AoS, local, Canary Island date palms
Mosman	Sandstone pillar	Bradleys Head Road	Sydney Harbour National Park	Local	4462	archaeological-maritime	not identified	not identified	AoS historically rare regionally. Representative local and regionally intact.
Mosman	Street trees	Bradleys Head Road	Bradleys Head Road road reserve (between Union Street and Whiting Beach Road)	Local	E344	landscape	not identified	not identified	ca 1901, Early use of trash box for avenue planting. Identified in HA Sydney Street Trees, AoS: part, locally and regionally.
Mosman	Alison Park	Bradleys Head Road	Sydney Harbour National Park	Local	E458	landscape	not identified	not identified	AoS: aesthetically, historically, scientifically, socially - rarity, statewide, intact.

Figure 35. Portion of the first desk top review of the Schedule 5 for Mosman LEP 2012, April 2016. AoS in the RHS column refers to assessment of significance, collected data from the State Heritage Inventory.

Comments regarding the desktop review process.

To reduce time needed to examine numerous online databases adjustments to the method were necessary; the following items were not collected onto the AILA database,

- Singular listed trees unless related to a larger landscape;
- Contributory elements such as walls, fences, kerbs and rails listed as *landscapes items*.

The review's focus became orientated towards larger land parcels such as reserves, parklands and green open space especially those along the harbour foreshores, particularly headland and bay areas. For each place, applicable SHR assessment criteria and landscape lens (LL) themes were noted and compiled into the AILA database.

The following provides comment on each LGA's overarching cultural landscape and an insight into the values of its community. The snapshots vary depending on when they were done. At the beginning of the process the method for collecting data was still in evolution and the use of the Planning Portal NSW as a spatial and diagrammatic tool was being comprehended. Coupled with this was the recognition of heritage values particular to each LGA and the research data or studies referred to which supported these values. The reviews in Volume 4 should be consulted for more detail.

A list of useful acronyms are provided:

OEH: Heritage Division of the NSW Office of Environment and Heritage;

LGA: Local government area;

LEP: local environment plan for a LGA;

s.5: refers to schedule 5 of a LEP which lists environmental heritage items for a LGA;

s.170: state agency lists of heritage items;

SHR: State Heritage Register, a list of items that meet the SHR criteria thresholds;

SHI: State heritage Inventory, a list of items managed by OEH inclusive of s.5 LEP items, SHR items and s.170 items;

HCAs: heritage conservation areas;

LCAs: landscape conservation areas.

LEP review for City of Sydney Council summary. Wed 29/06/2016 :

- Many items listed as State on s.5 of the LEP were not shown on the SHR;
- The LEP heritage maps illustrate local items and HCAs but not SHR items;
- Planning Portal illustrates local items, HCAs and shows all SHR listed items;
- Local landscape items on the SHI are often poorly described if at all, focus is on built elements within landscape;
- Spatial quality such as views into and from a place, vistas and visual structure of landscapes generally not described on SHI;
- Landscapes, particularly Sydney's urban parks have generally been under threat for decades, this from the incremental addition of built elements, large and small, that, bit by bit gradually have eroded the intactness of many valued landscape designs and the spatial quality of many planned green open spaces (based on the historical backgrounds of many urban parks described in SHI);
- The SHI, has, with some items, outlined recommendations for height and sunlight to limit development impacts on surrounding significant landscapes.

Hunters Hill LEP Review Summary 3/08/2016

Landscape listed items in Hunters Hill LEP are under-represented on the SHI.

Of a total 9 SHR items, 2 are listed as landscapes. For all local and state agencies, there is a total of 583 SHI items, only 5 however are identified as landscapes (including the two mentioned). More landscapes were identified in the full item search list – although many were not listed as landscapes items in their SHI fields, which demonstrated an inconsistency in the approach whether by the LGA or OEI it is difficult to pinpoint.

The LGA, a peninsula has numerous SHI items: wharves, stone elements such as walls, steps, markers and drain fragments, and harbourside land lots of green open space, and remnant bushland parcels, collectively they make up its cultural landscape.

Some significant places for consideration on the SHR include Boronia Park, Clarkes Point Reserve, note Kelly's Bush Park, Morts Dry Dock, and Clarkes House site.

Gladesville Hospital (north) is a State HCA 'The Priory,' this is a landscape of numerous heritage item fragments (more evident in close-ups). Valuably it covers the slopes of the place and the waterway of Tarban Creek as its expanded curtilage.

Gladesville Hospital (south) also includes numerous listed items (fragments), this significant historic place however it not SHR listed and is considered a contender for the SHR. This LGA includes a few LEP heritage listed LCAs.

North Sydney LEP comments summary, 5/08/2016:

Numerous heritage listed items on the LEP s.5 are based on:

- shipyard history; and industries dependent on water transport;
- railway heritage particularly around in Lavender Bay;
- foreshore land.

Heritage Conservation Areas (HCAs):

North Sydney has 33 HCAs on the SHI, mostly the listing sheets for each includes a table with lot numbers, some items are listed twice or are solitary building within HCAs. Missing are Statements of Significance (SoS), Assessment of Significance (AoS) and descriptions i.e. Lavender Bay Conservation Area, a locally listed precinct, consists only of dwelling lots in its listing sheet. The spatial arrangement of items, and response to landscape and the harbour is not identified.

Some other points in regards North Sydney review:

- Cremorne Reserve: SoS; 'the most substantial example'... of '100ft Reservation applied from 1828', history as pleasure grounds,
- Brett Whiteley SHR proposed for 1 Walker Street,
- SHI items of cliff faces are typical: Luna Park, Olympic Dr, Milsons Point; Rose Ave, Neutral Bay; Wyagdon Ave, Neutral Bay; Munro St, McMahons Point; Balls Head Rd, Waverton; Winter Ave, Neutral Bay,
- Wollstonecraft Reserve: significant *Eucalyptus tereticornis* stand,

The SHI physical description for Berry Island sparked its consideration for the SHR: *Valuable natural bushland on public land extends from the western edge of the former North Shore Gas Works around the head of Gore Cove. It includes Berry Island, a virtually intact area of natural woodland, protected from weed invasion because of its relative isolation and technology.*

There were approximately 8 places identified in the review with SHR potential including Carradah Park, Balls Head Reserve, Berry Island and Wollstonecraft Reserves.

Canada Bay Review Summary Sun 7/08/2016:

- Recreational items based on intensive use of the river edge;
- Overall spread of heritage is underwhelming across the LGA;
- Uncharacteristically very thin on peninsula parks - where they exist they tend to be small (insignificant);
- access to harbour via thin strips of green;
- few of foreshore heritage items;
- Dame Eadith Walker's estate, 'Yaralla' is the lung for this LGA (SHR listed)
- recent development favours private access to foreshore.

Woollahra LEP Summary Review, 23/08/2016:

Steep topography influenced development of LGA, subdivisions were limited by cliffs and sheer sandstone quarry walls, some areas required retaining walls to improve land usage (from Concrete Balustrade SHI listing).

Three harbourside parks, Steyne Park, Double Bay, Rushcutters Bay Park and Yarranabbe Park, Darling Point, not heritage listed.

Extensive mature, mass-tree plantings, mostly native figs, pines and rainforest species, occur along ridgelines and upper slopes, typically vertical elements, they delineate the early estates of the place (LGA), and are visually prominent from the surrounding landscape and Harbour.

Waverly LGA (proposed amalgamation), adjacent, has pockets of Landscape Conservation Areas across its area these include coastline natural features, reserves, parklands, cemeteries and streetscapes.

Vaucluse, identifiable as a cultural landscape on the Planning Portal, consists of over 30 heritage items, comprising singular trees and tree groups, mostly native species, harbourside parkland, remnants of estates and designed settings, all in close proximity. This place could be proposed as a LCA.

Numerous mature trees are listed in Woollahra LEP/SHI, the listing status of each generally dates to 1995. Most on a Significant Tree Register dated 1991 by Landarc (landscape architects). Numerous stone walls, fences and gateposts are listed for their significance as the last relic of large estates owned by prominent early citizens, for example, properties owned by the Hordern family, these often demonstrate the topography of the area.

Items listed as 'built,' that have landscape elements such as trees described in the listing title, were not picked up in the 'landscape' field searches of the SHI.

McElhone Reserve, once part of the Elizabeth Bay Estate, was identified as a contender for the SHR in an effort to consolidate and protect this fragment of its once extensive setting and harbour vistas.

Leichhardt LEP general review comments: 8/09/2016.

- The Balmain Peninsula is mostly covered by a HCA, in fact the greater portion of the Leichhardt LGA is protected in this manner except for its south-western corner;
- the waterplane of Sydney Harbour surrounding the peninsula however is not protected. The peninsula and its ridgelines from this viewpoint are therefore vulnerable to unsympathetic development and ridgeline and slope tree loss.
- Craig Burton contributed to a 1990/1991 heritage assessment that identified many of its valued landscape places.

Highlighted in the LEP listings are examples of parks and reserves by prominent landscape practitioners, these demonstrate the landscape design philosophies of the 1970s and 1980s. 1970s practitioners' include: S. Pittendrigh & Associates (Birrung Park, portion of Elkington Park, Simmons Point Reserve), and Bruce Mackenzie & Associates (Illoura Reserve, already on SHR, and Yurulbin). From the 1980s, work by Landscape Architect's includes; the Anne Cashman Reserve by Peter Lawson, 1988; and Mort Bay Park by Environmental Partnerships, in the mid - late 1980s which is on the SHR for its significant archaeological values.

Places identified on the Balmain Peninsula for nomination consideration on the SHR included:

- Gladstone Reserve: prominent knoll and highpoint, a valued public space later reserved ca. 1882. It demonstrates landmark qualities and has some historic landscape planning significance. MHQ were uncertain of inclusion in SHR, its built fabric and 1950s landscape layer not of State significance.
- Simmons Point Reserve: small headland fragment of green open space. Designed by a prolific landscape practitioner, it is a contributor to the landscape values of Sydney Harbour and its 'green necklace'. Not considered for the SHR due to its small size.
- Yurulbin: in proximity to Aboriginal middens and rock shelters, site plaques state this place is significant to Aboriginal people. It is a headland of green open space and contributes to the natural landscape values of Sydney Harbour and its 'green necklace' of parklands. Its design is by a significant landscape practitioner. Previously identified as worthy of the SHR in the Modern Movement Thematic Study.
- Ballast Point: prominent harbour headland and a rare cultural landscape. The place retains relics of past land use phases. Little historical reference in the SHI to Aboriginal use of the site 1788, or midden, as mentioned by historian

Wayne Johnson of SHFA. A contender for the SHR together with the adjacent Ronald St Reserve, collectively they join with Mort Bay Park (on SHR for archaeological significance) to form a continuous band of protection to the foreshore of Mort Bay as a segment of the 'green necklace'.

- Leichhardt Park includes Leichhardt Ovals and Aquatic Centre: a large (14ha) green open space of foreshore adjacent to Callan Park Conservation area. This parkland extends the foreshore protection of the necklace however its heritage values were not considered robust for the SHR.

Although the review highlighted other places for SHR consideration, two definite places from this LGA, Ballast Point and Yurulbin, were the strongest candidates for SHR nomination.

Auburn LEP general review comments 9/09/2016:

This LGA area had only 70 items on its LEP schedule 5, and 120 items on the SHI, 8 of which were itemised as landscapes. Further investigation revealed more landscape places. Although a small LGA with reduced heritage numbers, some items, it was found, covered large areas of ground. These include, for example; industrial sites (Clyde Marshalling Yard), waterways and wetlands, a botanic park (Auburn Botanic Gardens), sporting complexes the largest being Sydney Olympic site, hospital grounds (Lidcombe), a prison complex (Silverwater), and one of the largest cemeteries in the world, Rookwood Necropolis.

Some points of interest:

- The LGA boundaries follow waterways: Parramatta River to the north; Duck Creek to the south; and Homebush Bay and its drainage line, Powel Creek, to the east. The LGA also includes Haslems Creek, and its wetland area, another tributary that flows into Homebush Bay. How these vulnerable natural landscape fragments are managed especially between adjoining council LGAs, is a topic for consideration.
- Newington Armament Depot and Nature Reserve, also known as Millennium Heritage Parklands Precinct, Newington Armory, Royal Australian Navy

Armament Depot (RANAD), Newington Nature Reserve and Sydney Olympic Games site, was listed on SHR 05 Sep 2016 (according to SHI).* See State Significant Development map in LEP review (Volume 4).

- Grey Box Reserve, was recommended for nomination on SHR 5 Sept 2016 .* Lower Duck River wetlands, also recommended on this date.* This place appears isolated and vulnerable due to its surrounding zoning; heavy industrial to the west in Parramatta LGA and light industrial to the east in Auburn LGA.

Some parks in the LGA such as Blaxland Riverside Park and Wilson Park, are not listed.

** The listings on the SHI suffered a glitch in the period they were analysed by MHQ. Inaccurate information about the SHR status of places being proposed or already nominated was collected, when in fact this was not the case.*

Manly Desktop Review summary 27/09/2016:

Manly LGA has a moderate amount of heritage items compared to other LGAs, reviewed as follows: on its LEP s.5 it has 284 listed items, on the SHI it has 304 a discrepancy of 20 heritage items. Of the SHI items, 67 landscapes items are listed.

