WANGAL PARK
PLAN OF MANAGEMENT

Burwood Council
heritage ▪ progress ▪ pride

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List of Figures

Revisions Table

Issue / Revision	Date	Description	By	Chk	App
1	1.	PRELIMINARY	SC	AH	
2	SEPT 05	FINAL DRAFT	SC	AH	
6	3/2/2010	Revised DRAFT by Burwood Council	PS RT	KA LH	
7	22/6/2010	Revised DRAFT by Burwood Council	PS RT		
8	6/9/2010	Revised DRAFT by Burwood Council	PS RT	KA	
9	14/10/2010	Revised DRAFT by Burwood Council	PS RT	JI AH	JI
10	26/4/2013	Revised DRAFT by Burwood Council	JB PS	BA	BM

1.0 EXECUTIVE SUMMARY

1.1 Background

This Plan of Management (PoM) provides a framework for the long term planning, management and development of the land resource – Wangal Park (previously known as Cheltenham Road Park). The management of the parcels of land included in this document was first addressed under the Cheltenham Road Open Space Plan of Management, adopted in June 1996, and the Burwood Passive Recreation Generic Plan of Management, adopted June 1996.

In April 2005 Burwood Council commissioned a consultancy team to develop and draft the Cheltenham Road Park Plan of Management and Master Plan.

This initial consultancy team included the following specialist inputs:

- Landscape Architecture **Environmental Partnership NSW**
- Landscape Heritage **Mayne-Wilson and Associates**
- Environmental Assessment **Eco Logical Australia**

In September 2005 the Cheltenham Road Park Draft Plan of Management and Master Plan were compiled and received by Council. However, the documents were not placed on public exhibition, nor adopted by Council at this time.

In 2006 the name Wangal Park was formally adopted by Burwood Council for the Cheltenham Road site covered in this document following a park naming competition, held in the same year. The name Wangal Park has also been formally endorsed by the Metropolitan Local Aboriginal Land Council (see Appendix H). However, Wangal Park is not yet registered under the NSW Geographical Names Board.

The 2005 Cheltenham Road Park Draft Plan of Management and Master Plan prepared by Environmental Partnership were reviewed, updated and amended by Council staff in 2010. Much of the information, and the structure of the Draft PoM, forms the framework of this document. It should be noted that the Cheltenham Road 'Park' or 'Site' is referred to in various ancillary documents and background information related to this document.

On 28 September 2010 the Wangal Park Draft Plan of Management was approved by Burwood Council (Resolution 224/10) for public exhibition. Following this public exhibition in 2010, Council staff developed the Working Draft Sketch Masterplan and revised Draft Plan of Management.

Results of the community consultation were analysed and presented to Council at the Council meeting of 22 March 2011. Council resolved to establish the Wangal Park Implementation Advisory Group (WPIAG). The Group was formed on 25 May 2011 and meetings were held regularly.

A consultancy team was commissioned in 2012 to detail the wetland design and further resolve the Masterplan for Wangal Park. Council worked closely with the consultancy team to adapt the existing concept to the additional requirements. The consultancy team consisted of the following specialist inputs:

- Wetland Design **Equatica** (Principal Consultant)
- Landscape Architecture **McGregor Coxall**
- Ecology **Dragonfly**

The Council and the community were kept informed of the design process through reports to Council by staff.

1.2 Wangal Park site

The entirety of the Wangal Park site is Council-owned Community land, zoned RE1 – Public Recreation, located within the Burwood Local Government Area. It includes the main Lot (Lot 2) and a smaller Lot (Lot 3) fronting Cheltenham Road, which currently contains the State Emergency Services Burwood Unit headquarters building.

The Wangal Park site presently comprises a total site area of 4.2ha. As a new park, the site provides an important opportunity to extend Burwood's open space network and enhance the provision of recreational and visual amenity to the area. Having undergone major site modifications during its use as a brick pit and later landfill site, there are landform and associated environmental issues to be considered in park planning. Potential recreational and environmental values, together with the heritage aspects of the site and its relationship to adjoining residences have informed the masterplanning for the park.

This PoM provides a basis for Council's development, management and maintenance of this important open space asset and provides a guide for day to day and long term decision making.

1.3 Community Consultation

Consultation with the community has been an important factor in identifying the development and management directions for Wangal Park. The preliminary draft Plan of Management involved community consultation through direct mail-out of a park user questionnaire flyer to adjoining residents, community workshops, and a public exhibition to meet the requirements of the Local Government Act.

The current stage of community consultation has involved the development of a working group consisting of ten community members and five Council staff, as well as a NSW Police representative. At the time of writing, eleven meetings have been held. The Group seeks to contribute to the design and development of Wangal Park, and provide perspectives on various relevant issues which have helped to develop the Masterplan and Plan of Management. Council acknowledges the efforts and contribution of the Wangal Park Implementation Advisory Group (WPIAG).

This PoM and the associated Master Plan have been prepared as a continuation of the community consultation process, to progress the park's implementation, and to manage the park. The PoM has been prepared according to the requirements of the Local Government Act, and supersedes any previous Plans of Management for the parcels of land in this document.

1.4 Study Area at a Glance

Figure 1 - Site Map

Note: Map shows current boundaries (refer to proposed land exchange, section 5.3.3)

The following information outlines key management details for the park.

WANGAL PARK	
Address	26 Monash Parade Croydon (Lot 2) 32 - 34 Cheltenham Road Croydon (Lot 3)
Area	4.2 Ha
Key components	Lots 2 & 3 D. P. 793505
Zoning	Lot 2 RE1 – Public Recreation Lot 3 R2 – Low Density Residential
Ownership	Lot 2 Burwood Council Lot 3 Burwood Council
Care, control, management	Burwood Council
LGA 1993 categorisation	Park
Assets **(as at April 2013)**	State Emergency Service (SES) Headquarters building *Note: SES functions are proposed to be relocated to an alternative site which will facilitate demolition of the existing building, and construction of a car park and access from Cheltenham Road.* Playground and play net Heritage flues Lights, power
Condition of buildings	SES building - Fair condition
Heritage	No declared heritage items or Conservation Areas in Park *Refer to section 7.2, and Appendices E and P*
Existing uses	State Emergency Service Headquarters (Lot 3)
Leases / licenses	N/A
Caveats / easements	Pending access agreement for services lines and trench through adjacent DEC land benefiting Council (Appendix V)

1.5 Legislative requirements

Wangal Park is Community Land as per a title search carried out in 2011 (refer to Appendix L). This PoM identifies how the park will be managed in accordance with its purpose for public recreation and with the objectives of the Local Government Act (see table below).

Under the Local Government Act 1993 (Clause 36(3)), a Plan of Management for Community Land must identify the following:

- the category of the land;
- the objectives and performance targets of the plan with respect to the land;
- the means by which Council proposes to achieve the plan's objectives and performance targets; and
- the manner in which Council proposes to assess its performance with respect to the plan's objectives and performance targets.

All Council property classified as Community Land is required to be categorised in accordance with the guidelines for categorisation listed in the Local Government (General) Regulation 2005 (cl. 101-111). Wangal Park has been categorised in accordance with Clause 104 of the Regulation, which states:

Land should be categorised as a park under section 36 (4) of the Act if the land is or is proposed to be improved by landscaping gardens or the provision of non-sporting equipment and facilities, for use mainly for passive or active recreational, social, educational and cultural pursuits that do not unduly intrude on the peaceful enjoyment of the land by others.

The following table summarises the core objectives of the Community Land Categorisation for a Park and identifies how this PoM addresses them.

Category	Core Objectives for Community Land Categories	How this Plan of Management addresses the objectives
Park	(a) Encourage, promote and facilitate recreational, cultural, social and educational pastimes and activities; (b) Provide for passive recreational activities and pastimes and for the casual playing of games; (c) Improve the land in such a way as to promote and facilitate its use to achieve the other core objectives for its management.	• Development of the park caters for a wide range of community uses • Access to the park is afforded to all users • An integrated park landscape is provided that serves for both passive and informal active recreational use • Park facilities are located in areas compatible with adjoining park uses

Under the Local Government Act (Clause 9A and 38), this PoM must be placed on public exhibition for at least 28 days, with written submissions taken for at least 42 days from the first day of public exhibition.

Burwood Local Environmental Plan 2012

Wangal Park is currently managed under the Burwood Local Environmental Plan 2012 and is zoned RE1 – Public Recreation.

Local Environmental Plans (LEPs) guide planning decisions for local government areas. Through land use zoning and development standard controls, the LEP allows councils and other consent authorities to manage the way land is used.

On 31 March 2006, the NSW Government gazetted a Standard Instrument for preparing new LEPs, also known as the LEP template. Local plans across NSW now use the same planning language, making it easier for communities to understand what is proposed for their local area. Councils are able to include localised planning objectives

and provisions specific to their area, as well as determine zoning, additional land uses, heritage items and development standards such as height and minimum lot sizes.

Under Zone RE1 - Public Recreation the objectives in the Burwood LEP 2012 are:

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

Environment Protection and Biodiversity Conservation Act 1999
The Commonwealth legislation provides a national framework for environment protection through a focus on protecting matters of national environmental significance and on the conservation of Australia's biodiversity.

Where possible, open space should reflect environmental protection and enhancement philosophies.

1.6 Identified Values, Objectives and Strategies

The objectives of this PoM respond to the values recognised by the community and Council which have been identified through the process of masterplanning, community consultation, and study team investigations. Values are the recognised potential qualities of the park. Objectives are the desired outcomes which provide direction for decision making.

These values and objectives inform the following overall vision for Wangal Park:

> *Wangal Park is to be developed and enhanced as an integrated parkland providing both structured and unstructured recreation opportunities while responding to the ecological, environmental and cultural opportunities of the site and its surrounds.* (Environmental Partnership)

The Management Strategy and Action Framework in section 5.2 provides detailed objectives, strategies, and design principle responses for management and implementation of Wangal Park, which are based on the community's identified values. These have been grouped in eight Management Categories which are used throughout the document, listed below.

Management Categories

1 Natural Environment
2 Heritage
3 Visual
4 Social / Cultural
5 Recreation / park use
6 Education
7 Boundaries and security
8 Management and maintenance

1.7 Implementation

The Management Strategy and Action Framework (section 5.2) identifies priorities for planning and management strategies. The Masterplan (Figure 6) comprises a range of proposed improvements with varying community and environmental priorities. The Works Action Plan will be implemented prioritising the works which are of most immediate community and environmental benefit, and are practicable. These will be followed subject to Council resources, funding, and future detailed planning.

Part A
PLAN OF MANAGEMENT

The introduction details the purpose and structure of this Plan of Management.

2.0 INTRODUCTION

2.1 What is a Plan of Management

Plans of Management (PoMs) are required to be prepared by councils in consultation with the community, for all public land classified as Community Land, under the *Local Government Act 1993* (the Act). They are a long-term land management document describing the characteristics of the applicable land, and its requirements for management, including community expectations. Council is responsible for management of the land described, and the PoM defines how the land is used or developed into the future.

Community Land is required under the Act to be categorised as **Park**, **Sportsground**, **Natural Area**, **General Community Use** or an **Area of Cultural Significance**. The *Local Government (General) Regulation 2005* further details the guidelines for these categorisations, as follow:

A **Park** is defined as non-sporting community land which is mainly to be used for passive or active recreational, social, educational and cultural pursuits.

A **Sportsground** is defined as community land which is predominantly to be used for active recreation involving organised sports or the playing of outdoor games.

A **Natural Area** is defined as bushland, wetland, escarpment, watercourse, foreshore, or another category prescribed by the regulations of the Local Government Act.

General Community Use is defined as land which may be made available for use by the public, and does not satisfy the guidelines for any of the other categories.

An **Area of Cultural Significance** is defined as an area of Aboriginal, aesthetic, archaeological, historical, technical, research, or social significance.

A PoM may be Generic, relating to all land of a particular type, or Specific to a particular area. A specific PoM is required by the Act for some **Natural Areas** or **Areas of Cultural Significance**.

Wangal Park has been categorised as a Park, and will be managed under a Specific PoM due to its complex management requirements.

2.2 This Plan of Management

This Plan of Management:

- refers to the land identified as Wangal Park;
- supersedes the previous Wangal Park Draft Plan of Management 2010;
- is intended to be reviewed and revised every five years;
- contributes to and draws from Burwood's broader strategic goals, community values, and the framework of Burwood 2030;
- complies with the NSW Local Government Act 1993; and
- clarifies the use, management and future development of Wangal Park.

2.3 Structure of the Plan of Management

The Plan of Management is presented in two parts:

Part A – Plan of Management

Basis for Management
Outline of the consultation process for the PoM and the identification of values and desired outcomes (objectives) to be considered in the development of planning and management strategies.

Concept Masterplan Development
The development process of the Masterplan in response to the identified vision for the park, providing a structure for ongoing implementation of park improvements.

Management Strategies
The identified vision, values, objectives, and strategies for management of Wangal Park provide Council with a framework for decision making and the design and implementation of open space improvements.

Implementation
Sequence of actions required for the implementation of strategies including possible funding sources and management responsibilities.

Part B – Background

Review and Assessment of Site Factors
Review of the existing physical and cultural character of the site as a basis for identification of values, desired outcomes and issues, and subsequent development of planning and management strategies.

Relevant Background Information
Appraisal of literature, reports, and studies relevant to the development of the PoM. All relevant documentation was considered by Council and provided to the consultancy team for final Masterplan development.

Appendices
Supporting documentation and related information.

2.4 Implementation and Review of the Plan of Management

This Plan of Management will be implemented as follows:

- Draft PoM presented to Council for approval for public exhibition
- Draft PoM is placed on public exhibition, along with the Wangal Park Masterplan, for at least 28 days, with written submissions taken for at least 42 days from the first day of public exhibition.
- Council staff review comments received, and make changes to PoM accordingly
- Revised PoM presented to Council for adoption
- Final Wangal Park Plan of Management adopted, implemented and made available for public view on Council's website, in the library, and at Council Chambers.

This PoM will be reviewed in accordance with the requirements of the NSW Local Government Act and Council procedures. The schedule for this review is every five years from the date of adoption of the PoM.

The community have an opportunity to participate in the initial draft and review of this document as per the provisions of the Local Government Act and Council's community consultation procedures. Only written submissions will be considered.

General enquiries related to this Plan of Management should be addressed to:

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2.5 Local Context

Burwood LGA has few open space areas, but this number is relative to the size of the LGA. The formation of new areas is limited by the availability of suitable public-owned land, and high property values if purchasing private land for such a purpose. Accordingly, Wangal Park is an opportunity to provide a new open space which meets the needs of a variety of users and serves multiple purposes. The *Burwood Council Open Space Assessment* (Suter & Assoc, 2005) recommended a focus on improving the appeal and useability of existing smaller parks; as well as strengthening the uniqueness and quality of open space across the Burwood LGA.

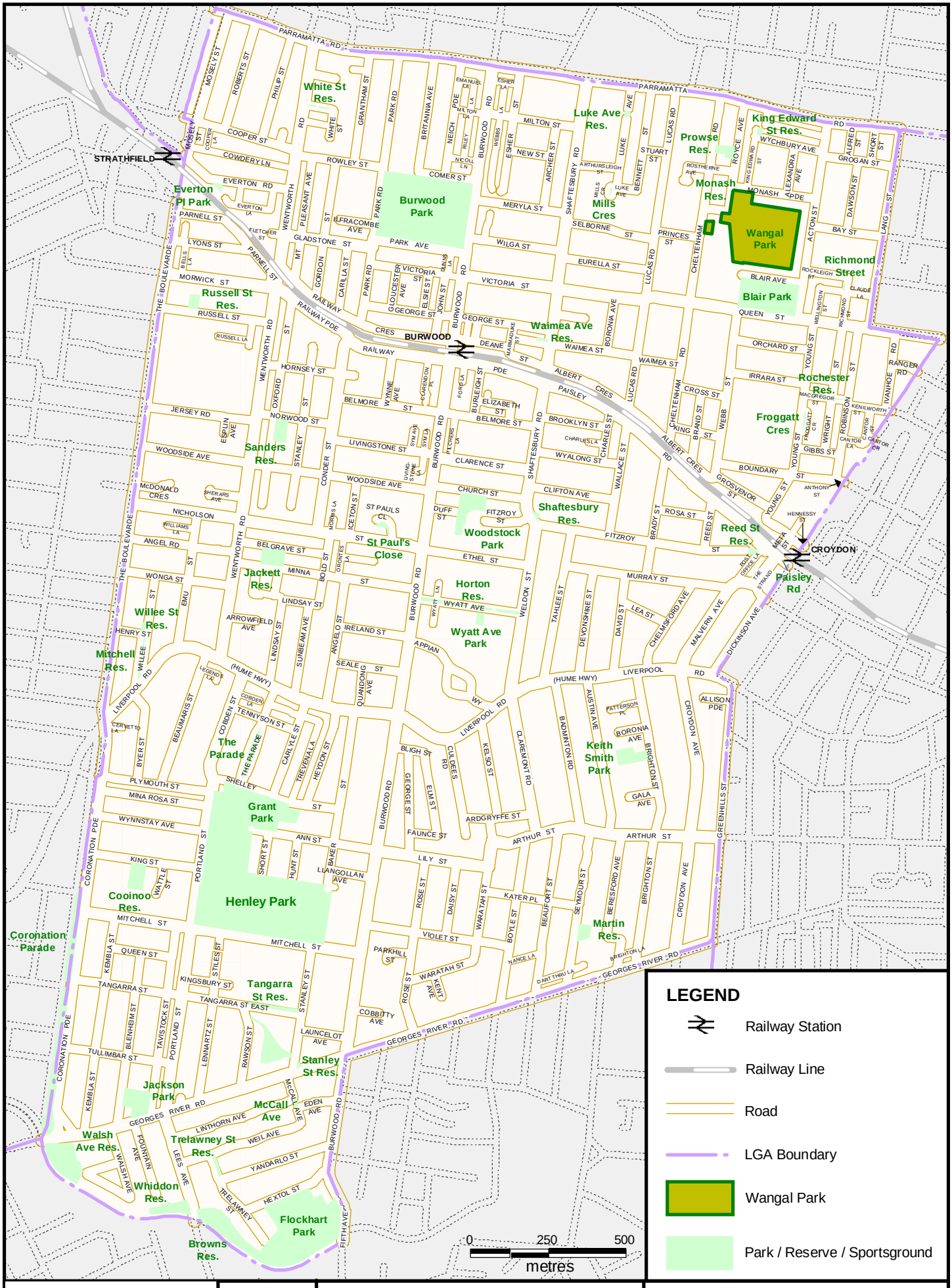
As well as the facilities and open space within the Burwood LGA, the surrounding LGAs provide a wide range of facilities. Major tennis and netball venues, golf, regional-level indoor aquatic facilities, bowls and district/regional field sports are adequately provided for, according to the *Burwood Council Recreation Study* (Suter & Assoc, 2001). Wangal Park will provide additional passive recreation space with opportunities for picnics, walking, cycling, children's play, youth recreation, and exercise equipment, in a large aesthetically attractive naturalistic area.

There are 25 parks and sportsgrounds within Burwood Local Government Area (LGA), with a number of other open space reserves made up of road reserve land or similar. This PoM refers to Wangal Park, a single Park which makes up approximately 10% of the Community Land within Burwood LGA.

The Park has been categorised in accordance with guidelines 6C and 6D of the Local Government (General) Amendment (Community Land Management) Regulation 1999 which state:

Land should be categorised as a park under section 36 (4) of the Act if the land is or is proposed to be improved by landscaping gardens or the provision of non-sporting equipment and facilities, for use mainly for passive or active recreational, social, educational and cultural pursuits that do not unduly intrude on the peaceful enjoyment of the land by others.

Refer to the Wangal Park Location Map over the page.



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Wangal Park Location Map

Disclaimer Note

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The basis for management describes the approach to determining management strategies for the site. This includes the identification of values and desired outcomes, based on community consultation and the masterplanning process.

3.0 BASIS FOR MANAGEMENT

3.1 Methodology

This PoM has been prepared with a "values based approach". Using values as the foundation of the PoM ensures the plan will remain valid for longer, "based on the assumption that community values change at a much slower rate than issues" (DLWC and Manidis Roberts, 1996).

Through a synthesis of the findings of the review and assessment phase (refer to section 7.0) and the outcomes of community consultation, a management strategy framework has been resolved that identifies:

- values and roles of Wangal Park (refer to section 3.3);
- issues and opportunities to be addressed in developing planning and management strategies (refer to section 5.0); and
- desired outcomes for the Masterplan and Plan of Management (refer to section 5.0).

The basis for management enables each step in planning to relate and cross reference back to the established values.

The PoM and Masterplan have been prepared by a "study team" consisting of Council staff and consultants engaged to carry out specific parts of the masterplanning process.

The diagram below outlines the key steps in preparing the Plan of Management.

Figure 2 - Steps in preparing the Plan of Management

3.2 Wangal Park Community Consultation Process

The PoM process incorporated several consultation streams to assist in the sourcing of information regarding community values and desired outcomes, to develop planning principles and management strategies, as well as to inform relevant stakeholders and the local community of the study outcomes as they have developed. It is noted that the results of individual consultations provide information only, and are used to complement the other forms of assessment rather than as a free standing basis for decision making.

Community consultation has been carried out during the planning process of the Wangal Park site, including the following key stages.

1996 Exhibition of the original Plan of Management

Cheltenham Road Open Space Plan of Management public exhibition.

2005 Community questionnaire and mail-out

Flyers containing information about the PoM and times and dates of the community workshops were distributed in 2005 by a letterbox drop to local residents within the Burwood and Croydon area. The flyers contained a questionnaire (see Appendix N).

The survey was undertaken to assist in the identification of constraints and opportunities in regard to the use, accessibility and qualities of the proposed Wangal Park. The survey was also distributed at community facilities such as the Burwood Library and local shopping centres. Specific questions were asked in regard to the anticipated use of Wangal Park, ideas for improving the area and park features that would be used / supported.

A total of 113 responses were received – a response rate of 4.5%. Tabulated questionnaire results are included in Appendix N.

The key outcomes of the surveys included:

- The majority of respondents expected using the park several times a week with an anticipated average visit of one hour.
- A high number of respondents indicated that they would walk to the park, with a number indicating that cycle access would also be used.
- Basic elements such as seats, picnic tables and toilet facilities were identified as important features of the park development. Pathway links including potential bicycle paths and open grassed areas were also identified as valued park elements; and
- Landscape improvements including shade trees with a preference to utilisation of native species were identified as important.

The community was informed of the progress of the Park's development through Council's website, email, newspaper advertisements and by direct mail-out. The preliminary draft Masterplan and Plan of Management were prepared at this time but not finalised or presented to the public.

2005 Community group workshops

Community workshops were held on 30 May and 20 July 2005. The aim of the initial workshop was to identify and discuss community values, desired outcomes and the pressures and opportunities affecting Wangal Park. The second workshop included a presentation of a series of preliminary Masterplan options, which were discussed and debated.

Outcomes of the workshops provided assistance in the resolution of preferred planning directions for the Masterplan and Plan of Management. Community Workshop Notes are included in Appendix O, which summarise the discussions and outcomes of the forums.

2010 Exhibition of draft PoM and working draft sketch Masterplan

In 2009 Council commenced preparation of a revised draft Master Plan and Plan of Management, which were put on public exhibition in 2010.

Public exhibition of the revised documents included two workshops and a letterbox drop. A results spreadsheet and analysis were prepared by Council staff and presented in a report, to contribute to decision-making in the masterplanning process (see Appendix M).

2011-2013 Wangal Park Implementation Advisory Group (WPIAG) established

In 2011 Council resolved to establish the Wangal Park Implementation Advisory Group (WPIAG). The Group, consisting of ten community members, five Council staff, and a NSW Police representative, was formed on 25 May 2011 and meetings were held approximately every two months. The WPIAG endorsed the final Masterplan and Plan of Management for public exhibition in 2013. Refer to section 7.8.

2013 Minister's resolution after various discussions with the DEC / BGHS*

In 2013, ongoing discussions which Council had undertaken with BGHS and DEC resulted in the Minister for Education terminating access to the Cheltenham Road access road through the BGHS land.

** Note: DEC refers to the Department of Education and Communities (formerly known as the Department of Education and Training), and BGHS refers to Burwood Girls High School.*

2013 Final Masterplan and PoM resolved for final public exhibition

The final Masterplan and Draft Plan of Management (this document) were exhibited.

Ongoing community consultation will be carried out according to the requirements of the Local Government Act 1993.

3.3 Community Values

Values

Values, as identified in conjunction with the 2005 community working group, are the features and qualities of the park that should be developed and promoted through planning and management. Desired outcomes (also known as goals and aims) are objectives for the park that provide a basis for decision making.

The values and desired outcomes as listed in the Management Strategy and Action Framework (section 5.2) were developed by the study team through a synthesis of the community consultation outcomes and the study team investigations outlined in section 7. These values are listed in the Framework in the eight Management Categories. A summary of the values are as follows:

1 Natural Environment
Park as a refuge from the surrounding urban environment.

2 Heritage
District Aboriginal and European heritage values of the site and its surrounds.

3 Visual
Aesthetic appeal and visual linkages to, from and within the site.

4 Social / Cultural
Shared community use of the park that provides for the diversity of the Burwood community and engages the community through park development, implementation and ongoing management.

5 Recreation / Park Use

Provision of an integrated park that provides for a variety of recreational opportunities including passive and active recreation for the local community and Burwood Girls High School.

6 Education
Visitor awareness of ecologically sustainable practices and the natural and cultural heritage of the site and its surrounds.

7 Boundaries and Security
Access connections to and through the site (including carparking) which consider the privacy and security of park users and adjoining residents.

8 Management and Maintenance
Maintenance and funding for park development.

The development process of the Masterplan in response to the identified vision for the park, providing a structure for ongoing implementation of park improvements.

4.0 CONCEPT MASTERPLAN DEVELOPMENT

4.1 Strategies for Wangal Park Masterplan

The combined community consultation, along with study team investigations, developed a vision, values, and objectives that have informed strategies to provide the basis for development of the Masterplan. These strategies have been identified in the Management Strategy and Action Framework and are outlined below:

1 Natural Environment
- Indigenous vegetation plantings across the park, including habitat areas of revegetated bushland and riparian zone.
- Use of recycled water from the wetlands for site irrigation.
- Enhanced soil, and tree planting.

2 Heritage
- Interpretative elements relating to the site's natural, Aboriginal and European heritage values.

3 Visual
- Enhanced park character with an urban bushland landscape
- Security and safety are design considerations throughout Masterplan process
- Softened visual relationship between park and adjoining residences whilst allowing passive surveillance

4 Social / Cultural
- Provision of park which caters for the wider community, and engages the community in ongoing management process
- Recreation space for both passive and informal active recreation

5 Recreation / park use
- Usage of park integrated for multiple uses
- Promote passive recreation, picnic facilities, cycle access, café use, and dog-friendly facilities

6 Education
- Integrate educational and interpretive information into the park

7 Boundaries and security
- Appropriate community accessibility encouraged through shared paths, accessible paths and facilities, visual linkages, and effective entry treatments

8 Management and maintenance
- Implementation adequately staged
- Maintenance adequately carried out

4.2 Preliminary Masterplanning Ideas

Preliminary masterplanning ideas were developed in response to study team investigations and community responses to two community workshops.

The initial workshop forum established the community values and desired outcomes for Wangal Park, which provided formative input into the development of planning options.

A series of masterplanning options were developed and presented to the community working group at the second workshop forum in July 2005.

Three design options were presented to the community for discussion and debate. The options included configuration and relationship options for the following park elements:

- Grassed playing fields
- Amenities block
- Playground
- Pond
- Riparian / wetland planting zone
- Native grassed areas
- Carparking
- Full strata, boundary embankment planting
- Trees in native grass, boundary planting
- Potential provision of skateboard facilities and a fitness area

4.3 Concept Masterplan History

In 2010 Council staff developed the Working Draft Sketch Masterplan LA86 (refer to Figure 5) and carried out community consultation. The main phases in the preliminary Masterplan development are displayed below, beginning with the Working Draft Sketch Masterplan marked up after community consultation, and three revised pencil sketches show the Masterplan design development.

Figure 3 - Design Development 2010 - 2013

Figure 4 - LA 86 Wangal Park Working Draft Sketch Masterplan

4.4 Final Masterplan

In 2013 the study team developed the final Masterplan and Plan of Management for public exhibition. The Masterplan is shown in Figure 6, and in Appendix A.

Figure 5 - Final Masterplan 2013

Figure 6 - Wangal Park Master Plan

4.5 Masterplan Design Programme

(Refer to Masterplan - Appendix A)

The following pages describe the Masterplan programme and key features, identified from design development and community consultation.

1 Wetlands for Recycling Stormwater

The wetlands will provide a focal feature to the central, western section of the park and incorporate an ecological function and habitat environment for the park. Three wetlands act as detention ponds which allow for recycling of water for on-site irrigation.

2 Existing Play Space

An existing playground is located on the Monash Parade frontage for casual park use and to provide an alternative play experience for park users. This area includes a 7 metre high play net and play equipment with a shade structure.

3 Amenities Block with Café

A large amenities block will be constructed to include toilets within close proximity to the recreation areas. Toilets in the amenity block would consider use of recycled stormwater to flush. The facilities will cater for all park users including disabled and elderly visitors. Provision for a café will be included with a north facing outdoor eating area. The park will be well serviced with separated waste collection bins including recycling facilities for food waste, paper, plastic, etc.

4 Major Play Space

The park will incorporate a large play facility with a variety of activities and a shade structure. This will be located in close proximity to the amenities block and adjoining passive play areas and picnic facilities. The size of this play area enables the opportunity to provide equipment that will appeal to a range of park users.

5 Grassed Terraces & Picnic Settings

Low north facing arced and terraced sitting walls within the southern grassed area will serve for informal recreation, picnics and seating. Picnic shelters, BBQs and seating will be spaced to provide amenity to multiple users. The area will also serve for informal 'outdoor classroom' use.

6 Skate Park Facilities

The facilities will provide youth recreation space, including a skate facility and half basketball court. The facilities will be designed to minimise noise spill to residential properties. The facility may require CCTV, fencing, and to be closed after specified hours.

7 Grassed Open Spaces

Central grassed areas for informal active and passive recreation. The areas may be used for recreation such as jogging – with access to fitness equipment around the shared pedestrian path, kite flying, informal games, and dog walking. Seating will be provided within the grassed areas with views across the park.

8 Main Shared Pedestrian and Cycle Path Network

Pedestrian and cycle access will be encouraged throughout the park, including bicycle racks, disabled access, fitness equipment adjoining the path, and solar lighting spaced at regular intervals. CCTV camera installations may be installed at strategic locations along the path and around the amenities block. Paths may include locations for public art displays. The path network incorporates a boardwalk to provide an alternative passive walking experience to view the wetland ecology and access the western and northern section of the park.

9 Locally Indigenous Display Planting and Aboriginal History Interpretation

This area incorporates formalised north facing terraces with display plantings of locally indigenous species. The planting will celebrate Burwood's natural heritage and provide information on locally indigenous plant species with an opportunity to also interpret Aboriginal history and culture.

10 Parks Depot

The parks depot building will provide a facility for storage of equipment, and a base for operations and park maintenance.

11 Car Parking and Existing SES Site

Future works will include the demolition of the SES building to be formalised as the park's carpark for 28 vehicles including 2 disabled, and secondary pedestrian access.

12 Observation Deck

Two observation decks are proposed overlooking the wetlands with sweeping views across the park. This also provides an opportunity to interpret Aboriginal history and culture, and the park and wetland ecology. The finished surface of the observation decks may utilise recycled timber, plastic, or steel, and will be a non-slip finish.

13 Boardwalk

A fenced boardwalk across the wetlands links the main shared paths. The boardwalk also provides an opportunity to explain the natural heritage and environmental processes of the wetlands through interpretive signage. Disabled access will be provided. The finished surface of the boardwalk may include recycled timber, plastic or steel, and will be a non-slip finish.

14 Stone beach

A stone beach will front the eastern wetland, with informal boulder seating.

15 Park Entry Points

Entrances to the park will be secured with lockable and removable bollards to prevent unauthorised vehicular access. Park operations and emergency vehicles will be provided entry to the park from Monash Parade. The entry points display signs showing the park's provisions and to assist wayfinding. The entry points will provide an opportunity to acknowledge Aboriginal history, culture and the traditional ownership of the land.

Key Features

Grassed Mounding

Informal grassed landform adjoining the wetlands to the northern area of the park. This area is a place for picnic rugs, informal recreation and repose, and links the park with the established play area.

Revegetation and Riparian Planting Area

Full strata planting of the site's former Turpentine-Ironbark Forest vegetation will provide a visually appealing and unique park character adjoining the wetlands. This area will require earth mounding and surface drainage over the capping layers to support taller tree growth. This planting will present an opportunity to acknowledge and interpret Burwood's natural heritage.

The riparian macrophyte planting zone adjoining the proposed wetlands provides a habitat which will attract a variety of local fauna species. The planting will create an urban wetland environment which will provide a unique educational opportunity and experience for park users. Stormwater will be 'polished' when passed through the wetland system.

Boundary Bank Planting

Plantings of locally indigenous grass and tree species to the boundaries of the park will provide visual surveillance from adjoining properties.

The large *Eucalyptus* and *Angophora* species trees on the southern boundary of the park will be retained and protected, if possible, during park construction.

Stormwater and Drainage

The stormwater overflow point will discharge in extreme storm events into the wetlands via a connection to the main stormwater system at Royce Avenue.

Grassed and planted drainage swales will drain surface water to the wetlands. The existing native grass *Themeda australis* in the northeast section and the natural soil profiles in the area will be retained and protected, if possible, when the earthworks for the drainage swale are carried out.

Chainwire Boundary Fence

The existing chain wire fence enclosing adjacent property boundaries will be removed.

The identified vision, objectives, and strategies for management of Wangal Park provide Council with a framework for decision making and the design and implementation of the open space improvements.

5.0 MANAGEMENT STRATEGIES

5.1 Vision

Vision provides a basis for long term decision making in the park along with evaluation of potential planning and management strategies. The overall vision for Wangal Park has been developed through a synthesis of values as identified in the original community workshop and study team investigations.

Overall Vision:

> *Wangal Park is to be developed and enhanced as an integrated parkland providing both structured and unstructured recreation opportunities while responding to the ecological, environmental and cultural opportunities of the site and its surrounds.* (Environmental Partnership)

5.2 Management Strategy and Action Framework

The framework provides the rationale for decision making for open space and related improvements evolving over the next 10 - 15 years. The framework also informs the establishment of planning and design principles for the ongoing development and enhancement of the park.

5.2.1 Definitions

The framework documents the recommended management responses under the following headings:

Objectives
Objectives are taken to comprise values and desired outcomes.

Values are the features / qualities of the park that should be developed or enhanced, and for which measurable outcomes should be established, as identified by the community working group (2005) and study team.

Desired outcomes are objectives for the identified park values that provide a basis and direction to decision making.

Pressures and Opportunities
Pressures may include impacts on the land or environment, and potential conflicts between users or usage and other qualities of the site.

Opportunities are the qualities of the site which make it suitable for natural value enhancement, or for community or recreational uses or activities, and which may not be fully realised at present.

Means
Are strategies and actions to achieve the desired outcome.

Priority
Provides preliminary prioritisation of strategies based on community issues and environmental and recreational management requirements. Includes:

High (H):	target within 2 years
Medium (M):	target within 2-5 years
Low (L):	target within 2-8 years

Design Principles
Provide a planning and design direction to realising identified strategies where these relate to site development and enhancement or recreational facilities.

Assessment
Assessment is taken to comprise performance criteria and monitoring.

Performance criteria are physical / measurable results of the desired outcomes able to be monitored.

Monitoring technique seeks to determine how the performance criteria are monitored.

Management Categories
The information in the Framework is grouped into the Management Categories, which have been identified with regard to Values and Objectives in this PoM.

5.2.2 Framework

	Objectives		Pressures and Opportunities	No	Means (Strategies)	Priority	Design Principles	Assessment	
	Values	Desired Outcome						Performance criteria	Monitoring technique
1	NATURAL ENVIRONMENT								
1.1	Park as a refuge from the surrounding urban environment	Effective interpretation of the park's natural heritage	The site can be expected to have supported native vegetation however little of this original vegetation remains	1.1.1	Potential for incorporation of locally indigenous vegetation to planting scheme	H	Park Masterplan to include 'bushland' component. including native tree plantings to boundaries with low grasses and groundcovers. sustainable with park use and local residential concerns	Effective integration of natural vegetation areas	Quality of bushland area established and maintained
			Community desire for local native vegetation to be incorporated in park redevelopment to improve local flora / fauna biodiversity and habitat	1.1.2					
		Creation of a park that incorporates environmentally sustainable best practice	Highly engineered / altered landscape form provides change to original natural setting	1.1.3	Provide bushland habitat areas to areas of the site that complement recreational use and enhance visual amenity	H	Include 'bushland' component. riparian and revegetation areas	Successful planting and habitat establishment	Visual assessment. photographs
			Wetlands will provide recycled water for reuse as irrigation for park. (A grant has been approved for a wetland design and construction.)	1.1.4	Recycle / harvest water from wetlands for site irrigation	H	Park improvements include considered responses to ecologically sustainable practices and principles. including wetlands. drainage swales and stormwater overflow	Effective implementation of sustainable practices	Implementation and practical use
		Improved soil conditions where possible	Poor moisture penetration caused by layers of fill which cover most of the park area is a serious inhibitor of tree growth	1.1.5	Provide enhanced soil preparation to any new tree plantings	H	N/A	Successful planting and establishment of trees	Visual assessment. photographs
			Planting of large trees may risk damage to landfill capping layer due to root invasion	1.1.6	Major tree planting to be focussed on areas of deeper soils. Planting to thinner profiles to focus on shallow rooted species	H	N/A	Integrity of capping layer maintained	Monitoring of environmental indicators and tree health
2	HERITAGE								
2.1	Aboriginal heritage	Identification and interpretation of local area Aboriginal cultural heritage values	Minimal information on Aboriginal heritage available specific to the park site and local area Community desire to include Aboriginal heritage	2.1.1	Interpretation of the Aboriginal heritage of the greater Burwood / Croydon area	H	Park improvements Masterplan provides interpretative elements into design. including on the Observation Decks	Scope of understanding of local area history by park visitors	Visitor comments / awareness
2.2	European heritage	Protection / interpretation of appropriate aspects of European cultural heritage	The significance of the site as a brickworks provides an interpretive opportunity although there is no physical fabric of note remaining	2.2.1	Interpret the site history in development of planning and management strategies to assist users in understanding of heritage	H	Interpret quarry and brickworks history	As above	As above
			The landfill phase of site history and the requirement to provide capping fill works limits potential to interpret / integrate excavated embankments in park design	2.2.2	Metaphoric representation of main path layout	H	Provide interpretive signage and enhance existing remains on site		
3	VISUAL								
3.1	Aesthetic appeal	Park provides visually unique and appealing landscape setting	Community desire to create a park that does not reflect a 'municipal' style	3.1.1	Integrate an urban bushland landscape that provides a unique park experience	H	Park Masterplan integrates locally indigenous plantings and natural materials to form a 'bushland' component as a focal landscape aesthetic	Aesthetically pleasing park landscape	Landscape monitoring
3.2	Visual linkages from the site to surrounding areas	Views to the city skyline and ridge top on Parramatta Road conserved and enhanced	Views of the city skyline. Parramatta Road ridge top and Burwood CBD are available from within the park	3.2.1	City and other views to be protected and enhanced in park implementation and management where possible. avoiding impacts on privacy of surrounding residents	H	Viewing areas to conserve privacy to surrounding areas	Views enhanced	Monitoring on site
		Views into private property minimised	Park use potentially impacts security and privacy of surrounding residential properties	3.2.2	Views to provide for maximum security / passive surveillance with minimum impacts on surrounding properties	H	As above	Privacy protected	Resident comments
			Visual surveillance of park from residences provides increased security and potentially prevents crime within the park	3.2.3					

	Objectives		Pressures and Opportunities	No	Means (Strategies)	Priority	Design Principles	Assessment	
	Values	Desired Outcome						Performance criteria	Monitoring technique
3.3	Visual linkages within and across the site	Visibility and sightlines through the park maintained and enhanced	Existing open character of site provides expansive views across the site from a number of areas	3.3.1	Establish sight lines along access routes and between spaces that reinforce legibility and enhance safety	H	N/A	Internal park visual relationships provide for user safety and visual amenity	Monitoring on site User comments
			Placement of elements such as planting and built structures must consider visibility and existing sightlines	3.3.2	Park planning and design to consider. as a key design principle. security and safety. Fencing on Cheltenham Road (DEC land) was constructed to comply with DEC regulations.	H	Internal park planting to focus primarily on canopy trees in maintained grass or native grass groundcover to maintain sight lines	As above	As above
3.4	Visual linkages to the site from surrounding areas	Views from surrounding areas including adjoining residential properties conserved and enhanced	Park provides visual amenity within urban landscape of adjoining areas	3.4.1	Develop and enhance park character to Cheltenham Road. Royce Avenue and Monash Parade frontages	H	Park improvement works to consider visual amenity of park edges	Park street frontages and edges provide quality visual amenity to streetscape	Monitor on site
			Adjoining residential views into the site may create exposed. intimidating areas especially to south eastern section of park	3.4.2	Soften visual relationship of residential properties overlooking / looking into the site whilst maintaining visual connections for passive surveillance	H	Provide dappled tree cover to boundaries whilst maintaining lower level visual connection. 160 trees were planted (2008/09) in the western and north western section	Encourage use of the park and its facilities	Monitor on site User comments
4	SOCIAL / CULTURAL								
4.1	Shared community use	Park role as a setting for local and wider visitor use is promoted and enhanced	Park likely to be used by both local residents and visitors from other suburbs in adjoining areas for both passive and informal active recreation	4.1.1	Provide passive recreation areas as a key use and landscape setting direction for the park	H	Provide an integrated park environment with seamless relationships between passive and active areas that encourages dual use	Quality of community use	Monitor on site User comments
				4.1.2	Provide informal active recreation facilities with siting relationships which avoids domination / shaping of park structure by active facilities				
4.2	Diversity of the Burwood community	Park provides facilities for a range of groups including the diverse cultural and ethnic members of the community and different age groups	Immediate catchment population contains a variety of age groups / users and ancestral backgrounds	4.2.1	Provide facilities for a range of age groups and uses including passive and active recreation areas	H	Design multi use spaces that allow for flexible and adaptable recreational use. such as the playground	Range of uses facilitated	Monitor on site
			Consideration and provision of youth facilities poorly supplied within the area	4.2.2	Incorporation of facilities suitable for youth (teen) usage	H	Incorporation of skate facility and basketball hoop as a subtle design approach	Quality youth facilities / usage of park	Visual assessment / survey of park users
4.3	Engagement of the community	Include the community through development. implementation and ongoing management of the park	Community consultation has been an integral part of the PoM process Interest from community in decision-making and direction for implementation and management	4.3.1	Formalised Wangal Park working group consulted about implementation and ongoing management of the park (WPIAG est. 2011) as well as the wider community	H	Ongoing community consultation	N/A	Community comments
5	RECREATION / PARK USE								
5.1	Shared use of space	Park provides for integrated. multi purpose recreation opportunities	Potential for conflict between active and passive recreation demands	5.1.1	Integrate recreational areas to provide positive relationships between uses	H	Planning to optimise complementary and multiple use of spaces and facilities. including open grassed areas	Effective shared use of the park	Monitor on site Community comments
5.2	Recreation	Active recreation role of the park supported with impacts on adjoining uses minimised	Active playing areas in adjoining DEC / School land. currently solely for school use.	5.2.1	Active recreation areas provided in adjoining DEC / BGHS site on Cheltenham Road. Note: Council leaves open the possibility of a future shared use agreement.	H	Minimise visual and physical impact of active playing fields and encourage multiple usage	Adjoining active recreation not dominating park structure / character	Monitor on site
			Community concern relating to traffic / parking and increased noise associated with organised sporting events	5.2.2	Sports fields not to be provided within Park	H	Provide adequate parking provision to facilitate passive park use and minimise impact to surrounding streets	Adequate parking provision	Monitor on site

	Objectives		Pressures and Opportunities	No	Means (Strategies)	Priority	Design Principles	Assessment	
	Values	Desired Outcome						Performance criteria	Monitoring technique
	Recreation continued		continued…	5.2.3	Investigate potential for traffic management policy for areas surrounding park in coordination with DEC	H	Parking to be located adjoining road frontage to minimise impacts on visible park area	Adequate parking provision	Monitor on site
		Park serves passive recreation role	Increasing importance as a recreation area due to forecasted residential population growth in adjoining neighbourhood	5.2.4	Promote passive recreational character and facilities	H	Variety of spaces and visual settings provided	Diversity of spaces	Monitor design and implementation
							Appropriate location and high quality of park furniture elements and shade tree planting	Park character and facilities well maintained	User comments. records of maintenance. improvement works
		Park serves as desirable picnic location	Park provides contrast from surrounding urban environment	5.2.5	Promote park as a picnic destination	H	Provide park furniture elements. and grassed mounding and terraces. to encourage picnic use in attractive park settings	Park use as picnic destination	Monitor on site Community comments
5.3	Burwood Girls High School	Use of the DEC lands as an extension of the school play and sporting area	DEC have declined to allow community use of school sporting fields	5.3.1	Note: Council leaves open the possibility of a future shared use agreement.	L	N/A	Future agreement between Council & DEC for use	Future community comments sought
		Avoid impacts on BGHS	Close proximity of Wangal Park site to BGHS	5.3.2	Boundary treatments to BGHS boundary to promote privacy and safety	H	Planting character to boundary considers impact on BGHS	Minimisation of anti-social behaviour	User comments
5.4	Access Linkages and connections	Role of the park as part of a broader open space / park system	Establishment of Lucas Road cycle way provides connection to Canada Bay and Cooks River open space areas via Monash Parade	5.4.1	Promote cycle access to. through and past the park	H	Provide loop access through park	Access to Lucas Road cycle route. via Monash Parade. integrated to park Masterplan	Implementation. user comments
5.5	Café facility	Café facility of high quality provided within the park if sustainable	General community interest in a café located within the park	5.5.1	Incorporation of café to park masterplan integrated with amenities building. Consideration to operate only on weekends / special events	M	Feasibility of café facility with amenities building. to be investigated	Café facilities are accessible to a range of park users. well utilised. and minimise impacts on other park uses	Implementation. amount of usage. user comments
5.6	Dog Use	Dog access managed in accordance with Companion Animals Act	Community desire for 'off leash' dog walking provision provides potential conflicts with other park users	5.6.1	Provide 'dog friendly' park. for on-leash only. with dog bins and to include multi-lingual signage. etc.	H	Inclusion of dog waste bins and associated signage	Dog access facilitated. minimisation of conflicts with other park users	Park user comments
6	EDUCATION								
6.1	Sustainability	Visitor awareness and understanding of ecologically sustainable practices undertaken at the park	Community desire for park to complement the educational function of local schools in general community education	6.1.1	Integration of information panels that describe recycling processes and sustainability. including re-use of water for irrigation	H	N/A	Visitor awareness of ecological role of park	Community comments
6.2	Natural and Cultural heritage	Visitor awareness of cultural significance	There are a range of natural and cultural heritage features within the Park that many visitors would not be aware of. including Aboriginal heritage	6.2.1	Provide interpretation of natural. Aboriginal and European heritage of the site	H	Providing supporting interpretive signage as part of coordinated scheme Integrate heritage interpretation into design development (eg. interpreting quarry history. indigenous plant display)	Visitor awareness of site heritage	User comments
			Park / interpretive signage should be universal	6.2.2	Integrate universal symbol / pictorial signage into wayfinding and interpretive signage	H	Wayfinding and interpretive signage utilises universal symbols	Signage / interpretation can be understood by all visitors to the park	User comments