Points of interest:

- Small *natural landscape fragments* such as ridgetop lookouts, and precious remnant watercourses and waterfalls are listed. Surprisingly, letterboxes are included as landscape items.
- Some *landscape items* however cover large tracts of land, North Head for example. On the SHI, this place is grouped as *Natural*, and categorised as *Wilderness*. It overlaps with, or encompasses, other North Head landscape items. As a NPWS managed portion of the Sydney Harbour National Park, North Head falls outside the parameters of the study. Also, Dobroyd Head and Grotto Point, opposite North Head, which collectively form an extensive headland reserve included in the National Park.

- Other *Natural* grouped *landscape items* with a macroscale emphasis comprise both the '*Harbour Foreshores*' and '*Ocean Foreshores*' listings. Categorised as *Coastal Environment*, each is extensive, and follows a natural physical boundary of the LGA.
- Viewed through the landscape lens, and identified using the NSW Planning Portal, another level of statutory planning protection (not heritage) is provided to numerous Manly LEP's *Natural* landscape items; this protection is termed *Scenic Protection Land*. It covers an extensive area and is replicated across the Harbour, at Middle Head, in Mosman Council's LEP. The organic form of these *Scenic Protection Land* tracts indicates that it responds to catchments, topography, landform, and foreshore waterways.
- Much of this *Scenic Protection Land* already has protective land zoning as Sydney Harbour National Park lands (E1), or as recreation reserves (E2) managed by Council. This zoning can include residential and industrial zoned land. Other councils once had similar zoning but this changed with the advent of standardised LEP structures across the state in 2012.
- One *Natural* landscape item, Bantry Bluff, categorised as *Landform*, is a small portion of a widespread *Natural* landscape that connects through to the Hawkesbury River and its catchment. It extends across the Manly LGA boundary, and into other council areas, this as a series of reserves and National Parks largely consisting of Garigal National Park and Kur ring gai Chase National Park.
- Coincidentally there is a North Harbour Marine Reserve between the North Harbour heads of North Head and Dobroyd Heads (illustrated in Sydney UBD) to consider.
- Numerous landscape fragments located to the east (ocean) and west (harbour) of Manly, and the parklands inbetween, constitute a cultural landscape, possibly a LCA could be suggested by AILA to protect this place. More investigation required.
- A Heritage study by Blackmore, Ashton and co. 1986 is constantly referred to in the SHI regarding this LGA. The late Kate Blackmore and Paul Ashton wrote good histories for heritage studies and were skilled on landscape heritage

assessments. Most of the landscape listings based on their work have valued information, including simple, clear, hand-drawn diagrams.

Ryde LEP Review summary, Tue 27/09/2016:

The largest number of landscape heritage items in the LGA occurs as extensive nature reserves (zoned E1 for NPWS lands), these often adjoin green open spaces (zoned E2 as reserves).

Collectively the E1 and E2 landscapes form a distinctive, broad and continuous band following the slopes of the Lane Cove River. Other large cultural landscape sites include cemeteries and Macquarie University. Along Parramatta River there are several recreational areas at the head of bays and sometimes following creeklines. Many don't appear to be listed. A few heritage items follow the main ridgelines. All of the landscapes listed in the SHI (just about) have a recommendation by OEH that states 'Nominate for State Heritage Register (SHR)' all are dated '05 Sep 16' (see note above) Due to this, many places weren't considered for our study seen as a double up (refer to Auburn review regarding this glitch).

The Heritage Conservation Areas cover small areas, the exception is one that connects through to Parramatta LGA at Eastwood. All are not evident on the NSW Planning Portal.

Desktop review conclusion

The study scope stipulated that the identification of places for nomination could come from a focus on, but not be exclusive to, sites in the Sydney Basin. Therefore, sites recognized during the course of the study, but outside of the study area of Sydney Harbour catchment, could still be nominated. In particular the places:

- Hawkesbury River landscapes,
- Royal National Park.

The development of the AILA custom database

The development of a stand-alone database particularly with custom query and reporting for landscape heritage was considered essential. Its development ran parallel with the refinement of the methodology. Significant landscapes and potential places for listing emerged from:

- Review of data resources;
- LEP Reviews;
- The identification of landscapes valued by the AILA membership;
- Consultation with relevant organisations;

The database became the depository for all of these potential nomination sites. From this database a refined list of 20 places were selected. This list was refined to the ten (10) places nominated for the SHR. In regards the development of the database model - advice was sought from:

- The Australian Institute of Architects (AIA) who had devised similar standalone databases for OEH studies, and
- A specialist in FilemakerPro database development, and an
- OEH recommended database technician and specialist in Microsoft Access.

Landscape Heritage Lens (AILA NSW Non-statutory database of landscapes)

The AILA custom database captured, particularly from the LEP reviews and workshop, a range of significant landscapes of heritage significance. This list, once approved by the AILA, provides its membership with an accessible reference to inform their practice.

OEH heritage data form and landscape nomination

Separate from the ANSLL was the preparation of the actual nominations. These were based on the current OEH *Heritage Data Form*.

It had generally been agreed in the ALHG that the OEH *Heritage Data Form* was unsuitable for proposing significant landscape nominations and that its orientation was built heritage.

The development of a parallel query nomination form for landscape however was decided against for listing a landscape item. This was because similar proposals and projects to effect change in this area had not been recognized by OEH. Instead the study team:

- Used existing heritage terminology to avoid marginalization;

- Devised ‘prompts’ to sit within existing fields of the OEH *Heritage Data Form* to assist landscape professionals, and others, to capture appropriate landscape data.
- Specifically, these new prompts related back to the ALHG documents, and include:
 - bioregions;
 - topography, geology and soils;
 - catchments;
 - Aboriginal clans; and
 - landscape character (Finn Thorvaldson).

Workshops

To inform the principal aims and the scope of works a study workshop was held over the course of the study two-year period to engage and consult AILA members, landscape heritage professionals and the wider community. This was based on: the lessons to be learnt from the loss of significant landscapes in the Cumberland Plain and MHQ provided an update on their 6 month study progress. Workshop participants were offered the opportunity to identify and submit their own significant landscapes for consideration in the study. This workshop provided an opportunity to identify significant landscapes and places under threat. Priorities were teased out, and the development of a new methodology specific to the profession was proposed by MHQ.

APPENDIX C Statement of Tuhbowgule Nangamay

It is the current generations that ultimately hold the responsibility and honour of maintaining Aboriginal culture around Sydney Harbour. This statement by members of the Metropolitan Local Aboriginal Land Council makes clear what this responsibility involves.

It is the current generations that ultimately hold the responsibility and honour of maintaining Aboriginal culture around Sydney Harbour and ensuring that the natural presence, restoration, interpretation and beauty of Aboriginal culture be continued through the dreaming.

It is therefore our duty to educate our community within to ensure that the traditional pathways of knowledge are passed on and interpreted by our people in genuine Aboriginal cultural environments. We see this as having inseparable sustainable relationships within all elements of 'Tuhbowgule'.

We seek to protect the cultural sites of 'Tuhbowgule' through conservation, restoration and maintenance programs. We will achieve this by active participation in natural resource and environmental, cultural heritage and interpretive tourism industries.

We will strive to demonstrate and promote Sydney Aboriginal culture and heritage as a living and evolving culture, one which is expressed in traditional and contemporary ways, honouring the past, celebrating the present and securing the future 'spirit of place'.

The vision ensures all Australians and visitors are rewarded by the 'Tuhbowgule' experience. It is hoped that by providing a cultural platform, which promotes gestures of goodwill, harmony and reconciliation, people will be able to identify, feel and connect with 'Tuhbowgule' and its 'Nangamay'.¹⁰⁰

¹⁰⁰ Munro, Jenny and Madden, Allen, *Metropolitan Local Aboriginal Land Council, June 2000*, Australian Museum Website <http://australianmuseum.net.au/statement-of-tuhbowgule-nangamay> downloaded 7/10/2016.

APPENDIX D Statutory authorities and legislation governing Port Jackson, specifically Sydney Harbour and Parramatta River.

State authorities

Port Jackson water plane:

NSW Roads Maritime Services (RMS) up to the high tide mark

Coastal zone:

SEPPs:

Title: State Environmental Planning Policy No 71—Coastal Protection

Gazetted: 01.11.02

Abstract: The policy has been made under the Environmental Planning and Assessment Act 1979 to ensure that development in the NSW coastal zone is appropriate and suitably located, to ensure that there is a consistent and strategic approach to coastal planning and management and to ensure there is a clear development assessment framework for the coastal zone.

Sydney Harbour Catchment

Deemed SEPP (formerly Regional Environmental Plans)

Title: Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Gazetted: 28.09.05

Abstract: This plan provides zoning and development controls for land surrounding the harbour and the waterways (including the wider catchment) for the protection of the environment, vistas and function of the harbour.

Local Government Authorities (LGAs)

Sydney Harbour Catchment

Auburn

Canada Bay

City of Sydney

Innerwest

Ku ring gai

Lane Cove

Manly

Mosman

North Sydney

Parramatta

Ryde

Willoughby

Woollahra

Local statutory protection for reserves, trees and remnant bushland is provided by zoned foreshore land as E2 and recreational reserves, and by the LEP Schedule 5, Environmental Heritage, as heritage items, or as landscape conservation areas

(LCAs). Some landscape amenity is afforded from Heritage conservation areas (HCA).

Coastal strip and Sydney Harbour Catchment

Sydney Harbour Coastal Council <http://www.sydneycoastalcouncils.com.au/>

The Sydney Coastal Councils Group Inc. (SCCG) was established in 1989 to promote co-ordination between Member Councils on environmental issues relating to the sustainable management of the urban coastal environment. The Group consists of 11 Councils adjacent to Sydney marine and estuarine environments and associated waterways, and represents nearly 1.5 million Sydneysiders.

The Councils include:

Bayside

City of Sydney

Innerwest

Northern Beaches

Mosman Council

North Sydney

Randwick Council

Sutherland Shire Council

Waverley Council

Willoughby Council

Woollahra Council

Sydney Harbour National Park (Figure 36)

Statement of Significance (SHNP Plan of Management, p 7)

The harbour is more than a jewel – it is Sydney’s heart. Framing the waters of Sydney Harbour are its headlands and islands, bays and beaches. These special places contain a wealth of heritage resulting from the custodianship of Aboriginal people and the early phases of the harbour’s development for maritime industries, quarantine, defence and recreation. The resilience of nature and the survival of this rich heritage in such close proximity to the city is truly inspiring. These formerly closed lands have now entered the public domain as our public parklands.



Figure 36. Map of Sydney Harbour National Park. Source: <http://www.environment.nsw.gov.au/resources/planmanagement/final/20120757SydneyHarbourNPFinal.pdf> downloaded 9 May 2018

APPENDIX E What is the process of a Desktop review?

How to undertake a desktop review and create a database of landscape items from LGA heritage schedules and the SHI is outlined below in the step by step process developed by MHQ for capturing landscape sites from council LEPs.

Step one: formation of new excel document for a LEP schedule 5

- 1 search LGA website for LEP (for each LGA) - scroll to schedule 5 (s5) *environmental heritage*;
- 2 select all s5 information:
Part 1 heritage items; Part 2 heritage conservation areas and Part 3 archaeological sites'
- 3 paste information into a blank database file (Excel) label eg: LEPs5_Mosman
- 4 LEPs5 DRAFT: add legend, add four columns for SHI search information (three columns) + MHQ notes / comments (one column);
- 5 review each item for mention of 'landscape' in 'ITEM'- eg: grounds, streetscape trees, kerbs, parks, reserves, house and garden, entry gateway, road reserve,
 - highlight table row - green for landscape items
 - highlight table row - peach for contributory items such as kerbs, gates fences, road reserve.
- 6 reduce each LEPs5 to only include highlighted rows (use 2 screens).

Step two: check LEP s5 sites against the State Heritage Inventory (SHI)

- 7 open OEH 'Search for NSW heritage' - insert LGA name in 'search' fields, and hit search:

Step three: capture LEP heritage snapshot

- 8 Note number of records for all items (note listed in alphabetical order under 'item name') – adjust fields to refine search (can be unreliable)

Section 1 - Aboriginal places (note number of records)

Section 2 - items listed under the NSW heritage Act - state (note number of records)

Section 3 - items listed by local government and state agencies - local (note number of records).

Step four:

9 return to OEH search first page and select 'landscape' from 'item type' in additional search criteria

10 review each landscape item and note: 'item number'; 'type of item'; 'group/collection' and 'category'

11 LEPs5 DRAFT: note any heritage studies or discoveries and add – highlight yellow

12 prepare a snapshot enumerating: total numbers LEP + SHI; 'landscape' items and 'types'; HCAs; GAPS.

APPENDIX F Lessons from the Colonial Cultural Landscapes of the Cumberland Plain and Camden and other Studies

The Australian study, The Colonial Landscapes of the Cumberland Plain and Camden, a broadscale study funded by OEH in 1997-2000, was selected as a relevant case study for the AILA NSW // MHQ workshop. Details of its approach and successes were outlined as the lessons learnt. Historically, cultural landscape studies in Australia tended to be reactive rather than proactive. The Cultural landscapes of the Cumberland Plain and Camden attempted to be proactive.