	Objectives		Pressures and Opportunities	No	Means (Strategies)	Priority	Design Principles	Assessment	
	Values	Desired Outcome						Performance criteria	Monitoring technique
7	BOUNDARIES & SECURITY								
7.1	Site connections	Internal and through site access	Potential conflicts between vehicle, bicycle, scooter and walking access Limited access options into park due to DEC Ministerial decision (22 Jan 2013)	7.1.1	Design and implement shared pedestrian / cycle paths, with line marking	H	Coordinated scheme and access integrated with general design of spaces Boardwalk and paths accessible for all pedestrians and cyclists, 3m wide	Path use limited to pedestrians, cyclists and service / emergency vehicles	Monitor on site Community comments
7.2	Access and connections with adjoining areas	Enhance access to and from adjoining areas	Park is enclosed by residential properties and school property creating isolated areas Limited access options into park due to DEC Ministerial decision (22 Jan 2013)	7.2.1	Plan spaces and access to maximise visual linkages, accessibility and use Main access from Monash Parade	H	Consider optimum access points and long term linkage objectives Incorporate interpretive elements at entry points	Access connections provide safe and equal access	Detailed design, implementation, user survey
7.3	Car parking / Vehicle access	Appropriate availability of car parking for visitors of the park	Community concern regarding increased pressure on parking to surrounding streets Council owned SES site (Lot 3) for future carpark	7.3.1	Refer Strategy No. 5.2.2 and 5.2.3	H	As endorsed by Local Traffic Committee	Car parking available for park users	Community comments
		Unauthorised vehicle access prevented	Unauthorised vehicle access is a potential hazard and crime issue	7.3.2	Provide park entry treatments and signage that prevents unauthorised vehicle access in a visually unobtrusive manner, e.g. bollards	H	Coordinated entry designs for park entries that restricts vehicle access to maintenance and emergency vehicles only (removable bollards)	Clear identifiable entries to the park. Prevention of unauthorised vehicles	Detailed design, implementation, community comments
7.4	Privacy and security	Appropriate level of personal safety is afforded / perceived by park users	Enclosed nature of park could be perceived as allowing anti-social behaviour	7.4.1	Park development to promote general park visitation and activity to assist passive surveillance NSW Police & Council ranger surveillance	H	N/A	High level of park usage, minimisation of anti-social behaviour	Community comments / police reports
		Park role as a 'good neighbour' to surrounding residences	Community concern regarding security of adjoining properties due to enclosure of the park	7.4.2	Park boundary treatments to allow for passive surveillance where level change is not significant	H	Intensive boundary planting to central park frontage with 'open' tree planting to boundary situation	High level of park usage, minimisation of anti-social behaviour	Community comments / police reports
8	MANAGEMENT / MAINTENANCE								
8.1	Maintenance	A clean and well kept park	Recycling desirable from an environmental perspective	8.1.1	Provide recycling and waste collection bin stations at appropriate locations	H	Parks depot integrated in suitable location	Provision of adequate bins for waste management	Implementation, visual assessment
8.2	Funding	Staged implementation programme addresses community and environmental priorities	Funding for improvement works needs to be confirmed / established Potential for external funding through State Government programmes (eg. Metropolitan Greenspace, Heritage Commission, NSW Dept of Sport and Recreation etc)	8.2.1	Master Plan and staged action plan according to Council's Capital works program.	H	N/A	Suitability of plans in conveying proposed improvement works and assisting funding approval	Awarding of various funding grants

5.3 Detailed Management Strategies

The following management strategies further detail the information in the Management Strategy Framework for day to day Council decision making, planning and programming.

5.3.1 Heritage

General

The heritage significance of the site as a brickworks and its context in the Aboriginal history of the local area is poorly recognised, as little tangible heritage fabric has survived, and Aboriginal significance is poorly documented given the developed nature of the area.

The following detailed strategies have been summarised from the Heritage Character and Values Assessment (Mayne-Wilson & Associates, 2005 – refer to Appendix P).

Detailed Strategies

Aboriginal Cultural Heritage

Limited information is available on Aboriginal cultural heritage specifically relevant to the Wangal Park site. As such, it is suggested that an oral history and general research is undertaken to develop:

- Specific Aboriginal cultural heritage statement of significance
- Identify potential interpretive themes / stories for integration into park interpretive strategies

The Metropolitan Local Aboriginal Land Council has given formal endorsement of the naming of the park as Wangal Park (see Appendix H).

Remains of the Brickworks

There are a few identified physical elements remaining on site that relate to the former brickworks. These include:

- A buttressed brick wall, which was described as part of the coal storage building (Heritage Impact Assessment, 2006, Appendix E), the majority of which is contained within the BGHS site
- Concrete caps covering the air circulation tunnels / flues
- The second brickworks office building which is now utilised by the SES

The NSW Heritage Office noted that the remnant archaeological remains have local significance as they represent a significant local industry that was pivotal to the development of the area. The Office stated that the in situ retention of these remains is the optimal management recommendation (Mayne-Wilson & Associates, 2005).

Council have commissioned ground-penetrating radar (GPR) investigations to identify locations of sub-surface remains. Some of the remnant flues have been located during works. An approval was given by OEH for excavation for services in the vicinity of some remnants in 2013. The two GPR reports are included at Appendix J.

It is noted however that the Burwood Brickworks have not been listed in the Burwood Local Environmental Plan 2012 as a Heritage Item or Conservation Area.

Heritage Interpretation

Prepare an integrated wayfinding and interpretive signage strategy for the park to incorporate:

i Local Aboriginal cultural heritage
ii Brickworks era
iii Landfill phase

iv Environmental restoration

Signage graphic themes should also consider and provide for wayfinding signage.

Provide interpretation of the past quarry and brickworks functions to the site through design and materials selection.

5.3.2 Recreation

General

Strategies are outlined for each of the recreational uses to be recognised in the park.

Wangal Park will provide for a range of recreational opportunities including informal games and passive recreation. The masterplanning process has led to the conclusion that formal active recreation facilities such as sports fields would not serve the identified values of the community at present.

Detailed Strategies

Informal games

- Establish open grassed areas to accommodate informal games and recreation within central area of park – the areas will be on a gentle slope
- Provide smaller scaled spaces of more undulating slope adjoining larger multi purpose spaces to provide for lower key passive and informal active recreation

Children's playground

- Provide major new playspace in off central location within the park incorporating the following features:
  - combination toddlers, 5-12 years play equipment
  - shade provision
  - related safety measures and easy access to toilet amenities
  - disabled accessible design and play elements
- Maintain existing smaller scale play facility in the north west corner of the park on Monash Parade

Passive recreation

- Develop and enhance passive recreational character and facilities within the park (including trees in grass, informal park seating)
- Provide for a range of passive recreation settings to cater for relaxation and lunchtime use including tree canopy and flexible use open grass spaces
- Formal / organised sporting recreation will not be provided in the park, to allow for the provision of multiple uses of the space at all times

Dog use

- Develop a 'Dog Friendly' role of the park in coordination with Burwood Council provisions and policies and the *Companion Animals Act 1998*
- Support dog use regulations with adequate signage
- Support dog use with dog waste bins
- Provide on-leash only access for dogs

Skate Facility

- Provide skate facilities to promote use of park by young people and respond to community need
- This is to be located in the central section of the park to minimise impacts on adjoining residences

Park Memorials

- The placement and installation of memorial trees (marked and unmarked), memorial seats, plaques, monuments and sculptures in Wangal Park will be permitted subject to the provisions of Burwood Council's adopted *Memorials Policy* (2010).

Public Art

- The placement and installation of public art in Wangal Park will be considered on a case by case basis and approved for installation by resolution of Council.
- Artworks should complement the natural and cultural heritage of the park

Prohibited activities in the Park

The following activities (but not limited to) are prohibited within Wangal Park:

Items as listed under Public Reserves Local Government Act 1993

Motor vehicles (unauthorised)
Motor bikes
Motor scooters
Horses
Open fires
Camping
Golf
Fishing
Motorised hobby articles (including but not limiting motor vehicles, boats, aeroplane and bikes)

Alcohol Prohibited Area (Time Limited)

Burwood Council can establish designated areas where it is illegal to drink alcohol in the Burwood Local Government Area. Determined by the Local Government Act 1993 there are two measures which can be enacted to make drinking alcohol illegal – Alcohol Prohibited Areas and Alcohol Free Zones.

Section 632 and 670 of the Local Government Act 1993 legislates that Council can make it illegal to drink alcohol by erecting a notice in accordance with the stated sections pertaining to a park, reserve, and other public place (inclusive of sporting fields) that are not legislated within Alcohol Free Zones. These areas will be known as Alcohol Prohibited Areas as they are not included within the Local Government Act definition of Alcohol Free Zones. An Alcohol Prohibited Area within a park, reserve or other public place prohibits the consumption of alcohol within the designated area under the terms of the sign which is enforceable by Police or authorised Council Officers.

It is expected that Wangal Park may be nominated as an Alcohol Prohibited Area in operation seven days a week between the hours of 8pm and 8am.

In accordance with Section 670 of the Local Government Act 1993 notices and/or signs designating Alcohol Prohibited Areas for a park, reserve or other public place in the Burwood Local Government Area must comply with the following requirements in order for a person to be guilty of failing to comply with the terms of notice or sign:

(a) the notice or sign is clearly legible, and

(b) where it relates to:

(i) the whole of a parcel of public land, is exhibited at each entrance to the parcel of public land or in a conspicuous place in or in the vicinity of the parcel of public land, or

(ii) part only of a parcel of public land, is exhibited at each entrance to that part or in a conspicuous place in or in the vicinity of that part, or

(iii) a building, is exhibited (as may be appropriate) either inside or at or near the entrance to the building.

For further information on the enactment and suspension of Alcohol Prohibited Areas refer to Council's *Prohibition of Alcohol in Public Spaces Policy*.

5.3.3 Access

General

Access within the park is a key contributing factor to park character and identity. Access and related activity enhances physical and perceived security through the park via passive surveillance.

Detailed Strategies

Entries

- Develop park entries with a consistent and identifiable treatment establishing open park character within an overall bushland planting theme
- Incorporate signage and other measures required to prevent unauthorised vehicle access (eg. removable bollards)

Paths

- Permit shared pedestrian and low speed cycle access to major access path
- All paths cater for disabled access
- Establish simple, clear path hierarchy with appropriate path surfaces and related elements (shade, signage, lighting)
- Paths to finish flush with adjoining surfaces (eg. grass / other pavements)
- Main shared access path from Monash Parade 3.5m wide

Signage

- Signage requirements as per the provisions of the Local Government Act
- Way finding and interpretive signage

Land Exchange with BGHS

- A proposed land exchange agreement is pending, for the exchange of the land owned by Council encroached by the BGHS sports field, for the strip of land between the sports field and the Royce Avenue residences. This land is intended to be used for pedestrian and cycle access. Refer to Appendices R and S.

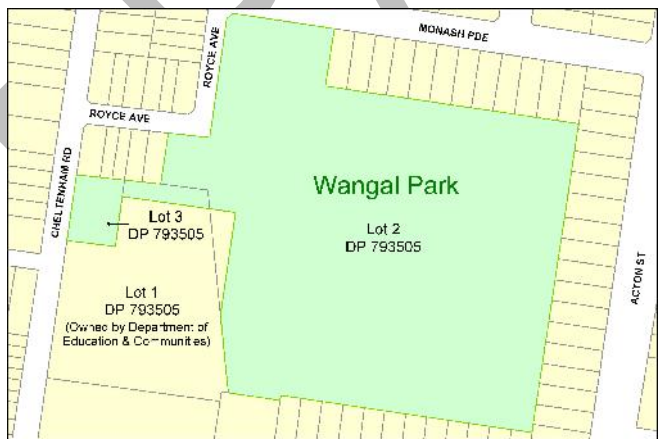

Figure 7 - Proposed Land Exchange Diagram

Vehicle Access and Parking

- Unauthorised motor vehicles are prohibited to access the park. Definition of motor vehicle as classified in Road Rules 2008.
- For the purposes of this PoM, an authorised motor vehicle will be classified as a motor vehicle owned by Council deployed to undertake a function of Council at that specific location. An authorised vehicle may also include a motor vehicle not owned by Council that has been contracted by Council to undertake works at the location and such authorisation will be given in writing and displayed at all times on the motor vehicle whilst in the park. Emergency vehicles are also authorised to access the park to attend to emergency situations.

- Regular Police and Council ranger patrols will be carried out.
- Carparking to be provided adjoining Cheltenham Road frontage to minimise incursion on usable park area (decommission SES building to provide car parking)
- Reinforce potential to access the park by walking or bicycle through park signage to cycle route, and to the park from adjoining areas

5.3.4 Park Facilities

General

Park facilities should be of a high quality and provide an appropriate level of service for visitors.

Detailed Strategies

- Provide public toilets in a location that is easily accessed from high use areas such as the picnic areas and major playground facility
- Provide picnic tables in the park with provision of fixed barbeque facilities in limited locations – decentralised from picnic tables – to discourage large groupings
- Provide park seats throughout the park to take advantage of views and varied sun / shade amenity, installed on hard wearing surface (concrete slab) to minimise grass wear
- Investigate alternative location for State Emergency Services operations
- Demolish and remove State Emergency Service building
- Development of a café as a long term objective – integrated with amenities block, expressions of interest to build, own and operate

5.3.5 Street Frontages

General

Wangal Park has low visual exposure to adjoining street frontages with the remainder of the park enclosed by residential properties and the Burwood Girls High School.

Detailed Strategies

- Provide open park character and access entry points to street frontages of Cheltenham Road and Royce Avenue / Monash Parade
- Master Plan design to enhance the Cheltenham Road and Monash Parade entries
- Establish aesthetically appealing boundary treatments to adjoining residential properties to minimise visual and spatial impacts.
- Monitor opportunities to extend public street frontage and enhance public accessibility of park to Royce Avenue, Monash Parade and Cheltenham Road.

5.3.6 Vegetation and Habitat Management

General

The establishment of Wangal Park provides ecological and environmental opportunities, particularly to create native vegetation areas with habitat value for indigenous fauna.

A Flora, Fauna and Tree Assessment (refer to Appendix Q) undertaken by AES Environmental Consultancy identified that generally the overall health and condition of the limited tree canopy on site is moderate to good, with only a few specimens considered to be in poor condition.

Further, habitat enhancement principles have been established in the Environmental Advice prepared by Eco Logical (refer to Appendix D) and are summarised into the three detailed strategies below.

Detailed Strategies

Habitat Creation / Enhancement

Full Strata Revegetation

The sections of the park returned to full strata Turpentine Ironbark Forest (TIF) will provide habitat complexity, with ground, mid and upper storey vegetation. This should provide habitat suitable for small reptiles, birds and small mammals in the form of refuge, foraging and breeding habitat. The size of the area will limit the diversity of fauna occupying the area and will not be able to support a complex array of fauna in its own right. Ideally the vegetation will showcase a reconstructed example of Turpentine Ironbark Forest and contain characteristic flora species of the vegetation community.

However, it is likely that the vegetation will require ongoing management to maintain its desired integrity. The area of re-vegetation will be established on some capped areas of the site which will require earth mounding to support larger tree growth.

Objectives

- Incorporate a suite of species characteristic of TIF
- Limit public access through the revegetation area, but permit access around the perimeter
- Suppress weeds through ongoing management

Riparian / Wetland Vegetation

The riparian edge planting around the wetlands will provide refuge, foraging and breeding habitat for some fauna. The inclusion of macrophytic vegetation will further enhance the value of the water bodies and the riparian edge. Habitat for wetland birds, amphibians, reptile and aquatic fauna species could be created in this zone. The riparian vegetation is centrally located within the capping area and will be subject to plant species restrictions due to the limited soil depth available in this area.

Council applied for a grant to design and construct two wetlands under the Metropolitan Greenspace Program, which was approved in February 2010.

Council resolved to construct a third wetland which is not part of the original Metropolitan Greenspace grant. The third wetland was then approved by DECCW with conditions. Refer to DECCW approval (see Appendix U).

Objectives

- Establish macrophytic vegetation in some areas around water body
- Establish bank side vegetation typical of TIF or other appropriate local vegetation community
- Create swales outside of the wetlands to carry ephemeral flows and provide frog habitat
- Suppress weeds through ongoing management

General Tree Canopy Zones: Native and Maintained Grass

The Urban Forest, including park trees, is managed and maintained in accordance with the Burwood Local Environmental Plan 2012, Development Control Plan, Community Strategic Plan Burwood2030 and industry best practice.

The tree canopy zones also provide habitat values for fauna. They are suited to birds of urban environments, offering foraging and refuge habitat. Native groundcovers and grasses around the northern, eastern, and southern perimeters of the site will be encouraged in this zone by adopting a no mow zone. Species selection for this zone will consider the available soil depth and potential root impacts as this planting zone adjoins the landfill capping area. Some earth mounding will be required to support tree growth.

Objectives

Tree canopy in an open understorey of native grass

- No mowing in this zone to encourage the establishment of native ground cover
- Suppress weeds through ongoing management

Tree canopy with a mown turf in picnic areas

- Suppress weeds through ongoing management

Suppression of Weeds to include:

- Mulching of garden beds
- Manual and mechanical removal of weeds where possible
- Chemical weed control with low toxicity herbicides such as ‘Round Up’ which do not have residual effects on the environment

Tree Removals

Selected trees within the park will be scheduled for removal where required for construction. Existing trees have been assessed by Council's Tree Management Officer (refer to section 7.4 and the tree survey plan in Appendix C). The plan identifies the existing trees' retention values. Existing trees will be regularly assessed by Council Parks Staff and Tree Management Officer.

Park trees are generally only removed when they are dead, dying, structurally defective or adversely interacting with structures where there are no repair alternatives available.

Tree Pruning

Park trees are periodically pruned by Council's Tree Maintenance Team for dead wood, storm damaged branches, lifting and selective pruning as determined by Council's Tree Management Officer.

Trees are not pruned or removed due to complaints regarding:

- Dropping of leaves, flowers, fruit, cones, bark, twigs or other debris
- Bird droppings
- Insects
- Shading
- Loss of views

Tree Monitoring

All trees should be inspected by Council's Tree Management Officer or a Consulting Arborist (AQF level 5) at least once each year. Trees should be inspected after any major storm event, e.g. gale force winds, excessive or prolonged rain periods, or significant electrical storms.

New Planting Works

New tree planting is proposed in the park to support park design objectives and interpretation themes. Understorey planting is to be limited to areas of revegetation.

- Provide locally indigenous (TIF) canopy tree planting throughout the park to provide shade to picnic areas and open grassed spaces.
- Provide dappled tree planting while still providing solar access to boundaries to maintain visual sightlines, passive surveillance to and from adjoining residential properties.
- Tree plantings will consider appropriate setbacks to adjoining residences to avoid future adverse impacts.
- Establish native revegetation area around the wetlands, interpreting indigenous Turpentine-Ironbark Forest landscape (commenced on National Tree Planting Day 2009 with the planting of 160 locally indigenous trees in the northwestern section).

5.3.7 Leases and Licences

General

What are leases, licences and other estates?

The Local Government Act 1993, allows Council to grant leases, licences and other estates over all or part of community land. Leases and licences are a method of formalising the use of land and facilities. Leases and licences can be held by groups such as community organisations and schools, and by commercial organisations or individuals providing facilities and/or services for profit.

A lease is a contract between a land owner, and another entity, granting that entity a right to occupy an area for a specified period of time. Council will consider leasing areas of Wangal Park especially in the following situations:

- there is a clear reason for granting a lease, and the lease is consistent with the intended use of the land e.g. a catering operator may need exclusive occupation and control of the café / kiosk,
- the occupant has made (or intends to make) a significant financial contribution to the asset, or

- there is a very strong link between the nature of the asset and the proposed tenant.

Licences allow multiple and non-exclusive use of an area. A licence may be required where intermittent or short-term use or control of all or part of the park is proposed. A number of licences for different users can apply to the same area at the same time, provided there is no conflict of interest. A licence allows occupation and a clear and transparent way of identifying the permitted activity. The main difference between a lease and licence is that a licence does not permit the sole, or exclusive, use of the area.

Licences may be granted to formally recognise and endorse shared uses. For example, an outdoor seating area adjoining a café may be used by the café at some periods, but not all the time. Short term licences and bookings may be used to allow Council to program different uses at different times, allowing the best overall use.

The definition of "estate", under Section 21 of the Interpretation Act 1987, includes other rights over land, such as easements, including "interest, charge, right, title, claim, demand, lien and encumbrance, whether at law or in equity".

Leases / Licences Applicable to Wangal Park

Under the conditions outlined above, this PoM expressly authorises the granting of short-term licences in the park, that fall within the following categories:

Markets; concerts; delivering a public address; commercial photographic sessions; picnics and private celebrations such as weddings and family gatherings; filming for cinema and television; and community, educational and/or sporting activities/uses for single one-off events.

In regard to granting such a licence, Council must take into consideration the following matters:

- Whether the use/activity is in the public interest.
- Whether the use/activity would not cause any significant detrimental impact on the park or on the local community.
- No permanent buildings or structures may be erected.

In this PoM, it is proposed that potential uses to be considered in Wangal Park could include:

- Community market
- Festival
- Restaurant or café
- Kiosk
- Wetlands

Local Government Act

The Act requires that any proposed lease is advertised and community comment sought. The comment must be considered, and a lease should not proceed if Council has received an objection to the proposed lease other than with the Minister's consent. (Clause 46-47)

5.3.8 Management and Maintenance

General

Quality park finishes and a sustainable level of recurrent maintenance are to be provided to the park.

Detailed Strategies

Maintenance

- Design and material finishes to focus on long term durability with the aim of minimising recurrent maintenance
- Provide dog waste bins and bag dispensers at appropriate locations (park entries, adjoining amenities block) for dog on-leash only
- Provide separate recycling and waste bin stations at appropriate locations (eg. adjoining picnic areas, amenities block, playgrounds)

Personal Safety

- Park improvements to be aimed at promoting general park visitation and reducing occurrence of anti social behaviour via passive surveillance. Refer to Wangal Park Crime Risk Assessment report (Appendix K)
- Develop and maintain visual continuity between spaces
- Adequate implementation of park lighting – access routes and adjoining areas that will potentially be used at night are to be well lit
- Regular police/security patrols

Burwood Girls High School

- Coordinate agreement with school regarding construction and maintenance of a trench and service lines, through the southern section of the DEC land, Lot 1 of DP 793505. Refer to Access Agreement and Land Exchange Agreement (Appendix S & V).

State Emergency Service Headquarters

- Investigate potential for demolition of the building once an alternative location for SES headquarters is established
- Architecturally record building prior to demolition to have a record of past buildings on the site.

Sequence of actions required for the implementation of strategies including possible funding sources and management responsibilities.

6.0 IMPLEMENTATION

6.1 Construction Strategy

The Management Strategy and Action Framework (section 5.2) identify priorities for planning and management strategies. The Masterplan (Figure 6) comprises a range of proposed improvements with varying community and environmental priorities. The Works Action Plan (section 6.2) will be implemented prioritising the works which are of most immediate community and environmental benefit, and are practicable. These will be followed subject to Council resources, funding, and future detailed planning.

A practical sequence of works with suggested priorities follows.