The aim of the study was:

- to review existing protection applying to gardens and their settings;
- to make recommendations regarding their adequacy;
- to propose planning controls and other measures to enable conservation; appropriate to their heritage significance;
- To recommend landscapes for State Heritage Register Listing;
- To analyse the historical geography that is critical to the understanding of a cultural landscape;
- To determine how geology and soils directly influenced settlement pattern;
- To demonstrate how rivers and waterways are important cultural routes;
- To demonstrate how early land grants created patterns in the landscape;
- To assess landscapes for their historic, aesthetic, scientific and social values;

Points considered in landscape assessment:

- The original land grant;
- Soils, climate, topography;
- Relationship to traditional transport routes;
- Views and vistas (original and current), visual connections;
- Remaining intact elements – house, garden, fences, outbuildings, paddock plantings, dams, indigenous vegetation;
- The use of the land;
- Aboriginal sites;

- Architect/designer;
- Landscape designers.

Lesson one: In many places the study was too late and the cultural landscape was already undergoing radical change eg: Bella Vista ca. 1998.

Lesson two: for SHR listing, the owners' agreement is essential eg. Brownlow Hill ca. 1998.

Lesson three: We had very limited influence in conserving significant landscapes where development was proposed. Looking over Orielton (now the suburb Harrington Grove) toward Harrington Park.

Heritage Curtilage

- The identification of State significant colonial estates and landscapes did raise the importance of heritage curtilages with some improved outcomes in urban release areas. The emphasis however remains on a building in a landscape rather than the landscape itself.
- The study resulted in a wider understanding that we need to allow a generous area of open space around the main building/tree group...inclusive of all important related estate components...This allows the group to remain prominent visually within, at least, the estate by retaining its traditional character and relationship to its domain.
- Recent planning for the Greater Macarthur Urban Release area shows that there is still a long way to go in lifting awareness in the planning profession.

Lesson four: Listing across multiple ownerships is extremely difficult, eg Pitt Town Bottoms.

Lesson five: Historically important 'picturesque' landscapes of national significance were undervalued 20 years ago and are now under threat in the face of urban expansion, eg: Camden Park and Glenlee.

Management mechanisms used for protection of significant landscapes at a local government level

- Heritage conservation areas
- Development control plans
- Central Hills Scenic Protection Lands had been 'preserved' in 1972- Allan Correy played a key role as landscape planner for the Macarthur New Cities development
- Visual and Landscape Analysis of Campbelltown's Scenic Hills and East edge Scenic Protection Lands (2011)

Any increase in the 'density of development and/or introduction of non-agricultural uses into the landscape of the Scenic Hills will have a significant adverse impact on the setting of the City of Campbelltown and its integrity as a mature and truly unique urban landscape which has been so carefully protected over the last 50 years of development (Paul Davies and Geoffrey Britton 2010-2011).

- Local controls can be overturned if development is deemed State significant development (SSD) or Regional development.

Other issues raised in the AILA NSW workshop

- The impact of climate change
- Bio-banking will transform significant pastoral landscapes into vegetated landscapes
- In Australia the age of trees is very difficult to judge and many arboricultural assessments do not take this into account.

- The National Trust of Australia (NSW) has listed many cultural landscapes and although non-statutory, these listings are taken into account when assessing development.
- 'Existing instruments are inadequate in their coverage of cultural landscape heritage issues, their comprehensiveness in defining curtilages, settings and views, and in their application' (2000). In 2016 little has changed.
- A strategic approach involving a whole of government agreement is imperative if we are to conserve and manage significant cultural landscapes.
- Recognition of significant cultural landscapes from whole of government is the first step.
- The continuing challenge is to protect the valuable places that remain without them losing the qualities that make them important.
- Landscape architects have an important role in managing the landscape character of significant cultural landscapes.
- In Greater Sydney green space is an endangered species.
- The support of the local community for significant cultural landscapes is critical for their protection.

APPENDIX G Extract from Colonial Cultural Landscapes of the Cumberland Plain and Camden by Colleen Morris and Geoffrey Britton

The following study extract is included as an appendix as a means to understand one of the significant cultural landscapes of the Sydney Bioregion. It is particularly pertinent now as the Cumberland Plain undergoes immense change. Written 20 years ago it provided the background for a large number of SHR cultural landscape listing proposals only some which came to fruition:

Early Settlement Pattern and the Cultural Landscape: An Overview

Preamble

In order to understand the development of the Cumberland Plain as a cultural landscape it is necessary to examine the settlement pattern with particular emphasis on areas of early agricultural and horticultural activity. It is not the purpose of this section of the report to examine each of the early properties or each parish in detail - many have been assessed individually in previously commissioned works. The following discussion draws on a number of previously published works and Carol Liston's lecture for the National Trust integrated with accounts by both travellers and occupiers of the land. Written from a European-Australian perspective, this overview discusses the transformation of the Cumberland Plain, the Aboriginal clan lands, into a landscape of 'improvement,' a concept central to 19th century thought and the survival of the Colonial settlement.

The First Land Grants

The Search for Productive Land

The underlying geology of the Cumberland Plain and its immediate surroundings is the primary determining factor in the development of the landscape that exists today. The poor sandstone soils of the Sydney Cove settlement prompted early

surveying trips in search of better agricultural land and by the end of 1788 European settlement had pushed west to Parramatta. Griffith Taylor has correlated the accounts of early surveys and mention of favourable soils with the presence of Wianamatta Shales formations (**Figure 3.1**) which produce relatively heavy clay and loam soils. Important deposits of alluvial soil are along the Nepean River at Camden, on the Nepean-Hawkesbury between Penrith and Windsor, on the George's River at Liverpool and in a narrow band along South Creek. The earliest major road established was from Sydney to Parramatta. From there roads to Windsor and Richmond were made by the early 1790s and to Castlereagh by the mid-1790s. Wyld's Outline Map of the Settlements in New South Wales from 1817 (**Figure 3.2**) indicates the major roads established by that time. It is pertinent to note that the main road to the west was not established until after the crossing of the Blue Mountains in 1813. With the roads came inns, important stopping points for all who travelled through the colony, with their associated outbuildings and, occasionally, cultural plantings.

Earliest Farms

When Phillip left the colony in 1792 farms of twenty five or thirty acres had been granted at Parramatta, Prospect Hill, Kissing Point, the Northern Boundary, the Ponds, and the Field of Mars. Families made use of the extra allowances - each man received thirty acres, an extra twenty for a wife and ten for each child, making more viable holdings. By 1794 farms were established at Toongabbie and the first 22 thirty acre farms on the alluvial soils of the Hawkesbury, the majority of them in the present Pitt Town Bottoms area (**Figure 3.3**). As early as August 1794 a track linked the community to Sydney and Parramatta. During the ensuing period the pattern of settlement concentrated on the areas of fertile soil around the Hawkesbury and George's Rivers and the basalt derived soils of Prospect Hill, where, by 1800, there had been 1920 acres alienated. Many small farms on poorer soils were abandoned as a loss of fertility from continuous cultivation made them unviable. In 1801 Governor King reported that the farms established along the alluvial soils of the Hawkesbury-Nepean were the major source of grain for the colony producing

twenty-five and up to thirty-five bushels of wheat per acre where elsewhere only twelve to fourteen bushels were produced.

Along the Hawkesbury River system the established mode of settlement was one of occupation before the documentation of ownership. Although the settlement of the Hawkesbury appears to have been unchecked during the period prior to 1800, it was concentrated around the present Windsor area and northwards. The river and the land was accessed from the north during this period and the most southerly grants were larger, near the confluence of the Grose and Nepean Rivers and somewhat removed from the concentration of settlement. Castlereagh, to the north of Penrith, represents an area of 1803-4 grants of a distinctive planned nature. Although the evidence is inconclusive, the majority of these grants, many of them to retired officers of the NSW Corps, are likely to have been surveyed prior to occupation as opposed to the indiscriminate nature of the settlement of other lands in the region where a survey and grant formalised a pre-existing condition. The Castlereagh grants were larger than many along the Hawkesbury and at Prospect Hill, relating in general to both the grantees' status as former soldiers and their familial dependents. The eastern boundaries of the 'front line' of grants was the alignment of Castlereagh Road. Although slightly widened in the 1870s, this strong north/south road alignment with intersecting east/west fencelines and lanes determined the strong axial patterning which is the dominant quality of the existing landscape.

Reserved Land

Liston draws attention to the importance of the land that was not granted, and therefore not 'improved', in the understanding of the settlement of the Cumberland Plain. As the potential of the land was not fully assessed, in 1804 King set aside large tracts of land of between five and ten thousand acres as commons at the Field of Mars, Nelson (Pitt Town Common), in the Castlereagh district (distinct from the town of Castlereagh) the Phillip settlement near Wilberforce, Greenhills, Prospect and the Ham Common at Richmond, a situation which remained through most of the 19th century. These were in addition to the land the Government reserved for its own use as stock land, in particular land through Rooty Hill, Blacktown and reserves north of

Castle Hill. The large Government Orphan School Farm south of Prospect Hill and Prospect Creek had been granted in 1803 and in the 1820s, when the Churches and Schools Corporation was established, one seventh of all land in the colony was put aside for the support of religion and education. Although the government later established farms on its lands at Toongabbie in 1791, Castle Hill in 1801 and Emu Plains in 1819 these were not permanent ventures and were gradually phased out.

A large area of land in the present Fairfield area near the Orphan School Farm and Lawson's holdings at Prospect was granted by King to Major George Johnston and Captain Abbott - 3,300 acres in total in 1806. Abbot's portion became 'Abbotsbury' but Johnston's grant was relatively unsettled until it passed to his daughter who with her husband developed 'Horsley' in the 1830s. These grants, along with grants to Thomas Wylde (Cecil Park) and Barron Field (Hinchinbrook), join to form a vast tract along the Cowpasture Road to present Hoxton Park.

In the south-western corner of the Cumberland Plain lay the Cowpastures which had been reserved for the 'wild cattle' of the colony and no settlement was allowed in or near the Cowpastures, or beyond the Nepean River. The spread of settlement southwards began with John Macarthur's order from Lord Camden that he be given 5000 acres near Mt Taurus, an area thought to be ideal for sheep. In addition to Macarthur's grant was another to a Walter Davidson of 2000 acres taken alongside the Macarthur grant which was split into two - to the north and south of the Davidson grant. All of this land effectively became Macarthur's on Davidson's return to England in 1809.

Macarthur's land grant coup came at a time when George Caley, Sir Joseph Bank's botanist, had undertaken two journeys into the The Cowpastures area and cautioned that the land of the Cumberland Plain and its immediate environs was not as fit for cultivation and grazing as it appeared and care should be taken with allocating the remaining land. His advice came when the south west was viewed with increasing interest due to flooding on the upper Hawkesbury and depleted soils giving lower crop yields.

Expansion

In 1809, after two floods had destroyed the grain crops for the colony, Lieutenant-Governor Paterson saw no alternative to settling the 'forest' lands of the Cumberland Plain. These lands were the open forests which had resulted from Aboriginal management of the land-

such as abounds with Grass and is the only Ground which is fit to Graze: according to the local distinction, the Grass is the discriminating character and not the Trees...

The first grants of 'forest' lands were to the west and south of Parramatta, in the districts of Minto, Evan, Bringelly, Cooke and further to the south at Airs and Appin. All of Paterson's grants were recalled and later re-issued by Macquarie. In the Cook(e) and Bringelly districts the 1809 grants made by Lieutenant-Governor Paterson away from the creeks on the Wianamatta shale soils were in general uncultivated. Macquarie thought the soils unsuitable for cultivation when he first sighted them in 1810 and in his tour of the area in 1815, noted that:

Some few of these farms were well enclosed and cultivated, but generally very little has been done by any of the settlers in these two districts, the lands being still in a state of nature. The farms belonging to Mr Hannibal Macarthur, Mr William Wentworth [Vermont-later leased by Mr Manning], Mr Secretary Campbell and Mr Bent (now Doctr. Wentworth's) are all very fine ones..

These early grants along the Nepean River were in areas even more remote to the roadways which were established later. The fact that they are among the earliest grants, apart from those to Macarthur and Davidson effectively outside the boundary of the Cumberland Plain, relates to routes followed by Caley in his 1804 exploration of the Cowpastures which approached the area from Prospect via Bent's Basin. In some parts of the south-western area small grants were clustered along the alluvial flats of the Nepean River but in general most of the grants in the Cowpastures were for large areas and given to persons with the means to establish themselves as

graziers. Perry argues that although cultivation of the 'forest' lands dwindled, large property owners such as John Oxley at 'Kirkham' and Charles Throsby at 'Glenfield' were able to report substantial areas under cultivation when presenting to Commissioner Bigge.

The Minto area between Liverpool and Campbelltown was viewed favourably by Macquarie who commented that Dr Townson's farm and St Andrew's, the farm of Mr Thompson were "by far the finest soil and best pasturage I have yet seen in the Colony." Macquarie considered the district between the George's River and Bunbury Curran Creek, which he named Airds to be very fine, rich land and the fittest he had seen on his 1810 tour for grants to small settlers. Although the soil was richer, as Jeans discusses, in general for the Cumberland Plain, lime was not available and the advantage of the larger holdings was that despite poorer soils, enough stock could be carried to manure the cultivation paddocks. This was coupled with the fact that the Cumberland Plain is the driest part of Sydney.

Burr & Co. attempted to map and accurately list the landholders of the region in 1813. Although its accuracy is questionable the accompanying map indicates the general settlement pattern in the Cumberland Plain to that time. (**Figure 3.4**) Liston summarises the settlement pattern of the Cumberland Plain by 1821 (**Figure 3.5**) as being a series of core settlements at Sydney, Parramatta, Windsor and Richmond and, from 1815-18, at Penrith and, in the south, Liverpool. The Macquarie town allotments of Pitt Town, Wilberforce and Castlereagh, all away from well-traversed routes, had not attracted growth, although the farmlands associated with those towns were well-established with the Windsor area containing 46.9% of the colony's sown crop-acreages and 58.3% of harvested grain in the 1822 Land Muster. Campbelltown was on the route to the south which started to develop from the mid 1820s as a major route. Large areas such as the North Shore and the Government Reserves were unsettled. The biophysical aspects of the land determined the general pattern. Smaller grants were along the creeks and rivers where there are alluvial soils, larger grants tended to be on the Wianamatta shale soils of the Mulgoa Valley and South Creek Valley, for example. These same features - the underlying geology

and original grant size, along with the establishment of roads - partially determined the pattern of consolidation and subdivision which took place later in the century.

Initially agriculture was geared to the smaller land grants of 30 and 60 acres along the rivers and creeks, particularly along the Hawkesbury River near Pitt Town Bottoms and Cornwallis and along Ropes, South and Ponds Creeks. Only the most fertile remained viable as small acreages and many were consolidated into larger holdings. On a much bigger scale, the consolidation of a succession of larger grants within the same family yielded great estates such as the domination of the Cox family in the Mulgoa Valley and the King family's extensive holdings at Dunheved. McLoughlin has analysed and mapped the holdings of seven major land-owning families (**Figure 3.6**).

To the west of the Nepean in the Camden area, any increase in settlement beyond the holdings of John Macarthur - who also controlled Davidson's grant - had been prevented by Macquarie in 1812, a situation which continued into the 1820s. This area, which became a Government Reserve for the raising of stock, included the convict settlement of "Cawdor". It included a house for the overseer of cattle and a public court and was not closed until 1841, after first Narellan and then Camden had been established, the remaining Methodist Church and Cemetery marking the location of the former village.

The Move West over the Divide and its Impact on the Cumberland Plain

The lack of viable land available for settlement prompted the need for a push to the west over the Blue Mountains. The timing of settlement was an important factor in determining which families established the large estates. Liston discusses that the celebrated crossing of the Blue Mountains by Blaxland, Lawson and Wentworth, each of whom had estates on South Creek and the Nepean, represented a lack of land in the County of Cumberland. Once land became available to the west of the Blue Mountains at Bathurst there was a major exodus to the west of both power, or political push, and money. By the 1820s the younger colonists left for the south toward the Goulburn and Braidwood districts and west to Mudgee. Although

continuing to be cultivated, the land still held in the County of Cumberland by the larger landowners tended to become stock or holding stations for their properties to the west in the Bathurst area or to the south around Goulburn or Braidwood. David Waugh worked for Thomas Barker who had the management of three extensive farms - Nonorrah (Maryland) and Orielson in the Cowpastures and Mummel in the Goulburn Plains. In general Waugh worked and resided at Mummel but moved between the holdings when necessary. In 1834 he wrote from Orielson:

About the middle of the month, I got a letter from Mr Barker to come down the country to assist at the harvest at this farm from which I now write, where they have 150 acres in hay, and 350 in wheat; and here I am at present furnishing stores to 50 men, keeping accounts &c.

Barker himself lived at Roslyn Hall in Woolloomooloo, as Jeans notes, a practice common to some of the wealthy landowners who alternated residing in town when the Legislative Council sat with “civilised estate life” and visits to sheep runs. There were exceptions - the estates of William Macarthur at Camden Park, Hannibal Macarthur at The Vineyard and George Macleay at Brownlow Hill, remained their primary places of residence. Because of the tendency of having properties inland, the clearing of the Cumberland County properties remained incomplete and they were described by one observer in the mid 1830s as being, in general, still difficult to discern on one’s approach due to the thickness of the surrounding forests and as having few sheep or cattle runs with the cultivated land usually being near the house. This observation differs somewhat from other contemporary accounts which suggest clearing was extensive in parts.

The larger estate farms of the Cumberland Plain were well established by this time. Raby, on the Cowpasture Road, was described in 1834 by Dr John Lhotsky as “one of the most famous farms in the colony” as was the farm where Lhotsky stayed with William Hovell, referred to in his account as Molle’s Main. Molle’s Main, named for the original grantee, George Molle, is representative of the trend where the grantees pushed westward taking up more land and either selling or leasing out their grants in the Cumberland Plain or using them as holding places before their stock was sent

to the Sydney markets. Granted to Molle in 1816, by 1820 it was occupied by William Howe who was preparing to build his house at 'Glenlee'.

Glenfield, Macquarie Fields, Campbellfield and Varroville estates all had absentee owners from the late 1820s. Little capital was expended on the properties in this period and the estate lands were leased out for grazing. Liston discusses a further aspect to the trend of absentee landlords where there were juvenile owners with trustees leading to a situation where the grants became effectively non-productive. Campbellfield was an example of this. Developed by Redfern, it was a large estate which was the product of Redfern's amalgamation of a number of grants. Redfern died in England while his son was being educated and with the vast estate in the hands of trustees, little change took place until the 1870s. The combination of abandoned trusteeship and government owned common lands, Liston notes, resulted in large areas of the Cumberland Plain's 'forest' lands remaining intact to the end of the 19th century. The implications of absentee ownership for the gardens associated with the estates is that they remained simple- their overall structure relying on the placement of the kitchen garden, carriageways, fences, hedges, windbreaks and large ornamental plantings.

The desire for new pastoral holdings continued and as land in country NSW was occupied, Queensland became the new frontier. By the 1860s a second generation of families, with their capital, moved out of the County of Cumberland. For the Cumberland Plain, the changes in ownership or management and the establishment of the town nuclei and roads which took place in the first half of the 19th century determined the way in which the land was bounded, cultivated and traversed. Helen Proudfoot examines in detail the evolution of the larger holdings of the South Creek Catchment area showing the dominant pattern that emerges (**Figure 3.7**). When visiting Clydesdale in 1834, the surgeon and naturalist George Bennett described the estates of the South Creek area as having "patches of fine red clay soil, which has been found very productive when laid out as vineyards." By 1850 many of the fine farms of the South Creek area were reported by another traveller as being abandoned.

The same traveller passed through the large estate of Birling at Bringelly and noted that the country toward Narellan was better than at South Creek. In the parishes of Narellan and Cobbitty early consolidations and subdivisions established a stable pattern by mid century. Edward Lord, the original 1815 grantee of Orielson, placed the deeds of this property with John Oxley of Kirkham in September 1816 and later, in 1835, 231 acres of it was amalgamated with the Macquarie Gift grant, Wivenhoe and in 1863, a part of the Orielson estate was amalgamated with neighbouring Harrington Park. The part of Harrington Park to the north of Cobbitty Road had been sold in two sections much earlier, one of which formed Oran Park in 1829. The boundary between Harrington Park and Oran Park was the road to Cobbitty, not established when the 1815 grant was made. A condition of the grant was that the Crown reserved the right to make a public road. Cobbitty Road became a convenient boundary (**Figure 3.8**), as did Macquarie Grove Road for the Wivenhoe estate indicating the way in which early roads define the framework of the cultural landscape.

The Siting of Dwellings

The large houses in their garden settings associated with the more prominent land grants were often simple in their original form and later expanded or replaced, often on the profits of the pastoral stations further west. Many of these houses were sited according to the well-accepted practices of the 18th century English Landscape School. Others, such as Edinglassie at Emu Plains and Bungarribee at Eastern Creek were styled in the manner of the picturesque, as promoted by Uvedale Price and Richard Payne Knight, a landscape aesthetic which became more fashionable in the 19th century. The convention was that they were designed to be seen and to convey the importance of the occupants and their property, as a “gentleman’s seat.” Set part-way down a slope or on a knoll overlooking the river flats, houses were sited so that they commanded a prospect, a view of a bend in a river or had as their focus a distant geological landmark. Loudon in his *Encyclopaedia of Landscape Gardening*, (**Figure 3.9**), first published in 1822, illustrates these well-accepted principles based on Humphry Repton’s *Observations on the Theory and Practice of Landscape Gardening* (1803) and *Enquiry into the Changes of Taste in Landscape Gardening* (1806) writing:

In hilly countries, or in any country where the surface is varied, the choice is neither made in the bottoms (Fig a) nor on the summits of the eminences (c), but generally on the south-east side of the latter (b), on a raised platform, the rising grounds behind being planted both for effect and shelter.

Thomas Shepherd in his lectures recommended two ideal settings which were either “in an open valley between two hills or high land, on a gentle swell with a base of large dimensions” or on a “flat piece of land upon the steep side of a hill.”

Macquarie’s journals of his tour in 1815 records his visits to a number of colonial properties and he comments in a favourable tone on houses that are situated using these principles. Mr Uther’s farm at Appin he found “a very pretty well improved one on the slope of a high hill, on the summit of which he has erected his house.” The siting of the next property, Mr Hume’s house, elicited no comment but on that of Wm. Broughton Esq. was being erected a large one story weatherboard house “on a very lofty eminence commanding an extensive prospect.” Macquarie-Grove, Mr Hassall’s farm, was described as finely situated and a beautiful farm. This was in contrast to the site proposed by Dr Townson for his new house which Macquarie visited on his earlier tour in 1810 prompting Macquarie to write that it was “a very ill chosen situation” although it is likely that the two men had differing opinions on a number of matters as Liston notes that Macquarie and Townson had no liking for each other. St Andrew’s, the late Mr Thompson’s farm, Mrs Macquarie had thought beautifully situated with picturesque scenes around it.

The elements which are the remnants of these farms can still, in some parts, be seen so clearly in the landscape due to the extensive and planned clearing of the ‘forest lands’- the grassy woodlands of the Cumberland Plain - for grazing, wheat and vine production, dairying and fuel. By 1833 Mrs Felton Matthew could report that the view after she and her husband Surveyor Matthews had crossed Blaxland’s bridge at Luddenham was:

exceedingly picturesque, the large tracts of cleared ground about Ludenham, and Wimbourne, (the latter is Mr George Cox's) and his house built of stone and one of the most tasteful, and best situated mansions I have yet seen, the river winding through its deep green banks, and the back ground still lofty mountains and apparently unbroken forests.

Although the siting of residences on a knoll to command a view obeyed the principles of landscape design as practised in England at the time, Louisa Meredith who lived at Homebush during the early 1840s commented on a significant difference in the approach to the homestead. A universal arrangement in the colony which was at odds with the principles of contemporary landscape gardening as practised in England was for the main entrance drive or 'Avenue' to arrive at the house via the farm buildings - stock-yards, barns, stables, piggeries and farm hands cottages, the front entrance or hall door "commanding a full view of all these ornamental edifices". The avenue itself was often unadorned with trees and bordered with a four-rail fence on either side as was the case at Homebush. An example which appears to demonstrate the practice of the entrance route passing the areas related to the farming activities of the place can be seen at Harrington Park where the original entrance drive arrived via the south-west near the stockyards. From the 1890s a new drive passed an ornamental pond and entered through a picket fenced gateway to the garden on the east of the house. The house itself was sited so that it commanded a direct view of Razorback Range. Camden Park was a premier property but Annabella Boswell, visiting there in 1848, wrote:

We were delighted with our ride through Camden Park, but did not admire the approach to the house, which is entered from the back.

Important viewlines to distant landmarks were incorporated as landowners became increasingly sophisticated. The view of St John's Church in Camden from the Macarthur property Camden Park is well-known but Mr Cowper of Wivenhoe near Narellan who was secretary of the Church and School Lands Corporation during the 1830s, also commanded a view of the Church, "about three miles and a half distant". although the church itself post-dates the establishment of Wivenhoe. The twin spires of St. John's at Parramatta provided a visual reference point for early dwellings such

as Hambledon Cottage. There is an important sightline between St James at Menangle and Mt Gilead and St Peter's at Richmond and St Matthew's at Windsor are important landmarks for the surrounding areas. At Fernhill, Mulgoa, the trees were thinned to allow a vista to the tower of St Thomas from one section of the long drive. Christ Church, the Anglican church at Castlereagh, built in the latter half of the nineteenth century, was sited in such a manner that it was a visual landmark for prominent members of its congregation. This predilection for a vista to a church spire was enunciated by the Reverend James Hassall in his reminiscences from 1794 when he wrote that, in his mind, there was:

...no spot in Australia more calm, more peaceful and beautiful, than the sacred precincts of St Paul's, Cobbitty... the beautiful old native apple-trees surrounding it...Camden Church in the distance, the Razor-back range beyond, and the Cowpasture River below, furnish a sight worthy the visit of the stranger...

Other devices used as eye-catchers were summerhouses, common to a number of colonial gardens such as those which once existed at Elizabeth Bay House, Rose Bay Cottage and at Tempe a bathing house provided a similar Picturesque incident in the landscape. A notable example of a summerhouse, now in ruins, is at Beulah where the octagonal summerhouse had views over the landscape toward the Razorback range and was a visual reference point between the two Hume properties Beulah and Meadowvale (formerly Hume Mount Farm). Other examples were at Macquarie Fields House where the summerhouse on axis with the house at the edge of the garden commanded views to the east and Rouse Hill House where the later summerhouse (c. 1870s) terminates a garden walk.

The Small Lot Owner

Small grants of 25 to 30 acres proved unviable away from fertile alluvial soils along the rivers or grants on initially productive soils became nutrient-poor in a relative short period of time. Many of the small grants and commercially unviable grants were soon consolidated into larger holdings, creating a situation where, despite the number of grants shown on the settlement maps, large areas of land were owned by the one person or family. The small grants along the alluvial river flats also had the

problem of being susceptible to flooding. Macquarie noted in his tour of 1810 that the front line of farms along the Nepean in what is now the Penrith area were all liable to be flooded and 'consequently the houses of the settlers are very mean and paltry'.