6.2 Works Action Plan

The Works Action Plan identifies tasks and areas of work, which need to be addressed in order to implement the park enhancement works and management requirements. It is essential that the Works Action Plan involves the active participation of all relevant departments of Burwood Council along with appropriate community groups.

The Works Action Plans are in the form of a schedule that:

- Recommends priorities for works items;
- Describes the detailed activities required including pre-construction elements for capital works items;
- Describes the nature of actions required (capital works, policy review, management action, liaison action);
- Recommends possible sources of funding for the works; and
- Notes specific comments relating to the implementation of that item.

No.	*Item*	*Priority*	*Description*	*Possible Resources (funding and technical inputs)*
1.0 Planning / Investigation				
1.1	Aboriginal Heritage Investigation	High	• Prepare brief • Commission consultant • Scope to include: - Aboriginal cultural heritage oral history - Local history themes - Potential interpretation themes **Pending**	Heritage Council & Council
1.2	Archaeological Investigation	High	• Prepare scope of works • Undertake localised excavation to determine any additional remains of Burwood Brickworks **NB. completed**	Council
1.3	Interpretive Strategy	High	• Prepare brief • Community consultation • Prepare coordinated interpretation strategy integrating all heritage and ecological themes and outlining interpretive elements **Pending**	Heritage Council & Council
1.4	Park Detailed Master Plan Design and Documentation	High	• Prepare brief • Community consultation • Consultancy team to prepare documentation to meet Council implementation requirements **Completed 2013**	Council
1.5	Rainwater collection – adjoining sites as applicable	High	• Design pipework and linkage to wetlands **Completed** • Integrate to irrigation system **In progress 2013**	DEC

No.	Item	Priority	Description	Possible Resources (funding and technical inputs)
2.0 Management Policy				
2.1	Liaison with School	High	• Liaise with School over potential integrated access to Wangal Park **Minister's determination 22 Jan 2013 (see App. G)**	N/A
3.0 Capital Works				
3.1	Establishment / Preliminaries	High	• Site establishment • Contingency **Commenced and ongoing**	Council
3.2	Boundary Native Grassed / Tree Canopy Areas	High	• Locally indigenous canopy tree planting in native grass boundary treatment **Pending**	Council
3.3	Grassed Areas	High	• New turfing including fine grading and preparation **Pending**	Council
3.4	Tree Canopy to General Grassed Areas	High	• New locally indigenous tree planting **Pending**	Council
3.5	Bush Revegetation Area	High	• Full strata revegetation **Pending**	Council
3.6	Wetland Improvements / Hydraulics	High	• Wetland earthworks • Wetland surfacing • Timber / steel decking • Over flow pit to Royce Avenue • Fencing **NB. grant approved in 2010 – construction pending**	Council
3.7	Riparian Planting Works to wetland edge	High	• Preparation / mulch matting • Wetland planting • Aquatic planting **NB. grant approved in 2010 – construction pending**	Council
3.8	Path Access System	High	• Main shared pathways • Secondary pathways • Pedestrian solar lighting to pathways • Timber/ steel board walk **Pending**	Council
3.9	Playground - Major	High	• Playground equipment • Softfall surfacing • Shade canopy structures – supply and installation **Pending**	Council
3.10	Carpark	High	• Concrete surfacing • Line marking • Bollards • Tree Planting **Pending**	Council
3.11	Park Furniture	High	• Seats • Bins • Picnic tables • Solar lighting • Picnic shelter • Exercise equipment • Barbeques **Pending**	Council
3.12	Interpretive Signage	Med	• Interpretive signage to wetland area and other designated areas as applicable **Pending**	Council
3.1.13	Playground - Minor	Med	• Playground equipment • Softfall surfacing • Shade canopy structures – supply and installation **NB. Grant sought in 2009 and approved in 2010. Completed 2011**	Council
3.14	Amenities Building	High	• Construction of an amenities building with attached café and outdoor eating area **Pending**	Council

6.3 Implementation Funding Grants for Improvement Works

In addition to funds available from Council's capital works program and maintenance budgets, there are opportunities for grants and section 94A contributions to augment funding for the completion of Wangal Park.

Applicable sources of external funding (grants) should be pursued by both Council and the park's active stakeholders, to progress park improvements.

Part B
BACKGROUND

This section provides a review of the existing and past physical and cultural character of the site as a means of understanding its key values to the community and major issues for management.

7.0 REVIEW AND ASSESSMENT OF SITE FACTORS

7.1 Site Context

Wangal Park presently comprises of one large lot occupying approximately 4.1 hectares (Lot 2) and a smaller area of approximately 0.1Ha (Lot 3), which currently serves as the headquarters for the Burwood State Emergency Services. The park is within close proximity to the major arterial route of Parramatta Road and the Burwood Town Centre. Blair Park located on Blair Avenue is also within close proximity and is currently separated by existing residential properties and Burwood Girls High School. Access to Wangal Park is currently via Monash Parade, Royce Avenue, and Cheltenham Road.

Figure 8 - Site Map

Figure 9 - Monash Reserve (March 2013)

Figure 10 - State Emergency Services Headquarters (March 2013)

Wangal Park is bounded by Monash Parade and Royce Avenue to the north, Acton Street residential properties to the east, residences of Blair Avenue and Burwood Girls High School to the south and playing fields and Cheltenham Road to the west.

The site has been closed for landfill operations since 2004.

7.2 Cultural Heritage

In pre-European times the park site would have consisted of a gently undulating landform, comprising of soils derived from the Wianamatta Shales of the Cumberland Plain. The area would have supported open forest vegetation dominated by Turpentine-Ironbark species.

The Burwood and Croydon areas were occupied by the Aboriginal Wangal clan which was part of the Darug tribe. Due to the environmental factors and the extensive clearing undertaken in the early part of European settlement, no Aboriginal relics have been identified in the area. The Burwood region was an important part of the Wangal clan's territory due to its location between the Cooks and Parramatta Rivers. The estuarine sections adjoining the rivers would have been frequently used to gather plant foods and for hunting.

From the late 1700's through to the mid 1800's extensive clearing was undertaken to create grazing pastures with settlement also occurring in this period through land grants and establishment of rural estates. From the 1850's to the turn of the 20th century, a period of increased land values and subdivision occurred due to the expansion of the railway network to Parramatta. This period of subdivision required construction of new access roads and formed the street form throughout the area.

At the turn of the last century the Wangal Park site was developed as a brick pit and began production in 1913. In 1929 the landholding was subdivided to create 61 building lots around the northern, eastern and southern perimeters of the brickpit. In 1956 a new head office building was constructed which is the building now used by the State Emergency Services.

The brickworks operated at various levels of productivity until 1978 when the land was sold to the NSW Planning and Environmental Commission. Burwood Council acquired the site in 1989 as a nominated landfill area with the long-term view to develop the site as a public park. Landfill operations ceased in June 2004 and the required sealing and capping of the landfill was commenced but has not been completed. The Lot 1 area of 1.103 hectares was sold to the Department of Education and Communities in 2005.

Summary Statement of Heritage Significance

The following statement of heritage significance is derived from the Heritage Impact Assessment by DPC Heritage (see Appendix E).

> *"Although the site is not on a statutory heritage register it is considered that the remnant archaeological remains associated with the former brickworks are of local significance. Despite this, those remains have limited potential to yield further information or contribute to interpretation of the former brickworks."*

The Former Brickworks

The heritage assessment of the Brickworks in 2002 identified that the site was significant as being representative of the brick works industry in the Burwood / Ashfield district. The study stated that generally the site could be categorised as having 'little significance' due to the demolition of the brickworks buildings and alterations to the site, which make heritage interpretation difficult. A review of this heritage assessment by the NSW Heritage Office noted that the remnant archaeological remains associated with the brickworks have local significance because they represent a significant local industry that played an important role in the development of the Burwood and Croydon area.

The Heritage Character and Values Assessment (refer to Appendix P) notes that Council has taken action to protect some of the remnant structures from the brickworks, however the Burwood Brickworks has not been listed in the Burwood Local Environmental Plan as a heritage item or heritage conservation area.

7 REVIEW AND ASSESSMENT OF SITE FACTORS

Study Area's Character & Values

The Landscape
The spatial qualities of Blair Park, the grounds of Burwood Girls High School and the Wangal Park site are reminders of the spacious 19th century villa estates of the Burwood region. The proposed new park should conserve this earlier sense of spaciousness.

The Streetscape
The surrounding housing facades along with the standardised street tree plantings preserves an image of the late 1920's and may in the future warrant considerations as a conservation area.

The Buildings
The majority of adjoining housing are of the Californian Bungalow style of the mid to late 1920's with a few remnants of late Victorian era villas. The consistency and harmony of built structures is an effective resource for understanding and interpreting the origins and development of the area.

7.3 Historical Timeline

Pre 1788	The Wangal Park site was an area of native forest vegetation, comprising clays derived from the Wianamatta Shales. The area was inhabited by the Aboriginal Wangal clan of the Darug tribe
1788	Arrival of Europeans and progressive occupation of Aboriginal lands.
1794	November - First settler in Burwood, Sarah Nelson receives grant of fifteen acres which became known as 'Nelson Farm'. The farm was accessed from Parramatta Road via a track which ran slightly to the east of Cheltenham Road.
1794	December - Grant of twenty-five acres given to James Brackenrig. This land was bounded by Queen Street, Lang Street and Acton Street.
1796	Former convict Dennis Connor received a thirty acre grant to the east of Brackenrig's grant. The property included Blair Park and Acton Street. Part of the Wangal Park site is situated on the south western portion of Connor's grant.
1803	Grant given to Captain Thomas Rowley by Governor Hunter, which was named 'Burwood Estate' after the 'Burwood Farm' Rowley lived on in England. The western portion of the Wangal Park site was part of Rowley's grant. Subsequent grants by Governor King expanded the Burwood Estate to 750 acres.
1814	First significant house constructed in Burwood – Burwood Villa by Alexander Riley, Thomas Rowley's successor.
1833	Captain Thomas Rowley's children regain possession of the Burwood Estate following his death. The estate was subdivided amongst his children or their spouses and four lots were created.
1834	First subdivision of one of the Burwood Estate allotments.
1830's	Burwood Estate 'opened up' and Village of Burwood laid out in 1835.
1855	Railway line to Parramatta built.
1860's	Captain Mayne resided in a property called 'View Bank' on the corner of Cheltenham Road and Queens Street.
1866	Quarrying in the Burwood area had begun.
1868	'Evandale' house built on part of what is now Blair Park.
1869	'Humberstone' built by solicitor John Dawson located between Queen Street and Parramatta Road. The residence included 24 acres of parkland. The building seems to have remained largely intact until after 1951 when the property was demolished.
1869	Residence 'Sobroan College' located behind existing State Emergency Service Building. This property seems to have been demolished prior to 1930.
1874	The district of Burwood was gazetted as a Borough. Between 1874 and 1900 the Burwood population rose from 1,250 to 7,400.
1876	A small brickworks factory opens in Lang Street, Croydon. Several years later the Croydon Steam Brickworks opened in Webb Street. Both of these were closed in the 1920's.
1882-1883	Street lighting mains laid throughout the suburb.
1890's	Council implemented concrete guttering and extensive street drainage works throughout Burwood.
1901	Ashfield to Burwood tram line completed and higher density suburban development began.
1913	Burwood Brickworks began production. The brickworks were set up by The Suburban Land and Investment Company Limited.
1918	Land title for the Wangal Park site given to The Suburban Land and Investment Company Limited including the majority of lands contained by Parramatta Road, Cheltenham Road, Queen Street and Acton Street.
1923-1926	Subdivision of the Wangal Park site occurred.
1926	The Suburban Land and Investment Company Limited purchased portions of the lot facing Queen Street, which were later sold to Council for the establishment of Blair Park.

Historical Timeline (continued)

1929	The Suburban Land and Investment Company Limited subdivided their landholding to create sixty one building lots around the northern, eastern and southern perimeters of the brickpit.
1934	Brickpit taken over by Brickworks Limited.
1952	Brickworks closed temporarily as a result of the building recession.
1956	Two new kilns and a new head office building constructed. The head office building is now used as the State Emergency Service Headquarters
1976-1978	Burwood Brickworks ceased production
1982	Brickworks demolished by Department of Planning
1989	Burwood Council purchased the site from the Department of Lands with objective of operating as landfill and restoring as a park
1990-2004	Site operated as landfill
1996	Original Plan of Management completed and exhibited
2001	Burwood Council transferred Lot 1 to the Department of Lands
2001	Cheltenham Park Plan of Management prepared
2004	Landfill closed.
2005	Lot 1 (1.103ha) was sold to DEC by the Department of Lands
2005	First closure plan approval
2005	Capping commenced
2005	Various consultants' reports commissioned
2005	Preliminary community consultation
2005	Preliminary Draft Plan of Management and Concept Master Plan prepared
2006	Capping continued
2006	Naming of the park competition and Council adoption of the name Wangal Park
2007	DA approved for BGHS sports field development
2007/08	Playing fields on BGHS land constructed
2009	Play net installed in Monash Reserve
2009	160 locally indigenous trees planted National Tree Day 2009
2009/10	Wangal Park Draft Plan of Management (Version 9) and Working Draft Sketch Master Plan (LA86 Issue C) prepared by Council
2010	Council adopted Wangal Park Draft Plan of Management and Working Draft Sketch Master Plan for public exhibition – 28 September 2010
2010	Metropolitan Greenspace grant approved for wetlands construction
2011	Playground installed in Monash Reserve
2011	Community Consultation results analysis
2011	Access discussions with BGHS
2011	Wangal Park Implementation Advisory Group (WPIAG) established
2012	Consultancy team engaged for wetland design & resolution of Masterplan
2012	Ongoing discussions with BGHS & DEC
2013	DEC terminate access to road through BGHS but allow services trench
2013	Masterplan finalised, with no access road through BGHS, and with carpark on SES site
2013	Council commences earthworks on site
2013	Council staff revise PoM for public exhibition
2013	WPIAG endorse Masterplan for public exhibition
2013	Public exhibition of PoM and Masterplan
2013	Council adopts PoM and Masterplan

7.4 Vegetation and Habitat

Assessment of the site's vegetation and fauna habitat potential has been carried out during the planning process of the Wangal Park site, including the following:

- Identification of species by Doug Benson of National Herbarium of NSW (2009)
- AES report 'Flora, Fauna and Tree Assessment' on the impact of proposed works on threatened species and trees on site (2005)
- Environmental Advice by Eco Logical Australia regarding habitat values on site (2005)
- Tree Survey prepared by Council identifying existing tree retention values (2012)
- Equatica prepared documentation for design and construction of wetlands including ongoing wetland maintenance (2013)

Benson's Tree Identification

Prior to European settlement the Wangal Park site would have supported native forest vegetation. According to Benson and Howell (1996, p.52) the Burwood area would have been typified by Sydney Turpentine-Ironbark Forest (TIF).

Turpentine-Ironbark Forest of the Sydney Basin Bioregion is now listed as a critically endangered ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The forest would have maintained trees up to 20 to 30 metres in height, forming an open forest structure and appearance. Nearby pockets of Blue Gum High Forest also occurred throughout the Burwood area.

Little of this original vegetation has survived, as the land was cleared of TIF in the early nineteenth century to create grazing pastures (Mayne-Wilson & Associates, 2005). The site's vegetation currently consists of planted and self-sown trees, weeds, grasses and groundcovers.

Only two remnants of TIF vegetation occur in the Wangal Park site. Near the southern boundary is an *Angophora floribunda* (Rough Barked Apple) specimen. A patch of *Themeda australis* (Kangaroo Grass) about 10m long and 2m wide also survives on remnant natural clay soils on the lip of the old quarry (now filled) in the northeast corner of the site. These remnants of vegetation were identified by Mr Doug Benson of the National Herbarium of NSW during a site visit on 29 October, 2009.

During the site visit with Benson, several other tree specimens along the southern boundary were identified. These include two *Eucalyptus melliodora* (Yellow Box), *E. sideroxylon* (Mugga ironbark), *E. camaldulensis* (River Red Gum), and *E. nicholii,* (Peppermint Gum) It should be noted that these trees are not locally indigenous to Burwood. Benson also identified relatively recent plantings of 2 x *E. sideroxylon* specimens along the eastern boundary.

Figure 11 - Remnant tree on southern boundary of the site (March 2013)

Figure 12 - Existing trees on the southern boundary (March 2013)

Benson recommended that the aforementioned *Angophora floribunda* on the southern boundary has significance as a remnant of the original TIF vegetation and should be retained. He also recommended preserving the patch of *Themeda australis.* Benson suggests that the *Themeda* is likely to be remnant growth surviving from the

understorey of the original Forest. Council has identified all the above species to be retained and protected, if possible, during the park's construction. However, it should be noted that earthworks are required in the vicinity of these remnant specimens that may affect their longevity.

Council Tree Survey

Council prepared a Tree Survey in June 2012 identifying retention values of the existing trees across the Wangal Park site (refer to Appendix C).

The northern section of the site, adjoining the residential properties of Monash Parade, has some established mature tree plantings consisting mainly of healthy stands of *Eucalyptus* and *Corymbia* species. Council's Tree Survey identifies these trees to be retained and protected, if possible, during the park's construction. However, some trees in this area will need to be removed for the access road.

There is a strong 'edge effect' evident where the surrounding housing adjoins the landfill area - weeds and grasses have grown around the site. This area will be enhanced to provide passive surveillance over the park and filtered screening of residential properties.

AES Flora, Fauna & Tree Report

A Flora, Fauna and Tree Assessment was undertaken in April 2005 by AES Environmental Consultancy (see Appendix Q). The aims of this investigation were to determine:

- whether the proposed regrading and subdivision of the site is likely to cause a 'significant effect on threatened species, populations or ecological communities or their habitats';
- impacts on threatened species and ecological communities; and
- the significance of trees at the site.

The AES assessment found that there is little pre-existing vegetation on the site and what remains is not representative of any endangered ecological communities.

No threatened fauna species were detected in the process of the assessment and AES found that the site is not suitable habitat for any threatened fauna species.

AES also compiled a tree schedule to assess the Safe Useful Life Expectancy (SULE) of the trees on site and this identified that the health and condition of the existing trees was generally moderate to good. AES noted that the existing *Eucalyptus* species on the site provide fauna habitat and visual relief and should be retained where possible and appropriate.

Eco Logical Australia Environmental Advice

Environmental Advice was prepared by Eco Logical Australia Pty Ltd in October 2005 (Refer to Appendix D). The report identified that vegetation mapping of the area by NPWS showed Turpentine Ironbark Forest (TIF) as the original vegetation community on the site. The structure of this community type was open forest dominated by Turpentine (*Syncarpia glomulifera*), with Grey Ironbark (*Eucalytpus paniculata*) and Rough Barked Apple (*Angophora floribunda*) common tree species. Due to extensive past clearing the site does not contain any of the described vegetation community, or resemble the community prior to clearing.

The following four separate fauna habitat types were identified as occurring on the site:

- Remnant scattered trees;
- Shrubby thickets (weeds);
- Grassland, and;
- Aquatic refuge.

Generally the habitat available is poor and limited. However, it would be suitable for small reptiles, birds and bats. The lack of vegetation on site suggests that the site does not support much diversity and has a low abundance of native species.

25 plant species were recorded on the site by Eco Logical in 2005, as listed in the following table.

Species	Common Name	Type
Trees		
Acacia decurrens	Green Wattle	
Angophora floribunda	Rough Barked Apple	Remnant
Eucalyptus saligna	Sydney Blue Gum	
Eucalyptus sideroxylon	Mugga Ironbark	
Eucalyptus sp.		
Ficus sp.		
Pittosporum undulatum	Sweet Pittosporum	
Weeds		
Araujia sericiflora	Moth Vine	Weed
Cestrum parqui	Green Cestrum	Weed
Cinnamomum camphora	Camphor Laurel	Weed
Foeniculum vulgare	Fennel	Weed
Ipomoea sp.	Morning Glory	Weed
Lantana camara	Lantana	Weed
Ligustrum lucidum	Large Leaf Privet	Weed
Lonicera japonica	Japanese Honeysuckle	Weed
Olea europaea	African Olive	Weed
Ricinus communis	Castor Oil	Weed
Groundcovers		
Austrodanthonia sp.		
Axonopus fissifolius		
Centella asiatica		
Cyperus gracilis		
Dichelachne sp.		
Glycine sp.		
Microlaena stipoides		
Themeda australis	Kangaroo Grass	Remnant

7.5 Landform, Soils and Drainage

Earthworks

Due to the site's past uses as a brickworks and a landfill, the landform and soils are highly modified comprising primarily of fill. An initial closure plan of the landfill was submitted to the Environmental and Protection Authority (EPA) and approved, allowing for commencement of capping and earthworks. At least 1.5 metres depth of capping layer will be required to enable landscaping and development of the site (as per Closure Plan, refer to section 8.1). The capping shall consist of three layers:

Support Layer: To be non-plastic granular material spread in two layers and proof rolled with 8t firm foundation for the sealing layer.

Sealing Layer: To be clay-rich, non-dispersive material compacted in at least two layers to a minimum of 95% standard compaction and a maximum permeability of k=10^-7m/s under drains 1 and 2 and sedimentation basin floor.

Revegetation Layer: To be topsoil or suitable similar material laid in one layer and track rolled up and down the slope. It should be noted that mounding of soil will be required for areas where larger plants are to be planted and species should be selected to avoid risk of damage to the capping layer.

The EPA Surrender Notice requires Virgin Excavated Natural Material (VENM) soil to be used; however an amount (3000 cubic metres) of Excavated Natural Material (ENM) has been approved for use in the Revegetation Layer (refer to Appendix H). Application should be made to the EPA for an exemption to use manufactured topsoil on site, as VENM or ENM may not be available at the time of construction.

Figure 13 - West view from southeast

Figure 14 - Water body (sediment basin)

Figure 15 - Water body (sediment basin) view west

Figure 16 - View north across the site

Final Closure Plan 2013

Council has engaged a consultant – Environmental Planning Pty Ltd – to draft and complete the final Closure Plan based on the final Masterplan. The Closure Plan is currently pending. Refer to Appendix T.

Landfill

Gas wells have been installed to the perimeter of the landfill area to monitor gas emissions. Continued monitoring will be required until the park is developed. Until the site is developed, stormwater run off drains into the existing sedimentation basins where it is monitored for contaminants, before being discharged to the external stormwater system. When the park development is completed, constructed wetlands onsite will collect and reuse water for irrigation, as detailed in the Wangal Park Masterplan. The issue of water infiltration into the landfill must be addressed in any proposed drainage / water features.

Landform

The landform provides for a variety of views and experiences across the site. There are large areas of relatively flat and exposed landform combined with other areas, at higher levels, that create expansive overviews of the entire site.

7.6 Access

The Burwood Council Open Space Assessment (Suter, 2004) identified that poor access was one of the main issues that needed to be addressed in development and planning of the park. The assessment identified the potential to acquire existing residences and land to Cheltenham Road and Royce Avenue with the aim of creating a greater street presence and enhanced access from Cheltenham Road. This would also involve relocating the SES Headquarters to an alternative location, and demolition of the existing building. As per the Masterplan, the site is also accessible from Monash Parade and Royce Avenue.

The Wangal Park 2010 draft Masterplan included access through the DEC land fronting Cheltenham Road. Consultation with BGHS and DEC was undertaken with the aim of finding a mutually beneficial agreement, to allow community access to the DEC land for entry to Wangal Park, as well as potentially utilising the sports fields outside of school hours. A land exchange has also been proposed in various discussions, to exchange the triangular piece of land owned by Council which currently contains part of the school sports field, for land owned by DEC which would allow better access to Wangal Park from Cheltenham Road next to the SES building (refer Figure 7).