Jean's states that the small farms averaged about 55 acres of which about 20 would be cultivated. By the 1820s Jean's assessment is that the largest body of small farms were situated on the Hawkesbury and South Creek alluvial soils. Other small farms had been established in the Minto, Airs and Appin districts. In Airs these were mostly along Bow Bowing and Bunburry Curran Creeks. Away from the creeks the small grants had been either unfarmed or consolidated into larger parcels which were economically viable. These larger estates determined the character of the route between Campbelltown and Liverpool. By 1836 the District magistrate's report indicates that of the 170 small settlers in the Campbelltown district, about 100 were totally dependent on their holdings and of those 70 would need assistance to avoid ruin.

The only opportunity for former convicts and people of lesser means to farm was to lease a portion of a larger holding as a tenant farmer. This practice became more common from the 1840s and coincided with both the end of the convict system and a Depression which placed the large landowners in a position where there was no longer the workforce to farm the land economically. This led to areas of tenant farms, usually clearing leases, creating a pattern of small farms. Some of these were on the good farming land of the Nepean. Beyond Camden the later properties at Cawdor - Oldham Hills, Burnham Grove, Mayfield and, toward Cobbitty, Francis Ferguson's Australia Nursery- indicate the farms which were leased from the Macarthurs during the 1850s. These farms were part of the 'Cawdor Estate' which was eventually subdivided for sale in 1885. For the most part the rural small holdings character of the area that still exists along the Main Southern Road, Cobbitty, today relates directly to the pattern of small farming leases from the 1850s and the later 1885 sale of the land.

Few other areas around Camden and Narellan were available for the small lot owner. Both Atkinson and Higginbotham explain the process of amalgamation and subdivision in the area around Elderslie. Laid out in 1841, the village failed to develop as envisaged but as Atkinson argues, the area was one of the few where small pieces of freehold land was available without the constraints of tenant farming.

There were no small grants along the Nepean near present Luddenham, Wallacia and Greendale. Proudfoot explains the difficulty in understanding the settlement pattern in this area which appears to be one of tenant farming. Although there are claims that about 2000 people lived in the Greendale area in the 1840s and there being 9000 acres of cleared land, there is little surviving evidence of buildings.

Agriculture, Horticulture and Scenery

The task faced by all settlers was to first clear the land for cultivation. The colonial 'improvement' of the land was described by a number of educated writers as generally being a process of mass destruction with little thought to 'improvement' as it was commonly understood by those with a knowledge or appreciation of landscape gardening such as the Macarthur and Macleay families who cleared their farms judiciously, leaving native trees to emulate the English ideal of the park-like appearance of a country estate. Even Oxley, the Surveyor-General had cleared almost 2,000 acres of every tree, an example one traveller observed as being almost universally followed.

This technique of clearing the land is borne out by Sir John Jamison's description of his celebrated property 'Regentville' in the Mulgoa Valley:

In the early part of 1825, six hundred acres of forest timber were felled nearly adjoining my house at Regent-Ville, and remained untouched until September 1828, when about thirty labourers were employed to grub up the stumps and to burn off the timber.

The impression that Jamison appears to have followed a program of clear-felling of timber in the vicinity of his new house is substantiated by Baron de Bougainville's account of an:

absolute lack of shade... we continue our walk in the direction of a beautiful valley, of which one part of the land is under exploitation; the rest, denuded of trees, except for the trunks, and enclosed by fences, serves as pasture for the herds.

There were some exceptions to this mass clearing, notably Fernhill, built in 1842, where the native Angophoras (*A. subvelutina* and *A. floribunda*) were judiciously thinned and other native trees removed so that clumps in the manner of the English Landscape School lined the drive to the mansion. Munday described Fernhill in his book *Our Antipodes* as being the best example of landscaping in the manner of an English park he had encountered in the colony. Angophora, or apple trees as they were commonly called, were favoured for their more unusual form. By the 1840s, when Fernhill was laid out, it seems that a number property owners were acknowledging that the retention of some trees was desirable. This had been recommended by Thomas Shepherd in the first lecture he delivered of a proposed series on landscape gardening shortly before his death in 1836. The Australian-born Annabella Boswell alluded to a change in attitude in 1849 when visiting Wivenhoe and noting that it could boast some very fine old Angophoras, as could Brownlow Hill where she was then living. She wrote:

Unfortunately it was too much the custom in the early days of the Colony to clear off all the trees indiscriminately as soon as one formed a homestead, so there are really very few handsome well-grown trees left where they can be seen and admired, and lend beauty to the view. Of course, in many places the bush still extends for miles.

After the land was cleared, the ground was hand-hoed and the seed was broadcast by hand instead of being sowed in rows, a technique which both wasted seed and encouraged weeds. This was a practice which Karskens states continued well into the Macquarie period. The settlers followed a practice of sowing two crops a year in the same soil, were not aware of the need for crop rotation and did not weed or manure. The result was the early exhaustion of the soil, except on the richer alluvial

flats of the Hawkesbury-Nepean. On the richer alluvial soils many farmers sowed two crops a year, following the wheat harvest with sowing maize and then sowing wheat as soon as the maize was harvested. For the Hawkesbury settlers the increased yields were off-set by the frequent floods, destroying both crops and barns.

Karskens cites an 1805 description of one of the successful small farms away from the alluvial flats at Prospect. This was the sale notice for Samuel Griffith's farm described as:

...valuable thirty acre farm all clear and 16 acres under wheat, an excellent 2 acre orchard, abundantly stocked with bearing fruit trees of the best kind; commodious shingled dwelling house, good barn and every other necessary convenience; eligibly and delightfully situated at Prospect.

Prospect Hills was evidently still intensively cultivated in the 1830s when a traveller wrote that there were "fields of corn as far as the eye could reach." For this traveller the scenery far exceeded his expectations, Prospect Hills, in particular he considered very fine.

Reports from the early years of the 19th century indicate that orcharding was a major activity with peach trees flourishing in the area around Parramatta. Increasingly the incidence of small productive holdings with extensive orchards appears to have been the ideal that many settlers aspired to. When the Parramatta house of Samuel Terry, was advertised for sale in 1806, the garden described as being "in high cultivation, with upwards of 40 bearing fruit trees of fine growth and flavour" Terry was to later own and farm a number of properties on the Cumberland Plain, amassing 19,000 acres between 1810 and 1821. **(Figure 3.10)** Labour was cheap as convict labourers had only to be kept in food and clothing. The Reverend James Hassall, recalling his childhood at Denbigh at Cobbitty, wrote that three men were kept constantly at work in the five acre garden- garden meaning kitchen garden and orchard - with extra hands sent in when needed. Large orchards were established at Alexander MacLeay's Elizabeth Bay Estate and William Wentworth's, Vacluse House indicating their *de rigueur* status.

In the second decade of the nineteenth century there was an increased interest in grape-growing. During 1815 and 1816 John Macarthur with his sons toured France and Switzerland to gain a knowledge of winemaking and to collect vines. These, or what the Macarthurs thought as the vines they had collected, were imported to Australia in 1817. When planted, the vines themselves flourished but were not of good wine making quality. Gregory Blaxland of Brush Farm near Parramatta had more success with his early endeavours. Blaxland experimented with a number of grasses and crops including tobacco but his most successful were with viticulture and he was able to take a sample of wine to London, where it was received favourably, in 1822.

By 1820, Jeans states, improvement was noticeable on the grants of the wealthy with more using ploughs enabling more stumps in paddocks to be removed and increased tilling proficiency. Both William Redfern at Campbellfields and William Cox of Clarendon near Windsor - more remembered for his road-building - used more improved English farming techniques. Redfern "folded his sheep on the arable fields in the English manner," a technique used to manure the land, Cox promoted the rotation of crops of turnips with grasses and used the plough instead of hoes, but as Jeans discusses the shortage of labour in New South Wales prevented intensive farming in the progressive English mode and farming activities instead concentrated on breeding sheep on natural pastures. William Howe of Glenlee was one of the most respected farmers and by the 1830s through his use of improved methods of agriculture his estate was one of the best dairy farms of the colony. Mrs Felton Mathew wrote, in 1833, that Mr Howe had the best "if not the only hay in the colony" and that "Mr Howe has, it is said, laid out his grounds, with true good taste in the best English style, dividing the meadows with the hedges instead of the rough wooden fences everywhere used."

Mills for the manufacture of flour from wheat were erected in a number locations such as those at Castlereagh on the Nepean River and at Kirkham near Narellan but gradually fell into disuse after wheat growing became difficult due to the incidence of rust which appeared in the 1860s, the most prominent early mill remaining today being at Mt Gilead.

When the Airds, Appin and Bringelly areas opened up the same problems of low yield experienced elsewhere on the Cumberland Plain were replicated. In 1824 G.T.W. Boyes, visiting Mr D'Arietta at Morton Park near the present Douglas Park noted the difficulties facing many settlers in their attempts to farm the poorer soils of the forest lands:

Arietta began at the wrong end, instead of feeding sheep he put in the plough and what money he had was soon swallowed up and the Estate mortgaged beside for its full value.

Despite its inadequacies as a profitable farm, Boyes found the scenery of the place worthy of both comment and rendering in watercolour (**Figure 3.11**). A photograph of the same scenery by Chapman in 1978 indicates the landscape to have been relatively unchanged (**Figure 3.12**), although recent pressures for rural residential subdivision will require careful management to preserve the character of this view (**Figure 3.13**). Boyes' comments on one aspect of the nature of the hills on D'Arietta's property is pertinent to the majority of the gently rolling hills of the Cumberland Plain and its margins:

The country about Morton Park is very beautiful - you ride over a succession of hills that are neither high nor steep- covered with loads of grass - and the trees are never thick enough to impede your way. The whole of the ride is very like a Park in England- from the summits of the little hills you get occasional peeps over a great extent of country, and when mellowed into the distance the external woods lose their monotonous effects.

Grazing, which would have been more profitable for D'Arrietta, required not only land but capital. Fletcher's analysis of the early settlement concludes that grazing was "principally in the hands of 500 settlers most of whom had come free." The most prominent of these were the Macarthur, Hassall, Blaxland and Johnston families. An exception was the emancipist Samuel Terry. Terry's farm, and principal place of residence, Mt Pleasant near the town of Castlereagh was formed from a number of smaller grants and totalled 2,000 acres. The diary entry of Rev. Joseph Orton from

October 1832 describes the area along the Nepean River on his approach to Terry's farm as consisting of:

Estates more or less cultivated and the land is generally good. Mr Terry's Estate is the most Anglo "sized" in appearance of any that I have yet seen in the colony; very similar to an extensive farming establishment in the mother country. The surrounding scenery is exquisitely fine.

Further to the south along the Nepean River in the Mulgoa at Regentville Sir John Jamison's had by this stage created a productive property. Initially, Jamison was president of The Agricultural Society, founded in 1822 under the patronage of Sir Thomas Brisbane. The Horticultural Society was a separate body, becoming united with its Agricultural counterpart in 1826, under Sir John's leadership. An 1828 article in a magazine called *The Blossom* alludes to a certain amount of criticism by the horticulturally inclined of this leadership but Jamison was a 'mover' and had managed to organise a Committee of management for the Society's garden at Parramatta, something not previously achieved.

Elizabeth Hawkins described the garden in a letter to her sister in 1822, referring to differing cultivation techniques to those in England as the climate allowed frost-tender fruit trees to be grown in the open instead of espaliered on a wall.

I was delighted with his garden. The apples and quinces were larger than I ever saw before (it is now autumn in this country), and many early trees of the former were again in blossom. The vines had a second crop of grapes, and the fig trees a third crop. The peaches and apricots here are standing trees. He has English cherries, plums and filberts. These with oranges, lemons, limes and citrons, medlars, almonds, rock and water melons, with all the common fruits of England; vegetables of all kinds and grown at all seasons of the year, which shows how fine the climate is.

A record of *Plants Sent* in the Royal Botanic Gardens, Sydney, Herbarium records that Sir J. Jamison received 12 Olive trees of 5 sorts, vine cuttings and "pinks &c." in July 1829, indicating that progress had been made on the garden to the extent of using ornamental herbaceous material. Commissioner Bigge, in his 1823 report, *The*

State of Agriculture and Trade in the Colony of New South Wales recommended the planting of olives and by 1828 at least six varieties of *Olea europaea* had been introduced into the Government Gardens, with “nearly One Thousand Layers for Public Distribution” Olive cultivation became an accepted part of colonial gardening. A B Spark of Tempe near the Cook’s River noted in his diary on 13 February 1839 that he had sent his gardener to the second show of the Floral and Horticultural Society with fine specimens of pomegranates, olives and flowers.

Jamison seems to have experimented with a number of crops at Regentville and in 1829 he claims to have been cultivating the grape vine in the colony for twelve years, observing that soil and climate are more important for a successful product than the variety of grape. In the *Annual Report* for 1830 Jamison makes further recommendations:

The terraces ought to be carried from the bottom, horizontally along the hill, each seven feet wide, and fronted with a dry stone wall if possible. Where stones cannot be had, the front of each must be supported by wood, when the whole of the terrace should be trenched at least three feet deep, taking care to apply the most appropriate part of the natural soil, carefully avoiding manure, at the back and front of the terrace wall where the vines are to be planted - afterwards, attention must be paid to keep the vine-yard clean of herbage and grass, by light hoeing of the surface, as frequently as may be necessary.

He states that he had employed a German emigrant to lay out a vine-yard at Regentville using the latest methods from Germany and France. This vineyard was reported in the *Sydney Monitor* from February 15 1839 as the first terraced vineyard to be laid out in the colony. These terraces, a small house or winery, a dam and a road skirting the crest of the hill to the north of the vineyard are clearly depicted in an 1835 painting attributed to Conrad Martens. One description of the vineyard describes it as being enclosed ‘by hedges of the china rose and lemon’ and containing ‘between 30 and 40,000 vines including upwards of 200 varieties’.

Baron von Hugel’s journal records that the vineyard was laid out by F A Meyer. Meyer had arrived in the colony in 1830 and it was later reported that he had been on a

three year engagement during which he established several vineyards. The same report indicated the 'fever' that the colonists had caught for growing vines and that a Mr Manning had started a vineyard using the terracing technique of Meyer's. Doubts as to the success of this technique were expressed by Baron von Hugel who wrote:

Sir John's vineyard has been laid out according to mistaken notions current in the colony: wherever there is very arid, cold, sandy soil, the settlers think this is the best place for grape vines. Now Meyer was allotted a hillside facing due south, with the poorest description of sand and yellow clay. He neatly levelled this off into a large number of small terraces, none of them wide enough for the roots, with retaining walls of stones. The grape vine cuttings were then stuck into the sand here, without any soil or manure. The whole thing certainly looks like a vineyard, as these are painted in pictures - any child can recognize it instantly as such- but the results will not be satisfactory.

The Macarthurs also employed German vine dressers for their vineyards. From 1838-54 members of the Stein family worked at Camden Park. Others followed in the 1850s. Viticulture through the Cumberland Plain had improved with James Busby's writings on viticulture (1825, 1830 and 1834) and after he imported a valuable collection of vines from Europe in 1832. These started to bear in 1834 and Monsieur Joubert of Hunter's Hill, who William Macarthur referred to as a 'benefactor' of the wine industry, bought out a collection from the Medoc in 1837. The emancipist merchant William McDonald employed the nurseryman Thomas Shepherd, whose articles on the cultivation of the vine were published in the Sydney Gazette, to lay out his Mt Adelaide Estate at Darling Point in the mid-1830s. This included an extensive vineyard, an orchard, a lake with islands, a weir, bridge and romantic cave.

William Macarthur of Camden Park was an informed observer of the soil types of the Colony and in the 1840s discussed them in their projected capacity for grape growing. He believed a certain type of soil, suitable for vineyard use, existed on:

... a hill of this nature at Minchinbury, on the Western Road and I believe there is a continued chain or succession of such hills, along the Devil's Back to Carne's Hill, on the road between Liverpool and Camden, and from thence extending through

Leppington, Varroville, and Denham Court, into the Airds and Appin districts; and similar soil exists in the Bringelly district, on the Orielton Estate, and at Herbert's Hill, opposite Kirkham.

These soils were in addition to those already known to be fertile and suitable for grape growing - those to the north of Parramatta extending from Kissing Point to Pennant Hills, Castle Hill, Baulkham Hills, Toongabbee and Seven Hills - areas where farming had been well-established. The alluvial soils of the Hawkesbury Nepean yielded large crops of wine and the Mulgoa Valley where Jamison established his vineyard was home to several prosperous vineyards such as that established in 1830 at Winbourne (Wimbourne), an estate now conspicuous for its old Stone Pine avenue. Macarthur's appraisal of the grape-growing capacity of the Cumberland Plain soils corresponds reasonably accurately with a number of areas which became productive. With the advent of *Phylloxera* many of these vineyards disappeared, although *Phylloxera*-resistant grapes continued to be grown in some areas through the 19th century.

Orcharding was a major enterprise in the Cumberland Plain and extensive orange orchards covered the Hills district and the land along the Parramatta River. Sydney provided citrus fruits for Tasmania and Victoria. By 1840 Joseph Kenyon of Woodlands near Parramatta offered large quantities of export quality oranges. The leading orchardist was James Pye who developed orchards at Seven Hills and Field of Mars besides his celebrated orchard on the Windsor Road at North Parramatta. Elizabeth Macarthur describes the extent of orcharding to the north of the Parramatta River in 1847 in a letter to her son Edward:

...these orchard gardens have a most rich and beautiful appearance - covered with Golden fruit and dark glossy leaves of the Orange tree in contrast with the blossoms of hundreds and thousands of the Peach - now in full bloom - to say nothing of the Loquat - an evergreen - the blossom is fragrant ... you would be astonished ... at the numerous fruit gardens cultivated by small settlers -about the Pennant Hill country all for the Sydney Market!

This description of the orchards of the area supplements Elizabeth's accounts of her own garden at Elizabeth Farm and Louisa Meredith's descriptions of the houses in Parramatta:

...pretty gardens encompassing many of them, shadowed with fine mulberry, orange, and fig trees, and gay with luxuriant shrubs and flowers, among which the large American aloe forms a prominent feature, and frequently one appears in bloom ... Some of the houses are covered with vines, and the verandas of others richly tapestried with jasmine, woodbine, roses, and other climbing plants of every description.

In the garden of the famous 'Red Cow Inn' Meredith found pomegranate, oleander, pink and crimson china-roses and an enormous Prickly-pear.

The use of citrus as hedges, particularly lemon, was common in the colony also. Lemon hedges, orange trees and the Centifolia rose featured in Solomon Wiseman's garden, although the visitor Baron von Hugel found its simple square kitchen garden form "tasteless". The convention of using a geometric layout based on the form of a kitchen garden was not uncommon for early colonial gardens. At Annandale House the squared beds were edged with brick drains and at Bradbury Park Estate near Campbelltown enormous flower and kitchen gardens were laid out in a form which was, essentially, based on the form of a glorified kitchen garden bounded by a protective line of trees (**Figure 3.13**). Bennett, in 1860, comments that in addition to the frequent use of lemon and orange trees inside palings as fences, the Cape Mulberry and Quince trees were also used and when trimmed, formed neat and compact hedges. He adds:

The Cluster and other Roses, as well as the gorgeous Bignonia venusta, are also seen trailing over the enclosures.

The China rose and numerous other plants had initially been imported by the Macarthurs. The impact of this family and the Macleays on the horticultural development of the colony cannot be underestimated. As early as the 1830s William Macarthur had established his nursery at Camden Park, prior to the completion of the mansion and its more sophisticated garden lay out. By the 1850s a vast range of

plants were grown and gardeners that had worked for William - Francis Ferguson and Silas Sheather - both established nurseries of their own which served western Sydney. Ferguson's Australia Nursery was at Camden and Sheather's Camellia Grove near Parramatta. By the 1860s the sons of Thomas Shepherd had established, Chatsworth, a large nursery between Eastern and Ropes Creeks, which supplemented their Darling Nursery in Chippendale.

Louisa Meredith's descriptions of the gardens of Parramatta stand in contrast to her own gardening experiences at Homebush which she described as being a 'fair specimen of a New South Wales settler's residence, possessing many of the Colonial peculiarities'. A veranda ran the length of the front of the house and at the back there were two wings, leaving a shorter veranda in the centre:

with the garden (or rather wilderness) before it, commanding a beautiful view of the river (a creek of which ran towards the house), the opposite shores, and several wooded jutting points on our side.. The house stood on the highest ground in the estate, and for some hundreds of acres all around not a native tree nor even a stump was visible, so completely had the land been cleared, although not worth cultivation. This desert bareness was a little relieved close to the house, by three magnificent Norfolk Island pines, which towered far above the roof; and by the then broken and ruined fruit-trees of what had been two very large orchards, which were formerly well stocked with mulberry, plum, cherry, pear, apple, peach, orange and loquat trees... A curving road, nearly half a mile long, and some twenty yards wide, with a good four-rail fence on either side, led from the entrance gate, on the public road to the house, and this, being unadorned by a single tree, was, according to a Colonial stretch of courtesy termed the 'Avenue'...

The use of araucarias - Norfolk Island Pines, Bunya Pines, Hoop Pines and to a lesser extent the Cook Island Pine - became almost an ubiquitous feature of large colonial gardens. They represented both the exotic and the familiar, different from the northern hemisphere conifers but sufficiently close in their form to them to attract the colonists to this genus. Louisa Meredith thought them magnificent in an otherwise unsatisfactory place and they graced the more sophisticated and scientific garden of A.B. Spark at Tempe visited by both Lady Franklin and R.G. Jameson in

1839. Lady Franklin described the garden as having walks and right angles crossing with Norfolk Island Pines at the intersections. Jameson wrote in more detail:

The mansion itself, a large cottage ornée, with an exterior verandah and colonnades and snow-white walls, constituted the chief ornament of a very pleasing landscape, and presented a lively contrast with the variegated and umbrageous foliage of a garden, rich in specimens of the rarest plants, native and exotic, which had been scientifically grouped according to their botanical characters.

Here I saw the beautiful portia argentea, the araucaria excelsa, or pine, of Norfolk Island; the phornium tenax, or flax plant, of New Zealand; and the gigantic lily, said to be the chief floral ornament of the Australian wilderness; while the orange, the citron, the pomegranate, and many varieties of the vine, flourished luxuriantly. Nor were these the only indications of the owner's cultivated taste to be seen on the domain of Tempe...

Jameson also mentions seeing 'upwards fifty species of vines, from the most celebrated districts of France.' *Phormium tenax* was found in colonial gardens as it had initially been seen as an economic crop and its collection from New Zealand and investigation as to its economic viability had been a directive to Governor Phillip.

George Bennett was a keen observer and his 1860 publication indicates that flour and cloth mills were well established along the Nepean River and Penrith consisted of one principal street "with neat villas, gardens and agreeable scenery around, - the Blue Mountains forming a conspicuous object in the distance". Although principally interested in the indigenous vegetation of the Penrith area on his tour with Charles Moore, Director of the Botanic Gardens, Bennett commented on the incidence of the White Mulberry about the town, the abundance of Variegated Thistle (*Carduus marianus*) on the roadside and the many English plants in the vicinity of the mill owned by Messrs French. Returning from their expedition via the Old Lapstone Hill Road, Bennett, in the tradition of the informed traveller describes a scene that encapsulates both productive farming and picturesque scenery and, importantly, compares well with its English counterpart:

... the view over the Emeu Plains, seen through the opening in the dense mass of forest-trees, was extremely beautiful, and took in a wide range of landscape. Near us were the romantic glens and wild forest-scenery of the Blue Mountains; before us the broad Nepean River (taking its serpentine course to join the Hawkesbury); farm-houses were scattered like specks amidst fields of grain and meadows filled with cattle and sheep grazing; the land was undulating in character, terminating in distant lofty hills, more or less wooded. It reminded me of the view from Richmond Hill near the Park, - the Australian scene being, if anything, more romantic and beautiful.

Broadbent discusses the appeal of the picturesque to settlers themselves as only becoming prevalent after the wilderness of the colony had been pushed back and tamed. By the time Bennett was describing the productive pastoral landscape of the Nepean, the Cumberland Plain had been transformed and the juxtaposition of the forest-scenery with the farmed lands was appealing. Vast tracts of the remaining forest had been cleared to provide timber for firstly the construction of the railway to the south and then fuel to power the engines that reached Picton in the south west beyond the Cumberland Plain in 1863.

Summary

The primary factor affecting the settlement pattern in the Cumberland Plain was the underlying geology and soils. This directly affected the success of farming and the profits on which large homesteads and their accompanying farm buildings, gardens, orchards and vineyards were established. The importance of this is enunciated by a number of writers such Governor Macquarie in his journals and, much later, William Macarthur under the pseudonym, Maro. Large differences were found between the rich alluvial soils along the river banks and the initially tolerable, but soon depleted, soils of much of the Cumberland Plain. In areas such as these only the large holdings, often backed by wealth gained from pastures elsewhere, were found to be viable while near the Hawkesbury-Nepean, in areas such as Pitt Town Bottoms, Richmond and Castlereagh, smaller farms remained intact.

Associated with the underlying geology were the access routes through the Cumberland basin. The river system played a vital part in providing early means of transport and access to areas beyond Sydney. This meant the early settlement spread up the river to Parramatta and thence to Windsor. Early roads established transport routes to areas where there was a perceived need and in turn determined where there would be a concentration of settlement. Early transport routes to the Cowpastures began at Prospect Hill and travelled south to the Nepean River, a route followed by botanist explorer George Caley in 1804. During Macquarie's governorship turnpike roads were proposed to Parramatta and the Hawkesbury and later to Liverpool, the Cowpastures and Campbelltown. The road between Liverpool and Campbelltown was not well designed however and the main route south remained via the Old Cowpasture Road which began at Prospect. For the southern areas near present Campbelltown important transport routes were those to the Illawarra through Appin and across the Nepean at Menangle Ford, passing around Razorback Range to Picton and thence to Goulburn.

Smaller grants were generally confined to the alluvial riverflats with a pattern of consolidation into larger holdings occurring away from the rivers. Homesteads with large gardens were established on many of the larger properties. It is the siting of these houses in the manner of either the English Landscape School or the picturesque which remains an important element in the existing cultural landscape. Many of these houses were designed to be seen and to convey the importance of the occupants and their property, as a "gentleman's seat." Set part-way down a slope or on a knoll overlooking the river flats, their locations now signalled by mature vegetation, usually Araucarias, they, their outbuildings and the hedgerows that run between them, are the punctuation marks that allow the 19th century landscape to be read and interpreted. Where their original grant boundaries, relationships with traditional transport routes and intended viewlines are recognisable it further accentuates their significance.