In January 2013, the Minister for Education informed Council of the decision in principle to allow a trench for services to be installed below the road through DEC land, and ongoing maintenance access to be agreed upon. The Minister also noted they would be 'happy to progress a land swap' (see Appendix G). However, it was also advised that community access to DEC land was denied and the Department would terminate vehicle access in 2013, requiring Council to construct an alternative entry road (now completed) from Monash Parade. The determination of the access arrangements have resulted in progression of the design of services, pedestrian and vehicle access, and the wetlands as illustrated on the Masterplan. Refer to section 8.2 for summaries of the relevant Council reports.

The existing vehicular and pedestrian site access located off Cheltenham Road passes through DEC land, adjoining Burwood Girls' High School. This access driveway has been utilised as part of the capping and park construction operations and is scheduled for closure in 2013 following the Minister for Education's decision. A second access road was installed from Monash Parade into the site, in early 2013, to allow the original access road to be closed and returned to DEC. This second access road is intended to become the primary pedestrian and cycle path into Wangal Park. The Masterplan includes a secondary pedestrian and cycle entry from the proposed carpark in Lot 3 (currently housing SES headquarters).

Consultation with the residents neighbouring the SES site accessway, and the SES itself, should be carried out prior to finalising access arrangements. Council is working to finalise a formal agreement with DEC.

However, it should be noted that the Masterplan has been prepared with the intention of further discussions with DEC, SES, and adjoining residents resulting in an access agreement favouring pedestrian / cycle access from the SES site.

Refer to section 5.3.3 for detailed strategies regarding access to Wangal Park.

Figure 17 - Cheltenham Road frontage (SES site)

Figure 18 - Monash Parade access road

7.7 Landscape and Visual Character

The site is an expansive open space landscape with some significant vegetation in the north western section and around the boundaries where mature trees occur. Generally the site consists of four main areas as follow:

- The landfill area which is currently in the early stages of park construction works. This area currently contains groundcover and weed vegetation only. (see Figure 19)
- The residential boundaries form an enclosure on three sides of the landfill site in the south eastern, eastern and northern section of the park. These houses have been separated from the site by a chain wire fence, a cleared 'buffer' zone and the boundary fencing of the individual residential properties. The boundary areas are generally at a higher level to the rest of site and contain mown grass and weeds. Management of this zone needs to be carefully considered in future planning and management strategies. (see Figure 21)
- Lot 3 incorporates the State Emergency Service Headquarters. (see Figure 22)
- The northern area of the site to Monash Parade is the only section that would be considered as 'existing park'. The area is grassed with mature trees along the roadside of Monash Parade and Royce Avenue. A 7 metre high play net was installed and opened in August 2009. Play equipment has been installed (2011) in the same area to the east of the play net. This area will provide an important access point into the park once the works have been completed. Some 160 locally indigenous tree species were planted in 2009. (see Figure 20)

Figure 19 - North from proposed café / amenities

Figure 20 - Connection to Monash Pde

Figure 21 - Existing southern boundary vegetation

Figure 22 - SES site access way

7.8 Park Use and Recreation

An Open Space Assessment of the public open space in the Burwood Council area was undertaken in July 2004 by Suter & Associates, Leisure & Tourism Planners. The study was undertaken:

To provide a strategic direction for the future provision and development of open space in the Burwood Local Government Area and to determine the requirements of the future population.

As part of this study the demographics and the implicated demand for open space was reviewed and assessed. Future requirements for open space based on the existing facilities and the projected population of Burwood was also considered in the study.

Review and interpretation of population data from 2001, and Council's Community Profile 2002, identified the following:

- There are slightly lower proportions of children aged 0-14 years, with higher proportions of young people (15-29 years) and older people (65+ years) as compared to the Sydney Statistical Division (SSD).
- 51% of people within the Burwood Local Government Area (LGA) are born overseas, with only 16 % of the population have Australian ancestry.
- 56% of households speak a non English language.
- Broadly speaking, the Burwood LGA is an average income area with similar incomes to those of the SSD.
- There are higher levels of educated and working professionals within the areas compared to the SSD, indicating a potential higher earning capacity in the future.
- There are large proportion of flats / units and apartments, meaning that increasing numbers of people will not have access to traditional backyards.

The study noted that the main implications of population characteristics for open space and community facilities are that:

- *There will be a need for open spaces that cater for children as well as adults, i.e. sporting facilities and playgrounds as well as walking paths and places to exercise.*
- *Open space will need to support older people, including accessible spaces and facilities.*
- *Consideration should be given to the needs of various cultural groups, including opportunities for activities and any barriers such as language.*
- *Park design and facilities should reflect the cultural diversity of the area.*
- *There will be a need for affordable recreation and sport opportunities, hence the value of open space.*
- *The relatively large proportion of apartments and flats will increase the need for, and value of, open space, particularly around the town centre.*

Generally the study noted that there is a large provision of small informal parks. However, sporting facilities and large open space is inadequate especially when

considering the projected population growth within the Local Government Area. The study also identified an urgent need for a skate facility within the Burwood area and that the Wangal Park site offered a possible location.

The Open Space Assessment noted that the specific recreation needs for the Wangal Park site as a new open space would include:

- Provision of play equipment and play spaces
- Grassed area for games
- Walking and cycle trails
- Seating and shelters
- Picnic areas
- Landscaping, unique and appealing settings
- Amenities
- Carparking

Community Survey – Summary and Conclusions

A community survey was undertaken to identify issues and needs in regard to use, accessibility and potential qualities / values for Wangal Park. The response rate to the survey was low and the outcomes do not provide definitive references for park planning. However, the information plays a role as part of the overall information compiled for the plan.

The key findings include the following:

- The majority of park users anticipate that they will use the park several times a week, with a quarter of those surveyed predicting daily use of the park.
- Users anticipated that park visits would generally occur on weekends, but a high number of those surveyed also indicated weekday use.
- The majority of users felt that they would generally spend an average of one hour within the park.
- A high percentage of users anticipated that they would walk to the park, with a smaller percentage riding bicycles. Very few survey respondents indicated that they would get to the park by car.
- The major user age group identified in the survey was 36-64 years of age with a relatively high number of children aged under 14.
- Basic park elements such as seats, picnic tables and toilet facilities were identified as important features of the park development. Pathway links and open grassed areas were also identified as important. It was also noted that bicycle paths were desirable with potential inclusion of a BMX style facility with jumps etc.
- Shade trees and a preference for appropriate native plant species were identified as important landscape improvements. The provision of native species for local fauna such as birds to establish potential habitat areas was noted by several users.
- Other park comments and suggestions identified that the safety and security of the park including adequate provision of lighting was an important value of the park that needed to be addressed as part of the plan development.

Workshop Findings

An initial community workshop was held on Monday 30 May 2005. The workshop aimed to identify community values and roles of the Wangal Park site. Key values relating to park use and recreation that were discussed included the following:

Shared Use of Space

The workshop identified that a shared use of space was desirable, to create a multipurpose, integrated park that incorporates both passive and active recreation.

Linkages and Connections

The role of the park as part of a broader open space / park system was discussed including potential for linkages to the proposed Cheltenham Road (now Lucas Road)

Cycleway link to Canada Bay. Potential linkages to Blair Park were also identified as desirable.

Leisure and Sporting Recreation

The park provides opportunity to accommodate a range of formal (e.g. organised sport) and informal (e.g. walking, family play) sporting activities.

Catering for a range of groups

There is a need to cater for adults, older children as well as toddlers within the park. Currently spaces for adolescents are not readily provided. There are potential social issues created by marginalising community groups. The park should ultimately cater for a range of users including those with a non-English speaking background and disabled users.

Engaging the Community

Potential to include the community not only in the preliminary stages of the project but through to implementation and ongoing management of the park was seen as a desirable management strategy.

Wangal Park Implementation Advisory Group (WPIAG) Results

Council established a working group consisting of ten community members and five Council staff, as well as a NSW Police representative for the current round of community consultation. At the time of writing, eleven meetings have been held, for the Group to contribute to design and development of Wangal Park, and provide perspectives on various relevant issues which have helped to develop the Masterplan and Plan of Management. The Masterplan and PoM reflect the values and objectives which the WPIAG were instrumental in developing based on the original vision and values for Wangal Park. On 17 April 2013 WPIAG endorsed the Masterplan and this PoM for public exhibition.

7.9 Structures

Lot 3 of the Wangal Park site currently contains the Burwood State Emergency Service headquarters. The existing structures within Wangal Park are outlined below.

Structure/building	Description and condition
State Emergency Services Headquarters	• Brick building presently used as Burwood State Emergency Service Headquarters • Fair condition
Children's Play Area – Monash Parade	• 7m high play net (installed 2009) and playground (installed 2011)

Figure 23 - SES building on Cheltenham Road

Figure 24 - Play net & playground in Monash Reserve

There is a substantial section of the remnant coal storage brick wall within Lot 1 (BGHS), which supports the embankment to the adjoining school land. The Heritage Assessment of the former brickworks undertaken in 2002 (HLA Envirosciences) identified that the wall was the remains of the coal storage facility and is the only standing remnant of the brickworks.

This assessment also identified that there are subsurface remains across approximately one third of the original brickworks site within Lot 1 (BGHS land) and Lot 2 including remnants of kilns, buildings and chimneys associated with the brickworks.

7.10 Existing Leases

To date there are no existing leases for the site.

The Wangal Park Masterplan includes a café attached to the amenities building. The café is proposed to be leased out and managed by an operator. Detail of the proposed lease is to be determined.

7.11 Management and Maintenance

Wangal Park is to be managed and maintained by Burwood Council. The following maintenance schedule has been developed for future maintenance of Wangal Park based on the draft *Generic Plan of Management for Parks* (2013) .

Maintenance Task	Service Level	Schedule Interval
Turf	Mown turf at acceptable length	2-4wks depending on season in passive areas
	Minimise weeds in turf	Weed spraying in spring and as required
Wetlands *Note: Refer to Appendix B for full wetlands maintenance schedule and specifications*	Water quality	Regular checks
	Clean	Silt / pollution clean outs
	Structural / drainage	Regular checks
	Weeds and pests controlled	Weed and pest management program
	Flora and fauna health	Monitoring
	Groundwater monitoring	As per EPA req'ts
Waste collection	Adequate emptying of bins	Weekly in passive parks 3 times/wk high use areas
	Regular litter pick up	Weekly in passive parks 3 times/wk high use areas
	Dog litter bins serviced	Weekly
Amenities	Toilets clean	Cleaned min. 3 times/wk
	Amenities building maintained	As required
	Toilets secured (locked/ unlocked)	Daily
	Seats, picnic shelters, drinking fountains, bins, fences, signs, lights - clean and maintained	Clean and repair as required
Gardens and trees	Trees maintained	Pruning of defects and pest/ disease treatment as required
	Removal of dead or dangerous trees	As assessed by Tree Management Officer
	Garden beds maintained	Pruning, planting, watering, fertilising as required
	Mulched garden beds and tree surrounds	Mulch applied yearly
	Irrigation operational	Clean and repair as required
	Control weeds in gardens	As required
Playgrounds	Inspected regularly for safety, cleanliness, damage	Weekly checks Quarterly comprehensive inspections Repair, clean as required
Access	Report illegal access, or prohibited use	As required
	Provide access for services, emergencies	As required
	Paths clear of obstructions & trip points	Clear and repair as required
Security	Police & Council patrols	Regular patrols

Appraisal of literature, reports, and studies relevant to development of the PoM.

8.0 RELEVANT BACKGROUND INFORMATION

8.1 Previous Studies and Plans

Cheltenham Road Open Space Plan of Management 1996

A PoM was prepared for Cheltenham Road Open Space by Burwood Council as part of a series of plans developed for all of Council's community land. The PoM identified that the opportunity to establish Cheltenham Road site (now known as Wangal Park) as a new major park within the Burwood area was unique and would require maximum public participation and a careful open space planning process. The preliminary concept layout indicated that the park would predominantly serve for passive recreation with a more active zone including a playing field and tennis courts adjoining Burwood Girls High School.

This initial layout led to consideration for Council to exchange some of its land, which at the time was to be sold to the DEC. The primary reason for this 'land swap' recommendation was to enable improved pedestrian and vehicle access into the site from Cheltenham Road. The study also recommended that an amended PoM would be required once landfill operations had ceased.

Note: the Wangal Park Plan of Management 2013 (this document) supersedes previous Plans of Management for the site.

Plan of Management Cheltenham Park 2001

Council commissioned HM Leisure Planning Pty Ltd and Clouston, to prepare a plan to describe future proposals for the site that would meet the demand of future users. The plan was part of a series of studies undertaken as part of The Burwood Council Recreation Study 2001.

Their vision for the park was as follows:

Wangal Park will reflect the many uses and associations of its past, appealing in a contemporary and environmentally sustainable way to the diverse community of Burwood.

It will demonstrate through its design and management the historic chronology from Aboriginal stewardship, through its clearance for timber during early settlement, and its dramatic modification for extraction of clay for bricks, to its contemporary restoration as a district park.

The study identified two key objectives for the park's future:

- Completion of capping and landfill operations to construct a landform that is in association with a prepared concept plan for the park. Once this landform has been achieved the site should be developed and used as a public park.
- The park should provide a high quality multi-function space that meets both sporting and passive recreation requirements.

The concept layout for the park noted that the primary use would be for passive recreation with an active area adjoining Burwood Girls High School subject to availability of space. Informal recreation provision included picnic, 'kickaround' areas, playground including water play area, walking / cycling paths, a grassed mound to the centre of the park providing views to the city and an informal amphitheatre.

The Burwood Council Recreation Study 2001

This study by HM Leisure Planning Pty Ltd and Clouston was undertaken to address the future recreation needs of the Burwood area and to provide a strategy for provision and management of recreation facilities into the future. The study included extensive consultation with the community on which a basis for assessing demand and community priorities could be established.

The study findings specifically noted that the Cheltenham Road site provided an opportunity to establish and develop a sports and community precinct potentially incorporating Blair Park. The study also noted that bushland and conservation values of the site should be strengthened.

A Heritage Assessment of the Former Burwood Brickworks, Cheltenham Road Burwood 2002

HLA-Envirosciences Pty Ltd was engaged by Planning NSW to undertake a heritage assessment of the site to evaluate the environmental condition of the site in relation to the proposed redevelopment of site as recreational open space. The assessment generally noted that the Brickworks site is significant as being representative of that industry in the Burwood / Ashfield districts.

Burwood Council Open Space Assessment 2004

This assessment was prepared by Suter & Associates, Leisure & Tourism Planners to provide a strategic direction for the future provision, development and population requirements of open space in the Burwood Local Government Area to 2016. Suter recommended that the broad strategy for the development of open space should focus on:

- The establishment of quality, significant parks and sportsgrounds with the Cheltenham Road site providing an important opportunity to achieve this.
- Improving the quality of existing small parks.
- Emphasise the uniqueness and quality of open space throughout Burwood.

The study generally determined that given the projected population growth in the Burwood area increased public sporting facilities will be required to meet increasing user demand. It is also noted that there is an overall adequate provision of smaller parks, however there is an additional need for large open space, which caters for walking, cycling, picnics and family activity, and casual sporting games. Provision of skating facilities was identified as urgently required to meet demand.

Suter identified that a major issue affecting the development of the Cheltenham Road site is the enclosure of the park by adjoining residential properties, and this further creates a number of other issues including:

- Potential lack of use due to lack of awareness of the park
- Potential problems associated with anti-social behaviour including graffiti and vandalism due to the 'hidden' nature of the park
- Safety concerns again associated with the 'hidden' nature of the park
- Poor access into the park

The study suggested that a long term option to help address the above issues could include acquiring housing and land along Cheltenham Road and Royce Avenue adjoining the park.

> *There is a need to create an open and safe park with good street presence along Cheltenham Road as the majority of the reserve is surrounded by backyards.*

Suter also recommended that the SES land should be included within the park, along with land adjoining the high school to Cheltenham Road. This would assist in improving the profile, appeal and safety of the park.

Specific open space directions for the Cheltenham Road site are identified as:

- Provision of a unique bushland environment, with demand for bushland environments previously identified in the Burwood Council Recreation Study, and addressing the lack of natural settings in the LGA.
- Provision of public recreation facilities such as play equipment, walking / cycling trails, seating and shelter
- Inclusion of a sporting component potentially incorporating two playing fields and a cricket pitch, this is particularly important as Suter noted there are no other immediate opportunities to provide additional sporting facilities to meet increasing demand.

- Development of an 'integrated' park which provides for unique recreation and sporting experiences.
- Do not fence off areas from the public, rather create a large expanse of open space that is available for a range of user groups.
- Liaise with Burwood Girls High School regarding the use and design of the land to Cheltenham Road. Suter suggested that the school's land should not be used for sport and should instead contribute to the open park setting. It was recommended that the school access sporting fields in the park or Blair Park as a land use or land swap arrangement.

Note: Discussions with DEC and BGHS have been carried out throughout the planning process, however the Department have at present declined to make their land available for community use.

The assessment noted that there is an opportunity to develop a sports and community precinct around the Cheltenham Road site and Blair Park. This precinct could potentially address the urgent need for provision of skating facilities within the Burwood area. Suter also recommended that the development of Cheltenham Road as a large recreation space could potentially alleviate usage pressure from Burwood Park and that the development of the park should commit to providing and catering for recreation activity needs to aim to relieve pressure from Burwood Park.

Cheltenham Road Landfill Final Closure Plan 2004

A final closure plan was prepared for Burwood Council and the Environmental Protection Authority by Hopman Consulting Services to provide the necessary information to finalise the site's landfill operations. The main components of the closure plan included:

- Final contours for the site
- Composition and thickness of the capping layer
- Capture and treatment of gas emissions
- Resolution of groundwater issues
- Erosion and sedimentation controls.

The plan identified that the capping works and revegetation of the site were anticipated for completion in November 2005 at which time the site would be developed into the proposed parkland.

Note: due to revised concepts for Wangal Park development, an updated Closure Plan is to be prepared.

Flora, Fauna & Tree Assessment: Proposed Regrading and Subdivision of Lots 1 & 2 DP 793505, Cheltenham Park Croydon April 2005

An assessment was carried out by AES Environmental Consultancy (refer to Appendix Q) to determine whether the proposed regrading and subdivision of the Cheltenham Road site would have a significant impact on any threatened species flora, fauna or trees on the site. Refer to Section 7.4 Vegetation and Habitat.

Environmental Advice: Proposed Development of Cheltenham Road Park (Project No. 70-02), October 2005

An assessment was carried out by Eco Logical Australia Pty Ltd, to assess the vegetation and fauna habitat potential of Wangal Park site. The report identifies objectives to maximise the ecological potential of the proposed land uses for the site.

Heritage Character and Values Assessment of the environs of proposed Cheltenham Road Park, Burwood, June 2005

An assessment was carried out by Mayne-Wilson & Associates detailing the previous uses of the Wangal Park site and its heritage values.

Heritage Impact Assessment for Section 140 Excavation Permit Application - Cheltenham Park, Former Burwood Brickworks, June 2006

An assessment was carried out by DPC Heritage regarding proposed excavation works for construction of the BGHS playing fields on Lot 1.

Ground Penetrating Radar Investigations, January 2006 & February 2013

GBG Australia carried out a ground penetrating radar investigation to map the extent of underground flues for old brick kilns from the former brickworks. An additional investigation was carried out in February 2013 in the south-western corner of the site, in relation to services installation being carried out at that time. Refer to Appendix J.

Archaeological Advice, 2013

An assessment was carried out by Casey & Lowe regarding proposed excavation works in the vicinity of sub-surface archaeological remains, which were identified during preliminary works for services installation .

8.2 Summary of Council Reports

This section summarises the contents of the various reports to Council which have addressed the development of Wangal Park.

8.2.1 Management Issues report to Acting General Manager 28 July 2010

This report addressed planning issues which had been identified by the Acting General Manager in July 2010, which needed to be covered in the public exhibition of the draft PoM and Master Plan. The main issues were:

- Access restricted to the Park by a 2 metre high black fence along Cheltenham Road bounding DEC / BGHS land.
- The north east corner of the DET owned playing field encroaches onto Council property.
- The potential community impacts of a large central grass common / soccer field, considering that Wangal Park was planned primarily for passive recreation.

Other issues addressed were impacts of the skate facility, car parking, traffic impacts, safety fencing of the wetland, naming of the park, the grass mound, Monash Parade play equipment, drainage and earthworks, remnant vegetation and copyright of the plans.

8.2.2 Council report 28 September 2010

Council resolved (resolution 224/10) to put on public exhibition the draft Plan of Management and Working Draft Sketch Masterplan.

8.2.3 Council report 22 March 2011

On 22 March 2011 following the Wangal Park community consultation, Council was presented with a report on the results of the consultation. Council resolved unanimously to accept the recommendations made in that report, and to establish the WPIAG.

Under Recommendation C of the report, Council resolved to continue negotiations with Burwood Girls High School (BGHS) and DEC over the shared access to Wangal Park, via Cheltenham Road and for the community to have access to the DEC owned playing facilities out of school hours.

8.2.4 Council report 26 July 2011

Council staff met with BGHS and DEC on 10 May 2011 to discuss the Wangal Park development, specifically the park access through BGHS land and shared use of the sports fields. Previous discussions had been undertaken with the Department over these issues. However, no Memorandum of Understanding was agreed. Council received a letter of 14 June 2011 from the DEC detailing that the right to use the access road through BGHS land was terminated by DEC, preparation of a draft licence agreement for community use of the soccer field was underway by DEC, and a proposed land exchange. Council's General Manager made a preliminary response

detailing the requirement for an extension of time to allow for review of licence conditions, independent expert advice, and Council resolution.

Council received a further letter from the DEC on 6 July 2011. This letter includes a draft Licence Agreement related to the DEC owned soccer field. Council's General Manager also responded to the DEC on 12 July 2011 acknowledging receipt of the draft Licence Agreement, and explaining Council's obligations to the EPA for soil capping of Wangal Park requiring continuing access to the access road.

Council resolution 120/11(Carried Unanimously) stated that:

Council continue negotiations with the Department and BGHS to resolve the following:

- To achieve a Memorandum of Understanding (MOU) or Licence Agreement over the access to Wangal Park, via Cheltenham Road for construction only for a period of 12-18 months.
- For the community to have access to the Department owned playing facilities out of school hours and agree, under a MOU or Licence Agreement, to a cost neutral, to Council, land exchange or by registration of an easement on the title deeds over the relevant parcels of land as detailed above.
- Agreement, under a MOU or Licence Agreement for the shared pro rata cost to maintain, manage and operate the playing facilities.

A. That Council staff discuss any resolution/s of Council related to this report with the Wangal Park Implementation Advisory Group (WPIAG) as soon as practicable prior to recommendation C.
B. That Council staff amend the Wangal Park Draft Plan of Management and Master Plan and present the revised plans back to the community for comment.
C. That Council investigate potential revenue streams from the hire of the mini field.
D. That Council continue to communicate and engage with the existing WPIAG on this issue.
E. That the Mayor make representations to the State Member for Strathfield seeking a meeting with the Minister for Education to discuss issues relating to access routes.

8.2.5 Council report 27 March 2012

After the 26 July 2011 resolution, Council continued to negotiate with BGHS but was not able to achieve a permanent right of way access from Cheltenham Road or an MOU on the use of the school owned playing facilities out of school hours.

The report detailed the significant milestones in planning and development which had occurred since the previous Council resolution. These are outlined below.

In November/December 2011 Burwood Council collaborated with seven other Sydney Councils and the Sydney Harbour Catchment Management Authority to apply for a consortium grant application under the Federal Government's Stormwater Harvesting and Reuse grant, to help construct the Wangal Park stormwater catchment, storage and reuse infrastructure.

Council engaged the consultant team Equatica Pty Ltd to finalise the design of the wetland system and to integrate this with the overall Master Plan for Wangal Park. Council has continued to engage with the WPIAG as appropriate. The WPIAG have been very supportive of Council's endeavours to resolve Wangal Park's access issues with BGHS.