APPENDIX H National Trust of Australia (NSW) Register

National Trust of Australia NSW Landscape Conservation Areas

118 Gen. Hosp. (US Army Service of Supply) Cultural Landscape 26 Oct 2011
Alstonville Plateau Landscape Conservation Area Nov 1997
Bargo River Gorge Landscape Conservation Area 26 March, 2015
Barrington Tops Landscape Conservation Area 19 Sep 1984
Bathurst Agricultural Research and Advisory Station 25 June, 2014
Bellingen Valley Landscape Conservation Area 20 Aug 1979
Ben Halls Gap Old Growth Forest Landscape Conservation Area May, 1991
Bents Basin Landscape Conservation Area 24 March 1986
Berrima Memorial Park Landscape Conservation Area 14 Sep 2000
Berry District Landscape Conservation Area 27 Feb 1978
Blackwood Landscape Conservation Area 30 July, 2014
Blakehurst Kyle Bay Cultural Landscape 30 July, 2014
Bolwarra Flats Landscape Conservation Area 28 Jun 1982
Border Ranges Landscape Conservation Area 1 May 1978
Botany Bay Entrance Landscape Conservation Area 25 Nov 1974
Bow Wow Creek Gorge Landscape Conservation Area 21 Feb 1977
Broken Bay Entrance Landscape Conservation Area 25 Nov 1974
Broken Hill Regen. Reserves Landscape Conservation Area January, 1991
Brother Mountains Coastal Conservation Area 20 Jul 1987
Burning Mountain Landscape Conservation Area 28 Jun 1982
Burning Palms Landscape Conservation Area 21 Feb 1995
Bylong Landscape Conservation Area
Bynguano Range Landscape Conservation Area 4 April 1977
Castle Hill Historic Site Landscape Conservation Area 22 Nov 1994
Centennial Park Landscape Conservation Area 31 May, 1976
Cliefden Caves Landscape Conservation Area
Coast Hospital (Little Bay) Conservation Area March, 1989
Cumberland Plain Remnants LCA 3 Nov 1986
Drip and Corner Gorge Landscape Conservation Area 24 July, 2013
Dromedary Area Landscape Conservation Area 28 Aug 1978
Dry Stone Walls Conservation Area 15 May. 1989
Ellalong Lagoon Landscape Conservation Area 5 Nov 1984

Era Landscape Conservation Area 22 Jun 1993
Exeter / Sutton Forest Landscape Conservation Area 27 July 1998
Fingal Head Coastal Conservation Area 17 July 1989
Garawarra Landscape Conservation Area 24 March 1986
Glenrock – Burwood Landscape Conservation Area 16 May 1988
Goanna Headland Coastal Conservation Area 23 July 1984
Gosford Hills Landscape Conservation Area 15 May 1989
Gwawley Bay Landscape Conservation Area 25 Feb 2004
Hartley Valley (Cox’s River) Landscape Conservation Area 19 Jan 1987
Hastings Valley Landscape Conservation Area 1 March 1983
Hawkesbury Reserve, Brooklyn Landscape Conservation Area 23 Sep 1974
Hill End – Tambaroora Landscape Conservation Area Sep 1988
Holsworthy Landscape Conservation Area 30 Oct 1996
Hunter River Estuary Landscape Conservation Area 30 May 1977
Illawarra Escarpment Landscape Conservation Area 23 Sep 1974
Jamberoo Valley Landscape Conservation Area 17 June 1975
Jamison & Kedumba Valleys Landscape Conservation Area 5 Nov 1986
Jenolan Caves Conservation Area 23 Sep 1985
Jervis Bay Landscape Conservation Area 24 Feb 1976
Kangaroo Valley Landscape Conservation Area 17 June 1975
Kanimbla & Megalong Valleys: Coxs River LCA 3 Nov 1986
Kosciusko Alpine Landscape Conservation Area 19 Sep 1977
Ku-ring-gai Landscape Conservation Area 19 Sep 1988
Kyle Bay Cultural Landscape 25 June, 2014
Lake Cowal Landscape Conservation Area 18 May 1987
Lake George Landscape Conservation Area 5 Nov 1984
Lambs Valley Landscape Conservation Area 5 Nov 1984
Lord Howe Island Group and Maritime Environs Landscape C. A. 23 Sep 1974
Lower Hawkesbury Landscape Conservation Area Jan 1988
Malabar Headland Landscape Conservation Area 28 Feb 2001
MacDonald Valley / Wollombi Landscape Conservation Area 4 Aug 1977
Macquarie Marshes Landscape Conserv. Area 10 Feb 1986
Middle Harbour Landscape Conservation Area 24 Jan 1983
Momberei Scone Landscape Conservation Area 28 Jun 1982 Montagu Island Landscape
Conservation Area 25 Jun 1979
Moore Park Conservation Area 17 Jul 1989

Mount Grenfell Landscape Conservation Area 28 Aug 1978
Mulbring Landscape Conservation Area 5 Nov 1984
Murray Valley Flood Plain Landscape Conservation Area 27 Aug 1975
Muswellbrook – Jerry Plains Lands. Conservation Area 21 Jan 1985
Myall Lakes Landscape Conservation Area 25 Jul 1977
Narrabeen Lakes Landscape Conservation Area 28 Jul 1975
Old Bar Airfield Landscape Conservation Area 29 Jul 1998
Parramatta and Lane Cove Rivers Landscape Conservation Area 24 Jan 1983
Parramatta Park (Former Govern. Domain) Historic Con. Area 1 May 1978
Pennant Hills Ludovic Blackwood Memorial Sanctuary 30 July, 2014
Pokolbin Landscape Conservation Area 5 Nov 1984
Port Macquarie Coastal Conservation Area 19 May 1983
Port Stephens Landscape Conservation Area 27 Feb 1978
Queen Victoria Memorial Hospital Conservation Area
Robertson Landscape Conservation Area 28 June 1982
Royal Botanic Gardens and Domain Landscape Conserv. Area 31 May, 1976
Royal National Park Landscape Conservation Area 31 July, 2014
Seal Rocks Coastal Conservation Area July 1988
Stanwell Park Coastal Conservation Area 28 Sep 1985
Stroud Gloucester Valley inc. Vale of Gloucester LCA Mar 2011
Sydney Harbour Landscape Conservation Area 24 Jan 1983
Tweed River Valley Landscape Conservation Area 20 Aug 1979
Upper Dora Creek Landscape Conservation Area 9 Nov 1981
Upper Hawkesbury Landscape Conservation Area 24 Jan 1983
Warrumbungles Landscape Conservation Area 1 Mar 1982
Washpool Landscape Conservation Area 1 Mar 1982
Widden Valley Landscape Conservation Area 24 Aug 1981
Willandra Lakes Landscape Conservation Area 4 April 1977
Wingecarribee Swamp Landscape Conservation Area 21 Sep 1992
Wingham Brush Landscape Conservation Area 18 May, 1987
Wolgan Valley Landscape Conservation Area 22 Nov 1976
Woronora Plateau Landscape Conservation Area 13 May 1988

Trees and Tree Avenues

Boolambayte Grandis (Flooded Gum)
Brother Mountain Bird Tree (Blackbutt)
Brunswick Heads Memorial Pine Trees
Chrysophyllum, Royal Botanic Gardens
Cudgen – War Memorial Avenue 26 March, 2014
Dragons Blood Trees, Royal Botanic Gardens
Elephant Foot Tree, Royal Botanic Gardens
Erythrina, The Rocks
Faulconbridge – Prime Ministers’ Corridor of Oaks
Ficus superb var. Henneana, Rose Bay
Fontainea, Lennox Head
Forest Red Gum, Royal Botanic Gardens 27 August, 2014
Gallipoli Lone Pine, Oatley 26 June, 2013
Glebe – Small-leaved Fig 29 May, 2013
Hoop Pine, Royal Botanic Gardens
Hovell Tree, Albury
Maroubra Junction – Row of Six Silver Date Palms 26 March, 2014
Purcell Park, Matraville Woody Pear Trees 26 March, 2014
O’Connell Memorial Avenue of Trees 23 May, 2008
Parker’s Cork Oak, Tenterfield 26 June, 2013
Randwick White Walnut Tree 26 March, 2014
Red Cedar, Royal Botanic Gardens
Rose Bay – Port Hacking Fig 26 June, 2013
Swamp Mahogany Avenue, Royal Botanic Gardens
Swamp Oaks, Royal Botanic Gardens 27 August, 2014
Swamp Oak Suckers, Royal Botanic Gardens 29 October, 2014
Tamworth King George V Avenue of English Oak Trees 27 March, 2013
The Rocks – Cockscomb Coral 29 May, 2013
Urunga – Hoop Pine 26 March, 2014
Weeping Lilly Pilly, Royal Botanic Gardens
Woodford Tree (*Eucalyptus deanei*)

Parks

Anzac Park, Tamworth 18 May, 1987
Ashfield Park, Ashfield 22 September, 1986
Belmore Park, Goulburn 27 February, 1978
Bigge Park, Liverpool 16 March, 1987
Birchgrove Park, Birchgrove 19 September, 1988
Blackheath Memorial Park, Blackheath 30 July, 1997
Burdekin Park, Singleton 21 March, 1988
Burwood Park, Burwood
Cabarita Park, Cabarita 22 September, 1986
Carss Bush Park, Blakehurst 16 March, 1987
Centennial Park, Cooks Hill 30 July, 1997
Central Park, Armidale 2 March, 1981
Civic Park, Newcastle 19 September, 1988
Clark / Watt Park, North Sydney 18 May, 1987
Collins Park, Wagga Wagga 22 September, 1986
Cook Park, Orange 31 May, 1976
Elkington Park, Balmain 18 May, 1987
Gilbert Park, Manly 25 October, 1994
Gladstone Park, Balmain 16 March, 1987
Gregson Park, Hamilton 30 July, 1997
High Cross Reserve, Randwick 5 April, 1976
Howe Park, Singleton 29 March, 2006
Hurstville Park and Oval, Hurstville 22 June, 2011
Hyde Park, Sydney 3 November, 1986
Islington Park, Islington 29 May, 1996
Jackson Park, Faulconbridge 25 October, 1994
Jubilee Oval and Park, Kogarah 8 November, 2007
Jubilee Park, Glebe 15 March, 1989
King Edward Park, Maitland East 25 March, 1998
King Edward Park, Newcastle 25 February, 1998
Lambton Park, Lambton 30 July, 1997
Lang Park, Sydney 22 September, 1986
Lawson Park, Mudgee 26 June, 1996
Macarthur Park, Camden 16 March, 1987
Machattie Park, Bathurst 22 September, 1986

Mawson Park, Campbelltown 16 March, 1997
Milson Park, Kirribilli 25 October, 1994
Moore Park, Armidale 21 April, 1975
Mortdale Memorial Park, Mortdale 24 September, 1997
Oatley Park, Oatley 24 September, 1997
Observatory Park, Pennant Hills 30 July, 2014
Petersham Park, Petersham 26 November, 1986
Prince Alfred Park, Parramatta 25 October, 1994
Prince Alfred Park Sydney 23 November, 1993
Pymble Soldiers' Memorial Park, Pymble 25 October, 1994
Queen Elizabeth Park, Concord 22 September, 1986
Redfern Park, Redfern 22 September, 1986
Rowland Park, The Junction 25 March, 1998
St Ives War Memorial Park & Memorial, St Ives 30 June, 2004
St Leonards Park, North Sydney 23 November, 1993
Tumbalong Park, Darling Harbour 29 May, 2013
Victoria Park, Dubbo 20 July, 1987
Victoria Park, Forbes 29 September, 1975
Wallsend Park, Wallsend 30 July, 1997
Weekley Park, Stanmore 19 January, 1987

Gardens

Admiralty House Garden, Kirribilli February, 1995 ?
Anglewood Garden, Burradoo 29 May, 1996
Annambah Gardens, Maitland 24 October, 1995
Albury Botanic Gardens, Albury 6 April, 1987
Betty Maloney's Garden, Frenchs Forest 23 November, 1993
Blackheath Gardens, Blackheath 30 July, 1997
Brownlow Hill Gardens, Orangeville 24 October, 1995
Buskers End Garden, Bowral 27 September, 1994
Chinese Garden of Friendship, Darling Harbour 27 February, 2013
Chinese Market Gardens, La Perouse 30 March, 2011
Cowra Japanese Garden & Cultural Centre, Cowra 27 March, 2013
Crowdace House Gardens, New Lambton 30 July, 1997
Edogawa Commemorative Gardens, Gosford 24 September, 2014
Elizabeth Farm Gardens, Harris Park 29 May, 1996

Ellerslie Gardens, Corowa 21 March, 1988
Eryldene Garden, Gordon
Federation Garden Group, Lithgow 23 November, 1993
Fernside Gardens, Rylstone 28 March, 1995
Fitzroy Gardens, Elizabeth Bay 22 June, 2011
Former Clarens Garden Site, Potts Point 22 September, 1986
Glennifer Brae Manor House Gardens, Keiraville 22 November, 1994
Hambleton Cottage Garden, Harris Park 29 May, 1996
Hopewood Garden, Bowral 27 September, 1994
Ingleside House Garden, Ingleside 23 November, 1993
Isabel Fidler Memorial Garden, University of Sydney 26 October, 2011
Lewers Bequest Garden, Penrith 27 September, 1994
Lidsdale House Gardens, Lithgow 12 July, 1990
Naval Garden, Garden Island 23 May, 1983
Nooroo Garden, Mount Wilson 27 September, 1994
Remnant Garden from the Old Benevolent Society, Harris Park 29 May, 1996
Rippon Grange Garden, Wahroonga 29 November, 2000
Royal Botanic Gardens, Sydney 31 May, 1976
St Omer Garden, Braidwood 29 May, 1996
Wistaria Gardens, Parramatta 23 November, 1993
Wynstay Gardens, Mount Wilson 27 September, 1994
Yengo Garden, Mount Wilson 27 September, 1994