On 4 August 2011 Councillor Faker, Mayor of Burwood, wrote to the State member for Strathfield seeking his assistance to help mediate discussions between Council and BGHS on the Wangal Park access issue (attachment 1).

On 15 November 2011 the Member for Strathfield met with the General Manager to discuss mediation between BGHS and Council over community access from Cheltenham Road into Wangal Park. The General Manager instructed staff to prepare concept plans to be presented to BGHS.

Council staff and the Member for Strathfield subsequently met with BGHS on 16 December 2011 to present the Concept Plan, LA100 issue C, of the Proposed Shared Path into BGHS and Wangal Park.

The outcomes of the meeting were that:

- BGHS confirmed that it supported community access to the School's grounds including the proposed shared path access from Cheltenham Road into Wangal Park;
- Council would revise the Concept Plan without proposed fencing on either side of the access way to improve amenity and include a softened path surface treatment and some additional school amenities (tables and chairs);
- Council would be prepared to maintain the School's playing fields on the provision that they are to be made available to the community, out of school hours, and as a part of the permanent access way arrangement;
- Council would prepare a construction timeline for Wangal Park and the shared access.

Council staff accordingly prepared a Revised Concept Plan, LA 100 issue E, to reflect the outcomes of the meeting, which was presented to BGHS at the Member for Strathfield's office on Wednesday 29 February 2012.

The outcomes of the meeting were that:

- It was noted that Council's revised Concept Plan, LA 100 issue E, included the outcomes of the previous meeting;
- Most notably, BGHS no longer supported community use out of school hours of the school owned playing fields or the shared path access into Wangal Park from Cheltenham Road via the main shared path.

This was a significant change in the school's position which impelled the Member for Strathfield to write to the Minister for Education seeking the opportunity to discuss the Wangal Park matters.

8.2.6 Council report 12 February 2013

Prior to this meeting Council submitted an alternative proposal to the Minister for Education detailing the following:

- An extension of time for use of the current access at Wangal Park to enable the heavy haulage works to continue.
- A land swap of the parcels of land to facilitate future pedestrian and emergency vehicle access and car parking.
- The creation of an easement to provide for services to the park, including services for the amenities block, stormwater surcharge, sewage, power etc.

On 22 January 2013, the Mayor received a letter from the Minister for Education advising the following:

- An extension on the use of the temporary access road to 12 July 2013. However, should weather or unexpected construction issues delay work, the Department is also prepared to grant an absolute termination date of 30 September 2013.
- The Department has no objections, in principle to Council placing pipes in a trench below the temporary access road (i.e. an easement) and entering into a suitable agreement for future access to the area for maintenance.
- The Department would be happy to progress a land swap to resolve the issue of encroachment by the school's playing fields onto Council land.

Council resolved (resolution 12/13) the following:

1. That Council has no other option but to agree to the revised proposal as negotiated with the Minister for Education and detailed in Attachment 2 of the report to progress the development of Wangal Park.
2. That the Mayor write to the Minister for Education expressing disappointment with not being allowed permanent access along Cheltenham Road.
3. That Council instruct staff to finalise the Wangal Park Master Plan and Plan of Management for public exhibition based on the pencil sketch Master Plan Version D of 27 August 2012 subject to the inclusion of the pathway access layout, proposed car park on the SES site, access easement for services across Burwood Girls High School land and the other salient points illustrated in Drawing LT006.

4. That following the period of public exhibition the final Wangal Park Master Plan and Plan of Management be presented to Council for formal adoption.
5. That the General Manager be authorised to pursue all necessary negotiations in relation to the proposal put forward to by the Minister for Education and report back to Council where appropriate.
6. That Council officers inform the Wangal Park Implementation Advisory Group of the resolution of Council as soon as practicable.

8.3 Completed Projects Related to this Plan of Management

8.3.1 Lucas Road Cycle Link

Council coordinated a grant submission to pursue the potential for a cycle access and landscape link along Cheltenham Road, across Parramatta Road to open space corridors in Canada Bay to the Parramatta River and Cooks River foreshores.

The grant was later renegotiated by Burwood Council in full consultation with 'Burstbug' Burwood bicycle riders group, and the funding body, to utilise Lucas Road instead of Cheltenham Road to achieve a more favourable design solution and user satisfaction.

Council was successful under this proposal and work for design and implementation of path works for the cycle link, was completed in 2009 still providing a link into Wangal Park via Princes Street.

8.3.2 Monash Reserve Playground

Council installed a climbing net and playground within Monash Reserve, which were completed in 2009 and 2011, respectively. This project was grant funded.

8.3.3 Main entry road

Council installed an access road through Monash Reserve in 2013 to enable construction access into the Wangal Park site and eventually serve as the main entry road into Wangal Park.

8.3.4 Services Design and Installation

In 2013 an agreement between Council and DEC (currently pending) allows Council to install and maintain services through DEC land from Cheltenham Road, for the provision of services to Wangal Park.

8.4 References

AES Environmental Consultancy April 2005, *Flora, Fauna & Tree Assessment: Proposed Regrading & Subdivision of Lots 1 & 2 DP 793505, Cheltenham Park, Croydon*

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Suter & Associates, Leisure & Tourism Planners 2004, *Burwood Council Open Space Assessment*

9.0 APPENDICES

A Wangal Park Masterplan

WANGAL PARK

Croydon NSW

Burwood Council

This Masterplan has been primarily developed by Burwood Council with minor refinements from McGregor Coxall, Equatica and Dragonfly Environmental in collaboration with Council.

Burwood Council
heritage • progress • pride

equatica

MCGREGOR COXALL

DRAGONFLY ENVIRONMENTAL

LANDSCAPE PLAN

REVISION B | 1:500 @ A1

0 5 10 15 20 25 M

01

MCGREGOR COXALL

Project Team
McGregor Coxall
Equatica
Dragonfly Environmental

CROSSED SECTION THROUGH THE WETLANDS

WANGAL PARK

Croydon NSW

Burwood Council

This Masterplan has been primarily developed by Burwood Council with minor refinements from McGregor Coxall, Equatica and Dragonfly Environmental in collaboration with Council.

SECTION AND PLANTING PALETTE

REVISION B | 1:300 @ A1

02

Project Team

B Wangal Park Wetlands Specifications 2013 (pending)

C Wangal Park Tree Survey Plan

LEGEND

Patch of remnant *Themeda australis* to be retained and protected (if possible).

Trees in this area to be retained and protected where possible. Smaller trees were planted on National Tree Day 2009.

Trees in this area are not in the scope of work but should be shown on the Master Plan to be retained and protected.

Trees in this area may have to be removed or relocated for the construction of the path and road works. The trees in this area were planted on National Tree Day 2009.

Possible location for the 3.5m wide main shared path and 2.0m wide secondary pedestrian path. Council's arborist will provide specifications for tree root bridging options.

Trees to be retained and protected.

Trees, in approximate location, to be retained and protected (not shown on the Higgins Survey) for preliminary screening.

Trees to be retained if possible (for preliminary screening).

Trees to be removed.

Trees, in approximate location, to be removed (not shown on Higgins Survey).

General notes

This Tree Survey has been prepared by Burwood Council to provide arboricultural information for the planning, design and construction of Wangal Park. This survey shows trees to be retained and protected and those trees to be removed on the Wangal Park site as at June 2012. The possible locations for the main shared path and secondary pedestrian path are shown avoiding the existing trees in the northwest corner of the site where possible.

Trees to be retained

Some trees indicated to be retained were not drawn on the Higgins Survey. These trees have been shown on this survey in approximate locations only. The table below details only the trees to be retained. Trees numbered 1, 3 and 10 are the most prominent on the site. Tree 1 has been identified by D. Benson as a remnant tree. On completion of the Wangal Park Master Plan Council staff will mark all trees to be retained and protected prior to works commencing on site. All trees to be retained shall be protected in accordance with AS4970.

Trees to be removed

Some trees indicated to be removed were not drawn on the Higgins Survey. These trees have been shown on this survey in approximate locations only. Any self sown trees within the capping and land fill zone, not shown on this tree survey, may be removed for the construction of the park. The final Master Plan design of the pathways in the north west corner of the site may require some trees to be removed.

ORIGINAL SURVEY BY

Higgins Surveyors
PROPERTY & DEVELOPMENT CONSULTANTS
ABN: 39 003 853 084
LEVEL 1, SUITE 1.02
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PO BOX 1389
QVB SYDNEY 1230
PH: +61 2 9298 8844
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Project: **Wangal Park Wetland Design and Master Plan**

Scale: 1:400@AO

TRIM Container: F11/1051

Date: 22.06.2012

Drawn: JS

Checked: J.L.

Drawing: Wangal Park Tree Survey

Drawing no.: LA 107

Issue: A

Sheet: 01

North

D Environmental Advice 2005

ecological AUSTRALIA

ASSESSMENT | PLANNING | MANAGEMENT

Environmental Advice

Proposed Development of Cheltenham Road Park
(Project No. 70-02)

Report prepared for:
Environmental Partnerships

October 2005

ABN 87 096 512 088 | address Suite 503 3-5 Stapleton Ave Sutherland NSW 2232
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Document Tracking

Item	Detail	Signature
Project Name	Environmental Advice – Proposed Development of Cheltenham Road Park	
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Prepared by	Sam Luccitti	
Prepared by	Alex Debono	
Approved by	Bruce Mullins	
Status	Final	
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Last saved on	11 October 2005	

Acknowledgements
This document has been prepared by Eco Logical Australia Pty Ltd with support from Environmental Partnership NSW Pty Ltd.

The study team would like to thank Adam Hunter for his assistance with the project, and staff from the former Cheltenham Rd Landfill site.

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Contents

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1. Introduction

A plan of management is to be prepared for a proposed park on Cheltenham Rd, Croydon. Until recently, the proposal site was used as a landfill. However, upon closure of the landfill, the development of a park and sporting facility has been proposed for the site. A management plan for the proposal is required so that environmental values of the former landfill can be restored and enhanced following completion of the Cheltenham Rd Landfill Closure Plan (Hopman Consulting Services, 2004).

A draft layout of the proposal has been prepared (Figure 1). The proposal includes the establishment of five categories of land use:

- Full strata vegetation around the western end of the water body.
- Riparian edge planting around the water body.
- A tree canopy with native ground cover along the northern and eastern boundary.
- A tree canopy with a mown ground cover.
- Sports fields and parking in the south western corner of the park.

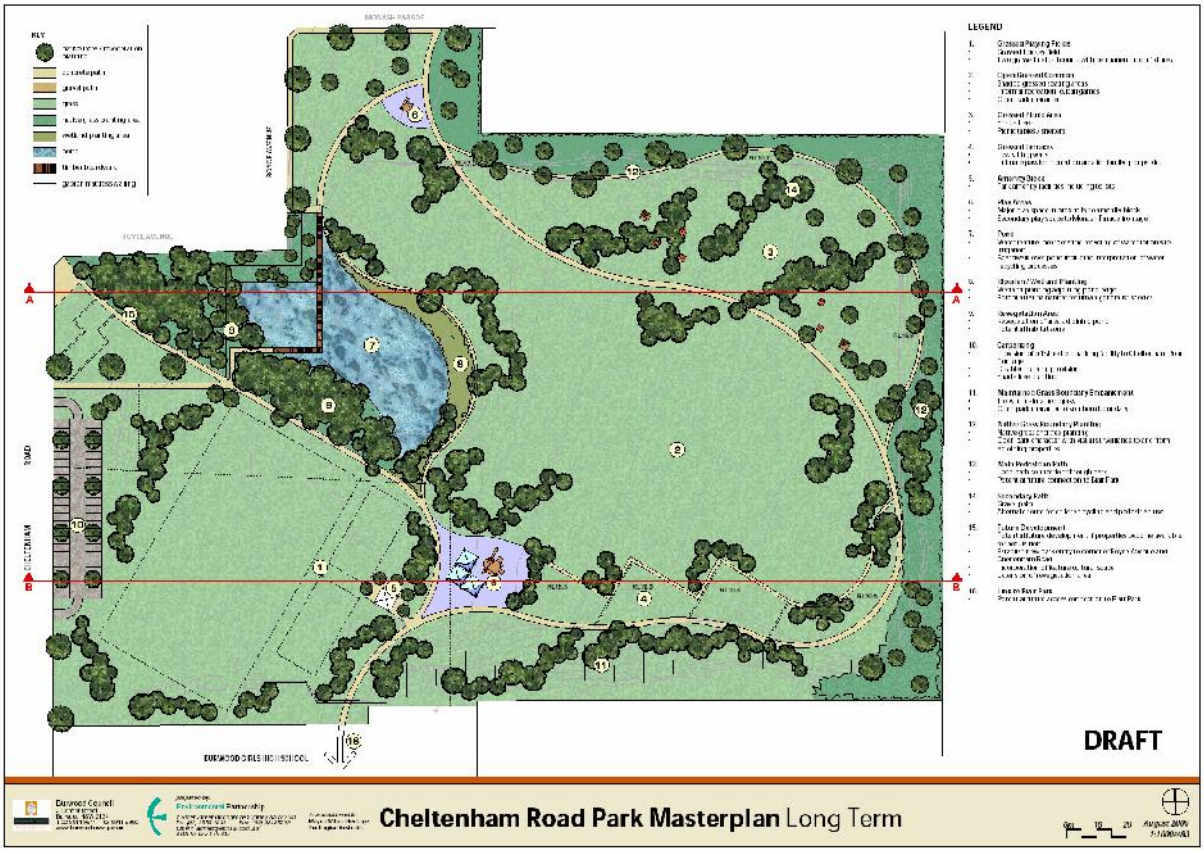

Figure 1: Draft long term Masterplan of Cheltenham Road Park.

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1.1 Description of Project

The project examines the current ecological values of the former Cheltenham Rd landfill site and opportunities for adding environmental value to the site following completion of the Cheltenham Rd Landfill Closure Plan (Hopman Consulting Services, 2004). The report contains a discussion of the ecological values of the proposal and objectives to maximise the ecological potential and focuses on the following:

- Habitat context of the site;
- Habitat values of the land use categories defined above, excepting the sports fields and parking areas, and;
- Implementation and management objectives / targets of each category.

1.2 Study Area

The Cheltenham Rd landfill site is located in the suburb of Croydon in the Burwood Local Government Area (LGA), Sydney, NSW (33º 52' 28.4''S, 151º 07' 2.4''E). The site is situated on a former brick pit and covers an area of approximately 4 hectares. The site is bounded by Cheltenham Rd to the east, Royce Ave and Monash Pde to the north, Action St to the east and Blair Ave to the south. Residential housing surrounds the site on all sides except to the southwest corner where Burwood Girls High School abuts the site boundary (Figure 1).

Figure 2: Location of the proposal site in Croydon, Sydney.

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Soils on site are highly disturbed, and at the completion of the Cheltenham Rd Landfill Closure Plan, the majority of the sites soil will consist of imported material. Some original soil may persist around the boundary of the proposal site.

As part of the Cheltenham Rd Landfill Closure Plan, a 1.5m capping layer will cover the proposal site. The capping layer will be comprised of a support layer of clean hard material overlayed by a seal layer of clay rich, low dispersive material. A third layer, the revegetation layer, will consist of a clean material top soil or similar, overlaying the support and seal layers at a thickness of approximately 500 mm.

The general topography of the site is likely to change somewhat upon completion of the landfill capping layer. The revegetation layer has not been deposited at the time of survey. The site currently slopes gently inward on all sides toward the sediment detention basin. The south east corner of the site slopes to the north to form a small drainage channel that flows to the sediment detention basin. An embankment extends along the northern, eastern and southern boundaries of the site.

Due to extensive past clearing, vegetation is mostly confined to the edges of the site. Several remnant tree and groundcover species of Turpentine Ironbark Forest, a few planted eucalypts and weed species account for the majority of vegetation on the site. There is no connection from vegetation on the site to other patches of remnant vegetation. The nearest remnant vegetation is approximately 4 km west of the site. Newington Nature Reserve is located approximately 6km north west of the proposal site.

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2. Methods

2.1 Data Audit

A review of information pertaining to the proposal site was carried out using previous reports on the Cheltenham Rd landfill site. A search of the NPWS Atlas of NSW Wildlife database was undertaken using a 10 km search radius.

2.2 Aerial Photo Interpretation

Aerial photographs of the site and surrounding area were used to investigate the extent of vegetation cover at the site and to generate a map of environmental opportunities (Figure 1). NPWS pre-1750 vegetation maps (NPWS 2002) of the area were used to identify the original vegetation community on the site.

2.3 Field Survey

A site inspection was undertaken on 15 July 2005 over a two hour period by Bruce Mullins and Alex Debono. The purpose of the site inspection was to record resident flora and fauna species observed, identify the presence of vegetation communities on site and their condition, identify remnant trees in the area surrounding the proposal site that may indicate former vegetation communities and identify any fauna habitat.

Plant species present on the site were identified and recorded. The habitat significance of the sediment detention basin and existing vegetation were also assessed.

No specific fauna survey was undertaken, however, fauna encountered during the site inspection were recorded.

The survey also intended to identify areas for enhancement or improvement in the development of the park. Potential links to vegetation off site were investigated through the use of aerial photography and survey of the surrounding area.

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3. Results

3.1 Vegetation Communities

Pre-1750 vegetation mapping of the area by NPWS shows Turpentine Ironbark Forest (TIF) as the original vegetation community on the site. NPWS (2000) described the structure of this community type as open forest dominated by turpentine (*Syncarpia glomulifera*), with grey ironbark (*Eucalyptus paniculata*), *E. eugenioides* and rough-barked apple (*Angophora floribunda*) common tree species. A sub canopy of turpentine, sweet pittosporum (*Pittosporum undulatum*) and *Acacia parramattensis* subsp. *parramattensis* can occur, and the shrub layer is typically sparse. The ground layer is usually dense with grasses and herbs. The Appendix provides a list of species associated with this community according to NPWS (2000 and 2004).

The site has been cleared of almost all native vegetation and does not contain any described vegetation community, or resemble the community mapped as occurring prior to clearing. The site has only a few remnant trees and groundcover species consistent with the TIF community. TIF is part of Sydney Turpentine-Ironbark Forest, which is listed as an Endangered Ecological Community by the NSW *Threatened Species Conservation Act 1995*.

3.2 Fauna

No formal fauna survey was undertaken, however, native and introduced bird species were recorded during the site inspection (Table 1).

Table 1: Fauna species observed at the Cheltenham Rd landfill site.

Scientific Name	Common name
Acridotheres tristis	Indian Mynah
Anthochaera carunculata	Red Wattlebird
Chenonetta jubata	Australian Wood Duck
Manorina melanocephala	Noisy Miner
Sphecotheres viridis	Fig Bird
Streptopelia chinensis	Spotted Turtle Dove
Sturnus vulgaris	Starling
Trichoglossus haematodus	Rainbow Lorikeet
Vanellus miles	Masked Lapwing

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3.2.1 Fauna Habitat

A total of four fauna habitat types occur at the Cheltenham Rd site:

- Remnant scattered trees;
- Shrubby thickets (weeds);
- Grassland, and;
- Aquatic refuge.

Generally, the habitat available is poor and limited, however, would be suitable for small reptiles, birds and bats. Some arboreal mammals may occur, but this is thought to be unlikely. The lack of vegetation on site during the survey suggests that the site would not support much faunal diversity and a low abundance of native species.

Remnant trees occur on the perimeter of the site. Many of the trees are large and may possess small hollows suitable for bats, arboreal mammals and hollow dependant birds. These trees also provide limited food resources and refuge.

Shrubby weeds on site provide dense refugia and a food resource for some fauna species, but similar resources are widely available in a suburban environment. Similarly grassland, although containing some native grasses and herbs, consists of only a small area and provides limited food resources for fauna. Regular mowing of the grassland area reduces its value for fauna and may inhibit the recruitment of some flora species.

3.3 Flora

A total of 25 plant species were recorded at the site. Plant species included remnant trees and groundcover species consistent with the TIF community. Several Sydney blue gums were present on the western boundary and a further two individuals occurred on the southern boundary. A rough-barked apple and sweet pittosporum (*Pittosporum undulatum)*, consistent with the TIF community, were present on the southern boundary of the site as well as an unidentified eucalypt.

Remnant groundcover species of TIF as well as other native groundcover species were identified in the north east corner of the site. A number of weed species and planted tree species were also present (Table 2).

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Table 2: Flora species observed at the Cheltenham Rd landfill site.

Scientific Name	**Common Name**
Trees	
Acacia decurrens	Green Wattle
Angophora floribunda	Rough-barked Apple
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus sp.	
Ficus sp.	
Pittosporum undulatum	Sweet Pittosporum
Weeds	
Araujia sericiflora	Moth Vine
Cestrum parqui	Green Cestrum
Cinnamomum camphora	Camphor Laurel
Foeniculum vulgare	Fennel
Ipomoea sp.	Morning Glory
Lantana camara	Lantana
Ligustrum lucidum	Large-leaf Privet
Lonicera japonica	Japanese Honeysuckle
Olea europaea	African Olive
Ricinus communis	Castor oil
Groundcover	
Austrodanthonia sp.	
Axonopus fissifolius	
Centella asiatica	
Cyperus gracilis	
Dichelachne sp.	
Glycine sp.	
Microlaena stipoides	
Themeda australis	Kangaroo grass

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4. Discussion

As outlined in Section 1, the proposal for the establishment of Cheltenham Road Park includes the development of:

- Full strata vegetation around the western end of the water body.
- Riparian edge planting around the water body.
- A tree canopy with native ground cover along the northern and eastern boundary.
- A tree canopy with a mown ground cover.
- Sports fields and parking in the south western corner of the park.

The ecological value of revegetation and habitat creation on the Cheltenham Rd landfill site are limited. It will not be possible to reinstate a functioning ecosystem consistent with the original TIF vegetation community due to the considerable disturbance on site, its regional context, small size and surrounding residential use.

The proposal, while providing areas of full strata vegetation to open woodland with a maintained grassy understorey, is unlikely to attract a large suite of native fauna to the site, due to its small size and lack of high quality habitat in the vicinity. However, the proposal will improve the current state of the site for the regions fauna, and provide alternative habitat for fauna typically associated with urban environments.

Each of the identified areas will provide a different suite of values for flora and fauna, with the sports field the most limited (foraging value).

Full strata vegetation
The area returned to full strata TIF will provide habitat complexity, with ground, mid and upper storey vegetation. This should provide suitable habitat for small reptiles, birds and small mammals in the form of refuge, foraging and breeding habitat. The size of the area will limit the diversity of fauna occupying the area and the area will not be able to support a complex array of fauna in its own right. Ideally, the vegetation will showcase a reconstructed example of TIF, and contain characteristic flora species of the vegetation community. However, it is likely that the vegetation will require ongoing management to maintain its desired integrity.

Riparian edge planting
The riparian edge planting around the water body will provide refuge, foraging and breeding habitat for some fauna. The inclusion of macrophytic vegetation will further enhance the value of the water body and riparian edge. Habitat for wetland birds, amphibians, reptiles and aquatic fauna could be created in this zone.

Tree canopy zones: native and exotic grassy ground covers
The two tree canopy zones provide similar habitat values to fauna. They are suited to birds of urban environments, offering foraging and refuge habitat. As with other parts of the proposal, these areas are not of sufficient size to provide habitat year round, and therefore, will be a temporary resource. Native ground covers around the northern and eastern perimeter of the site could be encouraged in this zone by adopting a no or reduced mow zone.

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5. Implementation and Management

All remnants of the TIF vegetation community still present on site, including the small area of remnant native groundcover, should be retained while mowing of the areas containing native groundcover should be stopped immediately. Revegetation works should use species consistent with the TIF community (refer to Appendix 2 for a list of species). However, revegetation using tree species is limited to areas with sufficient soil depth for their proper development. The suitability of using trees in these areas and their effect on the underlying capping may require further investigation. In areas where capping depth is deemed too shallow for planting of large canopy trees (1.5m), mid-canopy/understorey trees and shrubs of TIF may be suitable. Sufficient soil depth to plant mid-storey species is likely to be in the vicinity of 5m. Mid-canopy trees of the TIF community include *Allocasuarina torulosa*, *Melaleuca decora* and *Elaeocarpus reticulatus*.

Mid-storey species may be used but there is still potential for their root systems to damage the capping layer. However, installing a lining above the capping layer to prevent root penetration may result in trees being unstable in the long term by restricting proper root system development.

Any revegetation works should be preceded by on site weed control works, particularly of woody weeds on the southern and northern boundaries of the site. It is important to control these weeds to limit their further spread through the park and to other areas. Removal of privet (*Ligustrum* sp.) on the southern boundary will remove a potential food source for the colony of fig birds observed on site; however, it is likely that alternative food sources for the birds will be readily available in the surrounding urban environment or could be planted on site. The site is likely to require ongoing weed management to prevent the degradation of habitat.

5.1 Objectives for the Proposed Vegetation Categories

Full strata revegetation around western end of pond:

- Incorporate a suite of native flora characteristic of the original community.
- Limit public access through the area, but access around the perimeter permissible.
- Incorporate existing Sydney blue gum's into this community.
- Suppress weeds through ongoing management.

Riparian vegetation

- Establish macrophytic vegetation in some areas around water body.
- Establish bank side vegetation typical of TIF or other appropriate local vegetation community.
- Create swales outside of the water body to carry ephemeral flows and provide frog habitat.
- Suppress weeds through ongoing management.

Tree canopy in an open understorey of native grass

- Limit mowing in this zone to encourage the establishment of native ground cover.
- Replant TIF canopy and shrub species in this zone.

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- Suppress weeds through ongoing management.
- No planting in small area of existing native groundcovers in the north east corner of the site

Tree canopy with a mown ground cover.

- Replant TIF canopy and shrub species in this zone.
- Suppress weeds through ongoing management.

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6. Conclusion

The existing ecological values and potential for adding environmental value to the Cheltenham Rd landfill site are limited. Due to the highly disturbed nature of the site there is almost no potential for re-establishing a self-sustaining TIF community on the site, and areas of native vegetation will require ongoing management. Moreover, the regional significance of the site in providing fauna habitat is limited due to the isolation of the site from other patches of remnant vegetation.

Revegetation should focus on consolidating the existing remnant TIF vegetation through planting of species consistent with the TIF community as well as enhancing the habitat values of the existing sediment detention basin. In doing so, the site, in the long term, may provide temporary habitat for small mammals, reptiles, frogs and birds. Ongoing suppression of weeds will be required to maintain flora and fauna values.

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Hopman Consulting Services. March, 2004. Cheltenham Road Landfill Final closure Plan. Prepared for Burwood Council and the Environment Protection Authority.

New South Wales National Parks and Wildlife Service (2000) *Interpretation Guidelines for the Native Vegetation Maps of the Cumberland Plain, Western Sydney*. NSW NPWS, Hurstville.

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Appendix 1 – Description of Turpentine Ironbark Forest

ENDANGERED ECOLOGICAL COMMUNITY INFORMATION

Sydney Turpentine Ironbark Forest

Conservation Status

Sydney Turpentine-Ironbark Forest is listed as an endangered ecological community under the *Threatened Species Conservation Act* 1995.

NPWS/M. Cufer 2001

Description

Sydney Turpentine-Ironbark Forest is an open forest community and the dominant canopy trees are turpentine (*Syncarpia glomulifera*) and grey ironbark (*Eucalyptus paniculata*). Common understorey shrubs include sweet pittosporum (*Pittosporum undulatum*), hop bush (*Dodonaea triquetra*), elderberry panax (*Polyscias sambucifolia*) and sickle wattle (*Acacia falcata*). In open grassy areas, kangaroo grass (*Themeda australis*) and blady grass (*Imperata cylindrica*) are common.

Distribution

Sydney Turpentine-Ironbark Forest is restricted to the inner western suburbs of Sydney on Wianamatta shale. It originally extended over 26,000 hectares west to Guildford, and north of Parramatta River from Ryde to Castle Hill. It also occurs on the shale ridge caps in the Hornsby Plateau. Today, Sydney Turpentine-Ironbark Forest is reduced to 4.5 percent its original extent, surviving as small remnants in the Baulkham Hills, Parramatta and Bankstown areas and it is considered critically endangered (NPWS 2002a, NPWS 2002b). Sydney Turpentine-Ironbark Forest occurs in the Auburn, Bankstown, Baulkham Hills, Concord, Hawkesbury, Hornsby, Kogarah, Parramatta and Ryde local government areas.

Examples to see

Good examples can only be seen in small reserves, such as Wallumatta Nature Reserve and Newington Nature Reserve.

Ecology

Sydney Turpentine-Ironbark Forest occurs on fertile soils in an area of moderate rainfall. It is transitional between Cumberland Plain Woodland in drier areas and Blue Gum High Forest on adjacent higher rainfall ridges. As a transitional community, the species composition varies according to the influence of sandstone and aspect.

Threats

In the early years of European settlement, Sydney Turpentine-

February 04

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Ironbark Forest was heavily cleared for farming and timber, followed by suburban development as Sydney expanded. The biggest threat remains clearing and other threats are damage from recreational activities, rubbish dumping, grazing, mowing and weeds. The remnants are highly susceptible to weeds, such as privet (*Ligustrum spp*).

Recovery and management

The recovery of this ecological community is being addressed as part of the Cumberland Plain Endangered Ecological Communities Recovery Plan, which is currently being drafted.

High conservation value remnants of Sydney Turpentine-Ironbark Forest will be identified in the recovery plan and recommended for protection through a range of mechanisms including reservation, environmental protection zoning and development control processes. Other protection measures can be through plans of management and voluntary conservation agreements. These measures will enable the remnants to be better managed for conservation and vegetation corridors to be formed. Because of the small size of the remnants, weeds and the nutrient-rich runoff from adjacent urban areas should be controlled, especially on the edges.

Absence of fire has resulted in the dominance of *Pittosporum undulatum* in the understorey and the long-term loss of other species. Where natural bushfire cycles cannot be reinstated, *Pittosporum* may be controlled to maintain species diversity.

For further information contact

Central Threatened Species Unit, NSW Department of Environment and Conservation, PO Box 1967, Hurstville NSW 2220 Phone 02 9585 6678. www.nationalparks.nsw.gov.au

References

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February 04

Appendix 2 – List of Flora Species suitable for Revegetation Works

Adapted from NSW NPWS website.
Note: species listed are in likely decreasing order of availability.

Species list for Turpentine Ironbark Forest

The tree canopy zones on the grade to bank and non-capped area, can be planted with most species listed below. Species in the list –shrubs which prefer sheltered position' should not be used. Additional thought should be given to the likely dryness of the grade. Drip irrigation and thick mulch will help with plant establishment in this area, however, thick mulch will make it difficult to plant groundcovers. Also large logs placed (randomly) across the slope is likely to help stop movement of the mulch downslope, provide protected niches for planting and also provide potential habitat for small reptiles and other species.

Trees

Syncarpia glomulifera
Eucalyptus saligna
Eucalyptus paniculata
Eucalyptus globoidea

Midstorey species

Acacia decurrens
Allocasuarina torulosa
Melaleuca decora
Elaeocarpus reticulatus
Acacia parramattensis
Acacia implexa

Shrubs

Bursaria spinosa
Dodonaea triquetra
Indigofera australis
Ozothamnus diosmifolius
Acacia falcata
Acacia longifolia
Daviesia ulicifolia
Kunzea ambigua
Leucopogon juniperinus
Acacia myrtifolia
Zieria smithii

Shrubs which prefer sheltered position

Breynia oblongifolia
Clerodendrum tomentosum
Pittosporum revolutum
Polyscias sambucifolia
Rapanea variabilis
Notelaea longifolia

Grasses

Themeda australis
Microlaena stipoides
Oplismenus aemulus
Imperata cylindrica
Echinopogon caespitosus
Entolasia marginata
Entolasia stricta
Stipa pubescens
Dichelachne rara
Panicum simile
Poa affinis

Groundcovers and herbs

Commelina cyanea
Dianella caerulea
Dichondra repens
Lomandra longifolia
Pratia purpurascens
Centella asiatica
Lepidosperma laterale
Smilax glyciphylla
Veronica plebeia
Rubus parvifolius
Billardiera scandens
Pseuderanthemum variabile
Cheilanthes sieberi
Pomax umbellata
Poranthera microphylla

Climbers and scramblers

Clematis aristata
Clematis glycinoides
Hardenbergia violacea
Pandorea pandorana
Kennedia rubicunda
Tylophora barbata

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Ecological Assessment, GIS, Environmental Management and Planning
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Fax - (02) 9542 5622

Wetland Species

For riparian edge planting a wetland species list is provided below. The submerged species would be planted in areas that would be permanently wet, the edge species in areas with shallow water that for a period of the year is likely to be dry (note, Phragmites is a more aggressive species that is likely to spread rapidly) and the ephemeral species in areas that are still moist but are only likely to get inundated during storm events.

Submerged species

Eleocharis sphacelata
Baumea articulata

Edge species

Schoenoplectus validus
Bolboschoenus caldwellii
Phragmites australis

Ephemeral species

Juncus usitatus
Carex appressa
Isolepis nodosa

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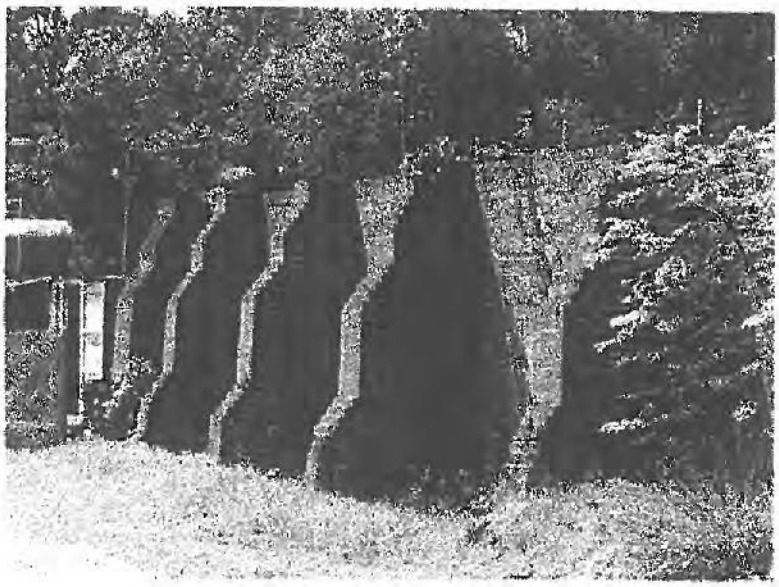

CHELTENHAM PARK

Former Burwood Brickworks

HERITAGE IMPACT ASSESSMENT

for

Section 140 Excavation Permit Application

Prepared on behalf of
Burwood Council

In association with
Environmental Planning Pty Ltd

June 2006

D P C

CONTENTS

1.0 INTRODUCTION

1.01 Background

This report comprises a heritage impact assessment of proposed works on the subject site. This assessment has been undertaken to support an application to the NSW Heritage Council for an Excavation Permit. The site is not listed as a heritage item but is subject to the "relics" provisions of the NSW Heritage Act 1977 (the Act), which requires an application to the Heritage Council under Section 140 of the Act for consent to undertake works.

The subject site, currently known as Cheltenham Park, was the site of the former Burwood Brickworks and was purchased by Burwood Council in 1987 for use as open space. Since closure of the brickworks in 1978 most of the structures on the site have been demolished, the plant removed and the brick pit used for landfill. The site was acquired by the State Government in 1978 following a number of unsuccessful proposals for housing development.

A structural report was undertaken on behalf of the Department of Planning and Environment in 1982 following which the kilns, square chimney and buildings were demolished. The sub-surface flues and a brick buttressed retaining wall believed to be former coal bunkers were retained. A portion of the original site facing Cheltenham Road, comprising the c.1956 former head office of Brickworks Ltd and a circular brick chimney, was subdivided from the main holding and is now used by the State Emergency Services. A portion of that allotment has been rehabilitated as open space and includes remnant flues that have been covered and capped.

The remnant 5.5 ha of the site, owned by Burwood Council, has undergone remediation including landfill of the former clay pit and it is intended to provide part of the site as playing fields for the adjoining school. It has become evident that the system of flues extends under this area and to ensure the future safety of the site it is necessary to partially collapse and fill in the former

sub-surface flues. These have recently been mapped following a ground penetrating radar investigation.

This report was prepared by Kim Ketelbey of DPC Heritage in June 2006 on behalf of Burwood Council. All photographs in the report were taken by Kim Ketelbey in December 2005 unless noted otherwise.

1.02 Identification of Place

The site is an irregular shaped allotment with a frontage to Cheltenham Road. The site is identified in Real Property as Lot 1 DP 793505, Parish of Croydon, Municipality of Burwood. [Refer Figure 1 & 2].

1.03 Methodology

An assessment of the former brickworks site has been undertaken in this report to establish its cultural significance and allow an understanding of the likely impacts that may arise as a result of the proposed works. The assessment has been undertaken in accordance with the methodology of the NSW Heritage Office and Department of Urban Affairs and Planning (now the Department of Planning) document the *NSW Heritage Manual*, in particular *Assessing Heritage Significance*, and the Heritage Office guiding document *Statements of Heritage Impact*. The report complies with the terminology of The Australia ICOMOS Charter for Places of Cultural Significance *The Burra Charter*.

1.04 Acknowledgements

The author acknowledges the assistance of Robert Teo, Burwood Council and Local Studies Librarian, Burwood Library.

1.05 Limitations

This report is not a structural report and is limited to the heritage aspects of the site. Investigation of the site was limited by on-going works and was restricted to visible and accessible above surface remnant fabric. The heritage assessment is limited by the lack of both documentary and physical evidence of the site.

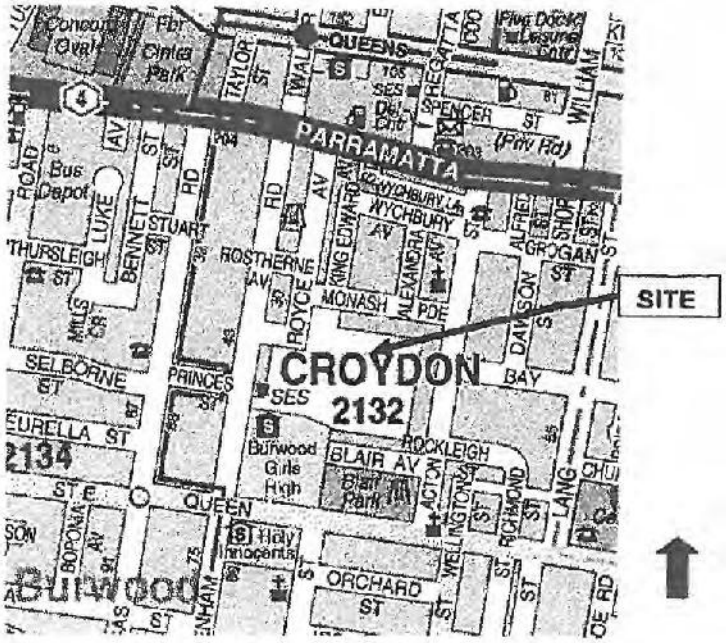

Figure 1: Location Map
UBD Sydney

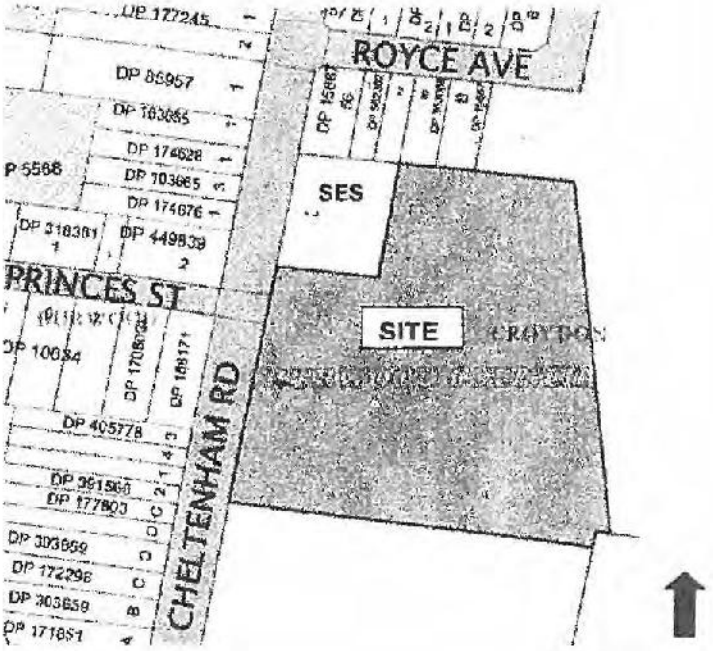

Figure 2: Site Identification
Courtesy of the Department of Lands

2.0 DOCUMENTARY EVIDENCE

2.01 Historical Context

The inland areas around Sydney were the lands of the *Dharug* tribe. The area currently known as Burwood Municipality was inhabited by the *Wangal* clan whose territory was on the south side of Parramatta River extending to the Georges River and west of Iron cove to Homebush Bay.[1] European occupation of the land and introduced disease impacted on the indigenous population and today none of the *Wangal* clan survive.

The European settlement at Sydney Cove was connected to the small farming community at Parramatta by a bush track, which by 1791, roughly followed the line of current day Parramatta Road. Around this time a track, to the east of Cheltenham Road, connected the Sydney-Parramatta Road, providing the only access to and from the Burwood area. Three land holdings fronted Parramatta Road including Rowley's Farm and that of convict Dennis Connor. [refer Figure 3]. The eastern boundary of Connor's land, granted to him in 1796, corresponded approximately with Acton Street and the southern boundary with Queen Street with King Edward Road to the west.[2] The subject site comprises part of Dennis Connor's original 30 acres (Portion 249 of the Parish Map) and part of Rowley's 750 acre grant (Portion 246).

From about 1833 a number of grants were subdivided and in 1855 the Sydney to Parramatta railway was opened. Although not initially intended for passengers, the railway opened the way for development and in 1874 the Municipality of Burwood was incorporated. Burwood was described at the time as a quiet village with around 1200 people but by 1900 this number had risen to 7,400. As the area developed large brick pits opened; Croydon Steam Brick Co (1878-1930) in Webb Street, Excelsior Brickworks (1889-1918) in Church Street followed by Burwood Brickworks in Cheltenham Road which opened in 1912. [refer Figure 4]

[1] www.burwood.nsw.gov.au; local history
[2] Op cid

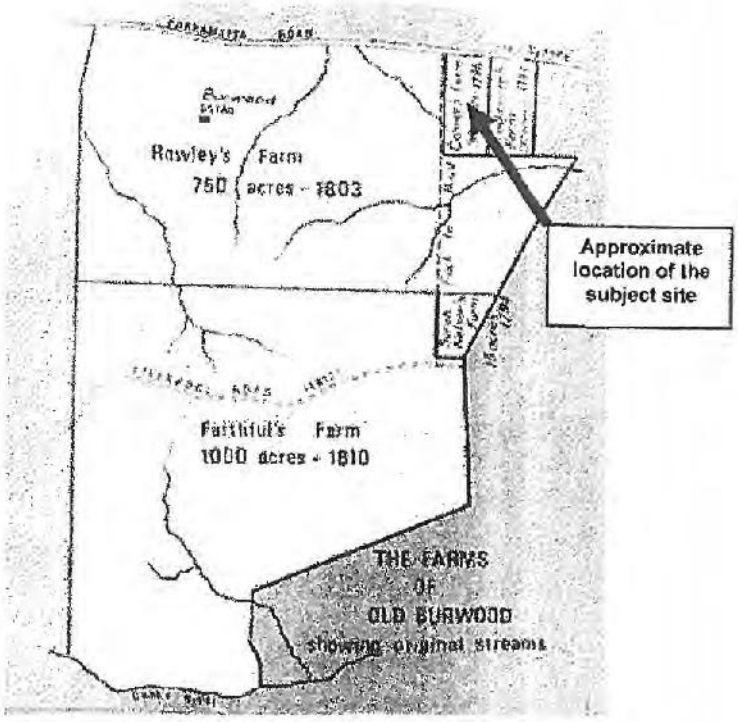

Figure 3: Burwood Farm Subdivision c.1833
Source: Burwood Council website, Local History

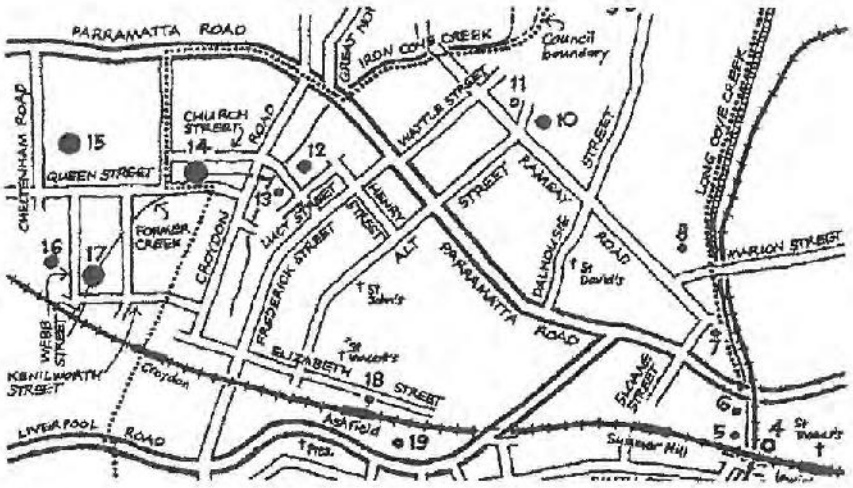

Figure 4: Brickworks in the vicinity; Excelsior (No.14), Burwood Brickworks (No.15) & Croydon Steam Brick Co. (No.17)
Source: Ashfield and District Brickworks. Peek & Pratten (1996, p3)

2.02 Brick-making in Sydney

Bricks were essential in the new Colony where building timber was scarce. Brick making yards were initially set up in areas close to good clay and timber for firing. By 1839 there were twenty-six brick-makers in Sydney but, as throughout the history of brick making, the industry was subject to fluctuations in the building industry and this number soon fell with the first economic depression of the 1840s. The suburbanisation of Sydney during the 1870s and the expansion of the railway resulted in a recovery for brick-makers who were now embracing steam power, primarily steam driven moulding machines. The first fully steam-equipped works were established in Newtown in 1870.