APPENDIX I List of Significant Landscape Design including some people of importance of New South Wales by Craig Burton

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CHRONOLOGY

1. THE DREAMING

The whole (state) including seas and islands

Refer maps by Tindale and Dr Horton

2. NEW HOLLAND TO TERRA AUSTRALIS

Visitors;

1770 British: James Cook

1788 French: La Perouse

1788 British: Gov. Phillip First Fleet (first Eastern Settlement) and land excursions

1791 British: G. Vancouver

1792 French: Bruny d'Entrecasteaux

1798 -1803 British: Matthew Flinders

1801 French: Baudin

1822 British: Capt. Phillip Parker King

1825 French: H de Bougainville

1827 French: D'Urville

1827 British: Capt. J Stirling

3. THE FIRST SETTLEMENTS (1629-1838)

1788 Sydney, (Albion) NSW

1788 – 1814 Norfolk Island. Kingston (Sydney)

1789 Parramatta (Albion and Rose Hill)

BOTANICAL GARDENS - SYDNEY & PARRAMATTA

1788 W. Paterson's Garden Sydney

1801 Parramatta (Paterson and Caley)

4. COLONIAL PERIOD 1810 – 1850

BOTANICAL GARDENS, NSW: SYDNEY

1810 First Sydney Common

1811 Second Sydney Common

1816 Sydney Botanic Gardens, Domain walls and Mrs Macquarie's road

1816 Charles Fraser (15yrs) First Superintendent

1828 Moreton Bay Garden set out by Fraser and Cunningham

1831 J.McLean (2yrs)

1833 R. Cunningham (3yrs)

1836 Committee (1yr)

1837 A. Cunningham (1yr)

1838 J. Anderson

1842 N. Robertson

1844 J. Kidd

1847 J. Bidwill

1848 C. Moore

EXAMPLES OF WORKS, NSW

Government House(s) Sydney

Government House Parramatta

Sydney Domain and Parramatta Domain

Sydney Botanic Gardens

Sydney Commons

Rouse Hill House

Brighton Farm

Harrisford

Camden Park

Brownlow Hill

Lyndhurst, Glebe

Vaucluse House

Tempe House

Elizabeth Bay House

Burwood Villa

Fernhill, Mulgoa
Forest Lodge, Glebe, NSW
Hereford House, Glebe, NSW
Rothwell Lodge, Glebe, NSW
Bett's House, Glebe, NSW
Crow's Nest House, NSW
Craig End, NSW
Gladesville Lunatic Asylum, NSW

5. GOLD RUSH PERIOD 1850 - 1899

PRINCIPAL MINING AREAS, NSW

Ophir
Sofala
Wattle Flat
Glanmire
Napoleon Reef
Hill End
Araluen
New England
Kiandra
Lambing Flat
Young
Forbes
Gulgong
Home Rule
Wyalong and West Wyalong NSW
Hill End NSW

AUSTRALIAN BOTANIC GARDENS 19th CENTURY, NSW

MAJOR GARDENS REGIONAL GARDENS DIRECTORS

1801 Parramatta NSW
1816 Sydney 1816 C.Fraser
1848 Sydney 1848 C.Moore

1871 Albury NSW {1865 R.Schomburgk(?)}

1871 Hay NSW

1871 Deniliquin NSW

1896 Sydney 1896 J.H.Maiden

6. THE VICTORIAN PERIOD (1835-1889)

EXAMPLES OF PARKS IN THIS PERIOD, NSW

1846 Boronia Park

1851 Hyde Park

1855 Sydney Domain

1858 Parramatta Park

1864 Richmond Park

1865 Prince Alfred Park

1866 Moore Park

1867 Belmore Park G'bn

1871 Victoria Park Dubbo

1870 Victoria Park

1878 Hyde Park

1879 National Park

1882 Cook Park,Orange

1883 King Edward Park N'cstle

1884 Blayney Park

1885 West Maitland Park

1885 Stuart Park W'gong

1885 Wentworth Park

1886 Carcoar Park

1887 Singleton/ Morpeth

1887 Wynyard Park

1888 Centennial Park

1890 Machattie Park B'hurst

HILL STATIONS, NSW

Mt. Victoria

Mt. Wilson

Mt. Irvine

Southern Highlands

Blue Mtns

Sydney Botanic Gardens

Vice- Regal Residences Sydney

Sydney Residences:

Bronte House,

Avona, Glebe,

Canterbury House,

Briarbank, Glebe,

Toxteth Park, Glebe,

The Heritage, Glebe

NSW Country:

Abercrombie House,

Retford Park,

Naroo, Mt. Wilson

7. THE FEDERATION PERIOD (1890-1919)

GARDEN SUBURB DESIGNERS, NSW

John Sulman

Walter Liberty Vernon

Walter Scott-Griffiths

Robert Coulter

Henry Halloran

Walter Burley Griffin

J.F. Hennessy

William Foggitt

Alfred Brown

MAJOR BOTANIC GARDENS: DIRECTORS

SYDNEY BOTANIC GARDENS

1896-1924 J.H. Maiden (28yrs)

1924-1933 D. Smith (9yrs)

1933-1936 E. Ward, C. Cheel (3yrs)

1936-1964 R.H. Anderson (28yrs)

EXAMPLES OF PLACES IN THIS PERIOD, NSW

Centennial Park, Sydney Kensington, Sydney.

Homebush Abattoirs, Sydney Haberfield, Sydney.

Yaralla, Concord, Sydney Daceyville, Sydney.

Griffith, NSW

Inglenook, Mosman, Sydney.

Belmont Park, Kurrajong, NSW

Kirribilli House, Sydney.

Glenhope, West Pennant Hills, Sydney.

Bella Vista, Seven Hills, Sydney.

8. THE INTER - WAR PERIOD (1920-1939)

EXAMPLES OF NSW PLACES IN THIS PERIOD

Castlecrag, Covecrag, CastleCove NSW

War Memorial Hyde Park South, Sydney, NSW

Craigend, Darling Point, Sydney, NSW

Greenway, Vacluse, Sydney NSW

War Memorials: Gundagai, NSW, Braidwood, Finley, NSW

Markdale, Binda, NSW

Kiloren, Crookwell, NSW

Fountains, Killara, NSW

St Aubins, Scone, NSW

Greenwood, St. Ives, Sydney, NSW

Everglades, Leura, NSW

9. THE MODERN PERIOD (1940 – 1962)

EXAMPLES OF PLACES IN THIS PERIOD, NSW

'Blue Mist' Leura, NSW

Invergowrie, Exeter, NSW

Snowy Mountains Hydroelectric Scheme, NSW

Pejar Park, Woodhouselee, NSW

10. NATIONAL IDENTITY PERIOD 1963 – 1979

1964 University of New South Wales Campus

1965 Warringah Freeway

1966 Newcastle Freeway

1967 Macquarie University

1969 Peacock Point

1969 Reader's Digest Roof garden, Surry Hills, Sydney

1969 – 71 Taronga Zoo

1970 Illoura Reserve Balmain, Sydney

1971 Kellys Bush

1971- 73 Kur-ring-gai College

1973 Winslow Street, Kirribilli

1978 Cowra Japanese Gardens stage 1

1986 Cowra Japanese Gardens stage 2

1978 Landsdowne Regional Park

1973 Brickfield Place

Lane Cove Plaza

Helen Street Reserve, Lane Cove

The Corso, Manly

1977 Long Nose Point, Balmain (Yuralbin)

1977 Dubbo Zoo

Eden Park, Ryde

1979 Simmonds Point, Balmain

Central Gardens, Merrylands

Millers Point, The West Rocks Sydney

Woolloomooloo Streets

Lane Cove Municipality
Clark Island, Sydney Harbour
St Thomas' Cemetery, North Sydney
Newcastle Foreshore Competition

11. LATE TWENTIETH CENTURY AND TWENTY FIRST CENTURY PERIOD (1980-Present)

KEY EVENTS CHRONOLOGICAL DATES AND EXAMPLES OF PLACES IN THIS PERIOD, NSW

1980 Formation of Australian Garden History Society

1982 Formation of the Burra Charter

1980s Malls, streetscapes and importation of "Main Street Programme". Capital cities and rural towns focus on urban improvements.

Development of private and new university campuses: UWS in Sydney

Chinese Gardens, Darling Harbour, Sydney

Japanese Gardens, Auburn, Sydney

Bicentenary projects; Bicentennial Parks throughout Australia and commemorative gardens

Botanic Gardens extensions: Mt Tomah and Mt Annan in NSW (1996 – 2006).

Redevelopment of Circular Quay and Macquarie Street, Sydney

1991 Garangula, Harden, NSW

1992 Mabo

1993 Native Titles Act

1996 Wik

1996 Sydney Park

1998 - 2000 Bradleys Head Wharf Area SHNP, Sydney

1999 Olympic Park, Homebush Bay, Sydney

2000 Millennium Parklands, Homebush Bay, Sydney

Victoria Park (Waterloo), Sydney

Mt. Penang Gardens, Kariong, NSW

Glebe Foreshore, Sydney. NSW

Former BP Site Waverton Peninsula, Sydney, NSW

Ballast Point Park, Sydney, NSW
Paddington Reservoir, Sydney. NSW
Pirrama Park, Pyrmont, Sydney
Darling Quarter, Darling Harbour, Sydney, NSW

CRAIG BURTON'S LIST OF HERITAGE LANDSCAPES

NSW HERITAGE LANDSCAPES

Underlying Indigenous places based on Dr Tindale's and Dr Horton's mapping of language groups as the basis of culture.

1. SOUTH EAST REGION

2. RIVERINA REGION

3. EYRE

4. SPENCER

Consider; natural values, cultural values and threatened places

1. SOUTH EAST REGION

1a. SYDNEY BASIN

1b. RIVER VALLEYS

1c. HIGHLANDS

1d. LAKES / DAMS

2. RIVERINA REGION

2a. RIVER VALLEYS

2b. OVERFLOW LAKES / WETLANDS

2c. PLAINS

1. SOUTH EAST REGION

1a. SYDNEY BASIN:

- | | |
|-------------------------------|---|
| (i) Estuaries and catchments: | Botany Bay
Sydney Harbour
Pittwater/ Broken Bay/ Brisbane Water
Port Hacking
Jervis Bay |
| (ii) Coastal Headlands | |
| (iii) Beaches and Lagoons | |
| (iv) Cumberland Plain | |
| (v) Dissected Plateaux; | Blue Mountains
Hornsby
Woronora |
| (vi) Highlands: | Southern Highlands |
| (vii) River Valleys: | Lower Hunter River
Wyong
Hawkesbury/Nepean/Nattai/Wollondilly |

	Parramatta Cooks Georges/Woronora Hacking Minnamurra Shoalhaven
(viii) Rural	Glen Lee Farm Camden Park Mulgoa Valley
(ix) Suburban	Castlecrag Daceyville Haberfield
(x) Urban	Sydney's Open Space
(xi) Threatened Places:	Cumberland Plain Sydney's Open space Sydney's Institutional complexes Hunter Valley
1b. RIVER VALLEYS	
(i) Northern Rivers:	Tweed Richmond Clarence Bellinger Nambucca Macleay Manning Wallamba Wauk / Coolongolook Myall Karuah Upper Hunter
(ii) Southern Rivers	Clyde Moruya / Deua Tuross Bega/ Brogo Towamba Snowy
1c. HIGHLANDS	
(i) Great Diving Range	Mt Warning Dorrigo/ Ebor/ New England Plateau Elands /Comboyne Plateau Barrington tops Budawang Range

Gulaga
Snowy Mountains

1d. LAKES / DAMS

(i) Lakes

Kippax Lake
Chipping Norton
Thirlmere
Pitt Town Lagoon

(ii) Dams

Centennial Park
Prospect
Manly
Botany Swamps
Potts Hill
Parramatta
Penrith Lakes
Audley Weir
Lake Woronara
Lake Cataract
Lake Cordeaux
Lake Avon
Lake Nepean
Lake Burragorang
Wingecarribee
Fitzroy Falls
Yarrunga
Lake Greaves
Lake Medlow
Cascade Creek Dams Katoomba
Wentworth Falls Lake
Lake Woodford
Lake Wallace
Mangrove Creek Dam
Mardi Dam
Colliery Dam
Lake Liddell
Plashett Reservoir

1e. RURAL PROPERTIES

1f. CITIES / TOWNS / VILLAGES

Braidwood
Hill End/ Tamb

2. RIVERINA REGION

2c. PLAINS

1. Liverpool Plains

2 Riverina (Murrumbidgee River and Macquarie Marshes)

South Coast

Far Western Plains

Snowy Mountains

Warrumbungles

Monaro

New England Tableland

Bellinger Valley

Mt Warning and Tweed River Valley

Central West Goldfields

Pilliga

Hunter River Valley (Pages and Isis River Valleys)

Lake George