By 1877 there were fifty six brick-makers in Sydney and this increased to one hundred and thirteen at the height of the 1880s boom, a period of rapid suburbanization and construction of large load-bearing brick commercial buildings.[3] The economic depression in the early 1890s resulted in the numbers of brick-makers being reduced by more than half. Architects looked to imported products due to the poor quality of bricks being produced locally and this put pressure on the domestic brick-makers to improve the quality of their product and embrace new technology.[4]

The high cost of bricks and poor service provided by brick-makers instigated the State government to establish a State Brickworks in 1912. Despite protests from the industry there were still sixty five non-government brickworks in the Sydney region by 1914, several of them newly opened works such as Austral Brickworks (1910) and Burwood Brickworks (1913). Many of the larger yards now used dry-press machines and downdraught kilns.[5] Downdraught kilns, which deflected gases down through the kiln and underground to a chimney via flues, were intermittent kilns, which required re-firing. Continuous kilns, first introduced by J H Goodlett at Granville in the

[3] Gemmel 1986 pp6-7
[4] Gemmel 1986 p13
[5] Gemmel 1986 p19

1860s, provided greater fuel efficiency. There were two main types of continuous kilns; Hoffman kilns and Tunnel kilns. Tunnel kilns were first used at P Hayes brickyard at Neutral Bay in 1880.[6]

Burwood Brickworks used a downdraft continuous kiln, which was a rectangular version of the circular Hoffmann Kiln known as a Patent kiln. The downdraught kiln had a permanent arched brick roof and the fire circulated downwards through the stacked bricks and dissipated via underground flues to a chimney. In 1900 James Nangle described in Australian Building Practice, the "patent" kiln which was used at many of the Ashfield and district brickyards including Burwood: 'with rounded ends, and the continuous chamber consists of two straight tunnels built side by side with the flue leading to the smoke stake between them".[7] Peek and Pratten state (1996, p7) that the continuous chamber was divided by temporary partitions, usually of brick, and each connected to the outside by an arched opening in the side of the kiln. Above the kiln was a corrugated iron structure which protected the kiln and within which the workers were able to move about during the firing process.

2.03 Brickworks in Burwood

The earliest known brick-making in the district occurred around 1855 and marked the beginning of an important industrial phase of Burwood's development. There were approximately 23 known brick-making operations from that time through to the closure of the last, Burwood Brickworks, in 1978. Of those only five operated during the Twentieth Century of which three were not commissioned until that time. They were Excelsior Brickworks (1889-1918), Croydon Steam Brick Company (1878-1930), Ashfield Brick Company (c1913-1950), South Ashfield Brick Company (1911-1951) and Burwood Brickworks (1912-1975).[8] Most of these arose as a response to the building

[6] Shying 1977,npn
[7] Cited in Peek and Pratten 1996, p7
[8] Peek & Pratten 1996 p3

booms of the late Nineteenth Century and early Twentieth Century and subsequent development of the surrounding suburbs.

2.04 Burwood Brickworks 1912-1978

In 1912, after considerable objection from local residents, the Suburban Land and Investment company opened the Burwood Brickworks in Cheltenham Road. The opening of the brickworks on Dawson's Paddock (the Dawson Estate) was reported by the SMH and the Austin Courier.[9] Burwood Brickworks was a modern steam driven works with a downdraft "patent" kiln.

The property was an irregular shaped holding of 37 acres 3 roods 27¼ perches (approximately 17.25 ha), extending from Parramatta Road to Queen Street in the south and was bounded by Cheltenham Road on the west and Acton Street on the east. The company initially leased some of the land and over the following five years sold various portions. The northern end of the property fronting Parramatta Road was sold in 1923 followed by a further sale to the Crown (creating the school) in 1924 and 1925.[10] In the late 1920s the company subdivided a further portion around the north, east and south perimeters of the brickpit, selling sixty-one housing allotments as the Blair Park Subdivision. The residue comprised 21 ac 1 r 28¾p (approximately 8.67 ha). In view of the on-going complaints about the brickworks, the new titles carried a grant of easement allowing the company to continue to manufacture bricks and other clay products.[11]

As with nearly all the brickyards in Sydney during the early 1930s Burwood Brickworks experienced hardship as a result of the Depression and its staff numbers dropped to four. By 1937 the property had been reduced to just over 14 acres (5.67 ha).[12]

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[9] Burwood Local History file, Scrapbook: Brickworks & Brickpits. SMH 14/2/1912, Austin Courier 10/2/12
[10] CT Vol 3445 Fo 167
[11] Peek & Pratten (1996), p74
[12] CT Vol 4830 Fo 239

In the mid 1930s the company Brickworks Pty Ltd was formed as a means of stabilizing trade, primarily through price fixing and included the purchase of the State Brickworks. Peek and Pratten (1996, p75) state that twenty six companies took up shares in Brickworks Ltd, one of which was the Suburban Land and Investment Company which was later to own and operated not only Burwood Brickworks but also South Ashfield, Great Northern and the National brickyards. Brickworks Ltd took over the assets of the Suburban Land and Investment Company in 1937, bringing under its control eleven brickyards in total.

Although many brickyards closed as a result of World War II government restrictions, coal and man-power shortages, Burwood Brickworks remained in operation and was one of only six out of thirty seven still operating in 1942.[13] As with all brickyards, working the pit was heavily reliant on man-power and this forced the majority of the industry to become more mechanized. Traditionally movable truck lines radiated out to the points of fall of the material required and when loaded were pushed to the "chinaman" or loading platform where it was transferred and power-hauled to the loft and bins. In 1946 a demonstration was held at Burwood Brickworks to demonstrate the advantage of using tractors fitted with a dozer blade.[14] It was estimated at the time that the rate of loading and transportation of brick material was four times faster than by obtained by hand labour. Another change due to mechanisation was the transportation of materials between the various brickyards allowing variation in the product.

Despite the implementation of labour saving practices Burwood Brickworks shut down temporarily in 1952 due to the post-war building recession. The following year the demand for both common and face bricks again exceeded supply and Burwood Brickworks re-opened. According to the company's 1954 Annual Report (cited in Peek and Pratten 1996 p79) two new kilns for burning

[13] P & P p77
[14] Peek & Pratten 1996 p78

face bricks were being readied for operation. Ray Dawes, a worker at the Burwood yard during the 1950s who was later become the Manager, recalled enclosing two kilns in sheds and converting all the downdraft kilns to a central flue type with a connection to the main stack. "A large fan was installed in the stack to assist the firing of the newly connected downdraught kilns as well as the patent kiln which had always been connected to it." [15]

In 1956 the new head office building of Brickworks Ltd was erected on the site fronting Cheltenham Road (the current SES site). Two years later four new downdraught kilns were erected to burn face bricks. During the 1960s and 1970s brickyards generally were again suffering labour shortages particularly in the dry-press yards resulting in several yards ceasing production. At this time the site was marked for parkland by Burwood Council in its Draft Local Planning Scheme but Brickworks Ltd refused to sell the site.[16] In 1974 a proposal was put forward for a housing scheme comprising nearly 600 home units on the site. Although Burwood Brickworks continued to make commons, within two years the yard had ceased production and the land was put up for sale along with the South Ashfield yard. Brickworks Ltd 1978 Annual Report stated that the plant and method of operation had become obsolete.[17]

The land at Burwood was acquired by the NSW Department of Environment and Planning for use as open space in 1978. In 1982 it was reported by engineers Hughes Truman and Ludlow (cited in Peek and Pratten 1996 p80) that "a square-sided stack, a square-ended Hoffman kiln, four downdraft kilns (two free-standing and two enclosed in a steel-framed building), a timber framed brick making factory and brick retaining walls, were still standing on the site." The cost of repairing and maintaining the remnant brickworks was considered. Although they are now demolished, the kilns and plant remained until at least 1982.[18] A portion of the land comprising the Brickworks Ltd head

[15] Peek & Pratten 1996 p79
[16] Vertical File: LH B711.58 BRI
[17] Peek and Pratten 1996 p80
[18] Stuart (2002, p3)

office building was segregated from the main site and the building is now occupied by the State Emergency Service. Burwood Council purchased the 5.5 ha site and the quarry was used as a landfill tip.

Figure 5: Burwood Brickworks c.1923 showing the square brick chimney on the left, the brick press building in the centre and the kiln on the right
Source: Burwood Council Jubilee Official Souvenir 1923.

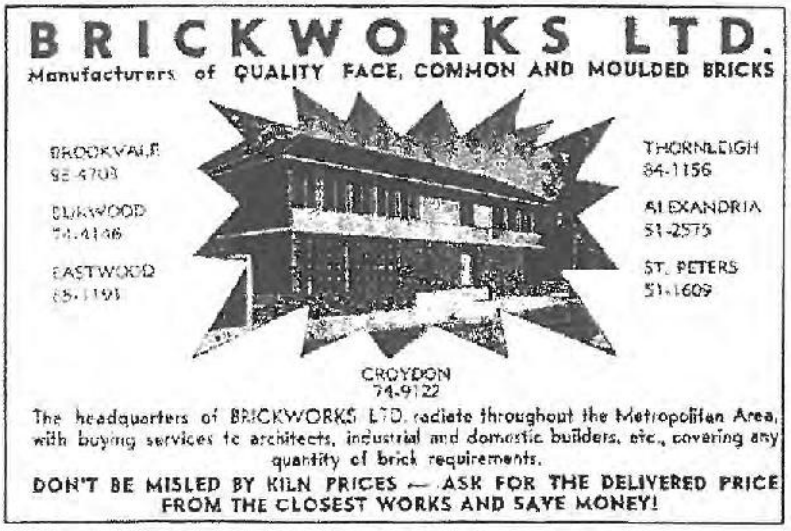


Figure 6: The c.1956 head office of Brickworks Ltd shown in an advertisement c.1956
Source: Australian National Clay reproduced in Peek & Pratten (1996, p79)

2.05 The Former Burwood Brickworks Site 1978-2006

Little remains of the original brickworks and there is minimal documentary evidence. Apart from a c.1923 photograph of the brick works (Figure 5) and a c.1940s aerial photograph, there are photographs of the pit and pump house taken in 1975 (at the time of the proposed purchased by Burwood Council) and photographs of the chimney, kiln and brick retaining walls taken by Hughes Truman Ludlow as part of their report on the site in 1982 (Figures 8 & 9).

The Hughes Truman Report (1982) provided a description of some elements of the site but does not include a site plan. The elements on the site were as follows;

- A brick chimney, described as being square in plan and photographs show detail of the brickwork.
- A square ended Hoffman Kiln under a steel framed roof.
- Four downdraught kilns, two inside a steel framed building and two free standing.
- A brick retaining wall along the southern side near the school with *counterfort* buttresses
- A timber framed building
- Brick paving

In 2002 Planning NSW engaged HLA-Envirosciences Pty Limited to undertake a *Detailed Site Investigation* (a DSI) of the site in respect of the proposed use of the site for recreational open space and playing fields for the adjacent secondary school. By this time most of the above surface infrastructure had been demolished. A system of flues below ground, which were constructed to link the Patent Kiln with the Chimney, remained in situ.[19]

Stuart (2002, p2) reports that there were three kilns on the site when inspected in 2002, the largest being a patent kiln. "There also seems to be

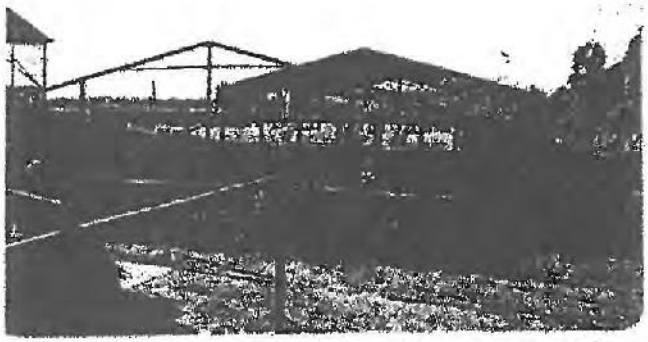
[19] HLA-Environsciences Pty Ltd. 1982

two small downdraft kilns in some form of building.....Flues from the kilns would have run to the large square chimney."[20] At time of inspection Stuart states that there were remains of the bases of the kilns, brick press building floor, chimney foundations and underground flues leading to the chimney. Brick retaining walls on the southern part of the site are remnants of the coal bunkers.

Figure 7: Aerial photograph of the site taken before some of the remaining structures were removed.
Reproduced courtesy of Burwood Council

[20] Stuart I. (2002) *A Heritage Assessment of the former Burwood Brickworks, Cheltenham Road, Burwood.*

PHOTOGRAPH 15



PHOTOGRAPH 16

PHOTOGRAPH 17

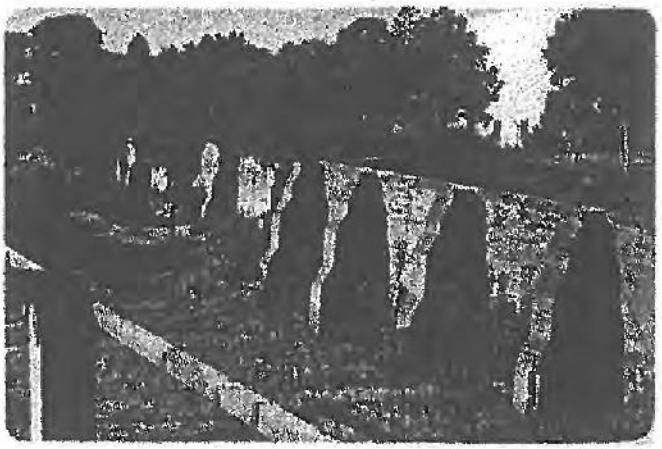


Figure 9: A series of photographs from the Hughes Truman & Ludlow (19820 report showing the Hoffman kiln (15), the two free standing kilns with steel building behind (16) & the retaining walls of the coal bunker (17)

This assessment is based on a limited visual inspection of the site. Access to most of the site east of the driveway was restricted due to the land remediation works being undertaken at the time. A number of reports have been prepared regarding the site and these contain site sketches which provide some understanding of the site and location of former structures.

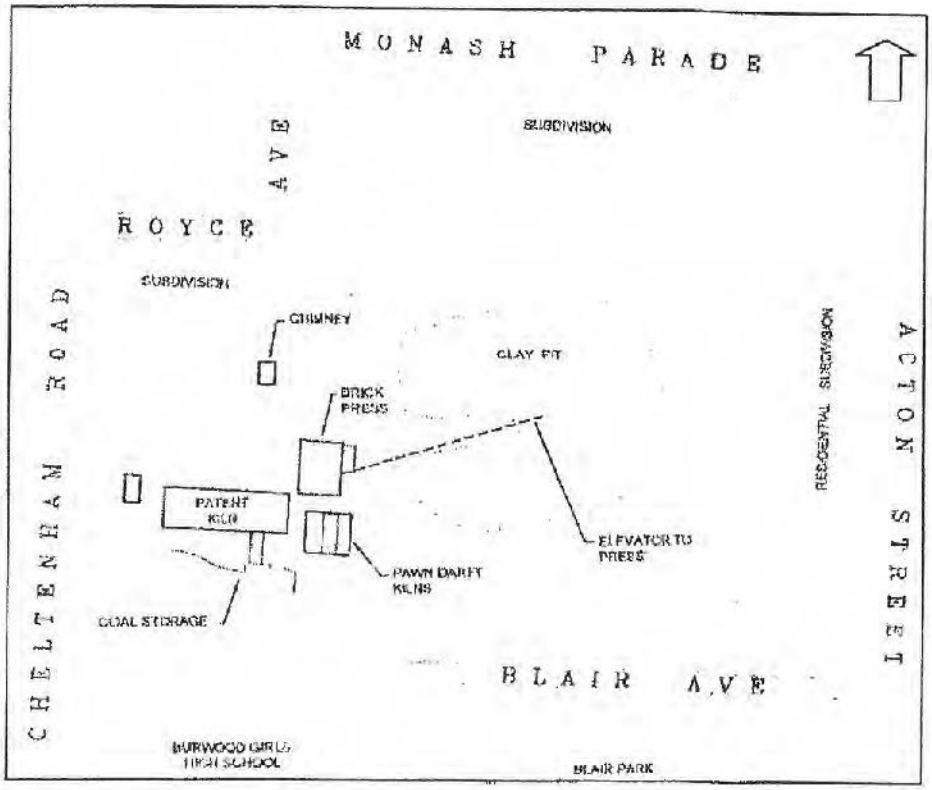


Figure 10: Sketch Plan of site based on a c.1930s aerial photograph
Source: HLA Enviros ciences Pty Limited (Figure 4, 2002)

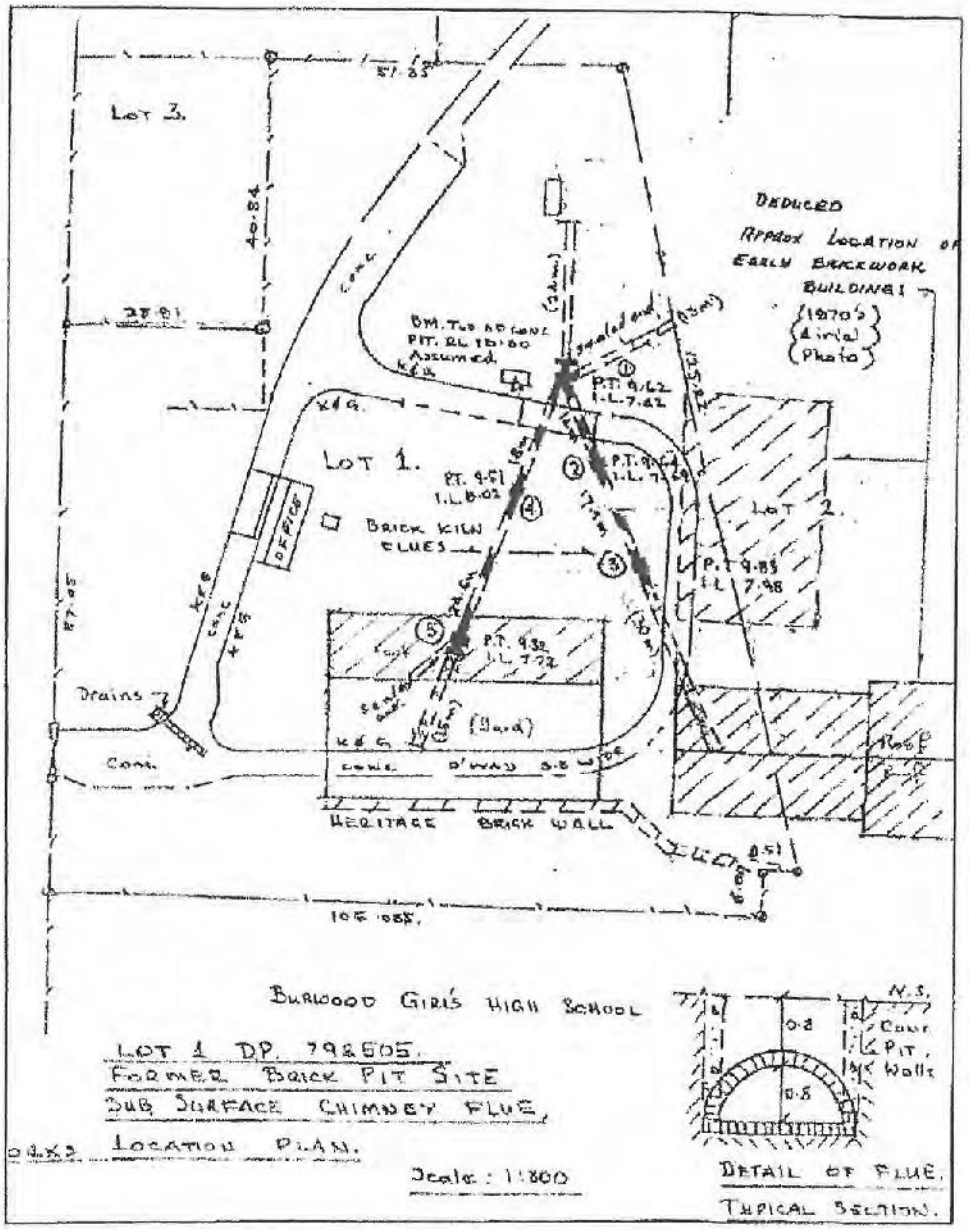


Figure 11: Sketch Plan of the site adapted from a c.1970s aerial photograph showing the subsurface flues and building footprints.
The central area enclosed by the driveway is now grassed parkland. The eastern section of driveway and office no longer remain.

Source: Attached to a URBS-JHD Report 2003. Author not known.

In December 2005 GBH Australia undertook a ground penetrating radar investigation of the central site area, to the south west of the former brick pit, to ascertain the location of any subsurface flues additional to the two found previously further to the west and now incorporated in the grassed area. The report (GBH, 2005 p3) concluded that "two reinforced concrete slabs about 4m wide and 22m long, situated side by side and 8m apart" were found in the southern half of the investigation site. "There is a transverse concrete strip footing extending at each end of the slabs. There is some remnant brick floor either side of the two slabs. There are also a number of holes which may be flue vents or collapsed section of flue."

There was some difficulty establishing the continuity of the flues but GBH state "that there is enough evidence to suggest a network of flues under the foundation which have been plotted. GBH believe that there are possibly two types of flue; major and minor. The major flues are approximately 1m wide and between 700mm to 1000mm deep. Three lines of major flues were found running north south and six lines running east west [refer Figures 12 &13].

There is evidence of a major flue to the north of the building footprint about 500mm below the original floor level and the top of the flue is exposed. There is similar evidence to one side of the slabs at a depth of about 800mm suggesting flues running in an east west direction although their destination is not known. A number of flues also converge on a point north east of the building footprint and it is suggested that the flues extend beyond the investigation area to the east and west.

Minor flues, approximately 400mm wide and 200-300mm deep, tend to run in a north south direction on either side of a major flue.

The results of the investigation are provided in drawing GBGA0293-01 and 02 and reproduced in Figure 12 and Figure 13. Figure 12 is over-laid on a magnified section of the lower right-hand-side of the drawing in Figure 13.

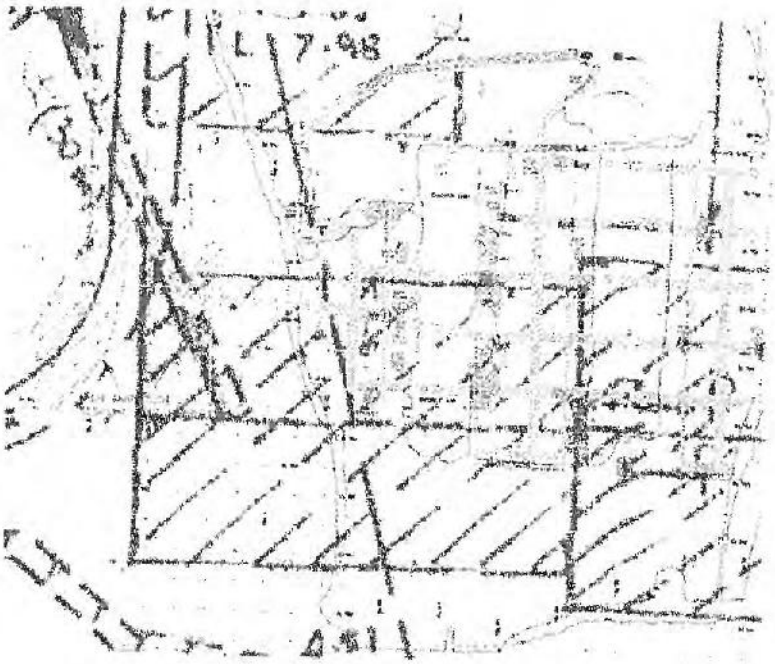


Figure 12: Subsurface evidence found by GBG Australia
Source: GBG Australia. Ground penetrating radar investigation. Drawing No. GBGA0293-01 (Dec 2005)

Figure 13: Network of subsurface flues suggested by ground penetrating radar
Source: GBG Australia. Ground penetrating radar investigation. Drawing No. GBGA0293-01 (Dec 2005)

3.0 PHYSICAL EVIDENCE

3.01 Context

The subject site is within a residential area to the south of Parramatta Road. It is enclosed on the north, east and south east by detached dwellings. On the south west corner is Burwood Girls High School. The entrance to the site is off Cheltenham Road on the west adjacent to the former Brickworks Limited head office, now used by the State Emergency Services (SES). Within the SES site and behind the building is the base of a former circular brick chimney.

3.02 The site

The site comprises a large irregular block with a slight incline to the north east. The entrance from Cheltenham Road leads through a steel gateway along a concrete kerbed roadway to the east where it curves around to the north before terminating at a dirt track. The road wraps around an enclosed grassed area just south east of the SES site. The grassed area has several concrete pads which are inspection pits of former flues.

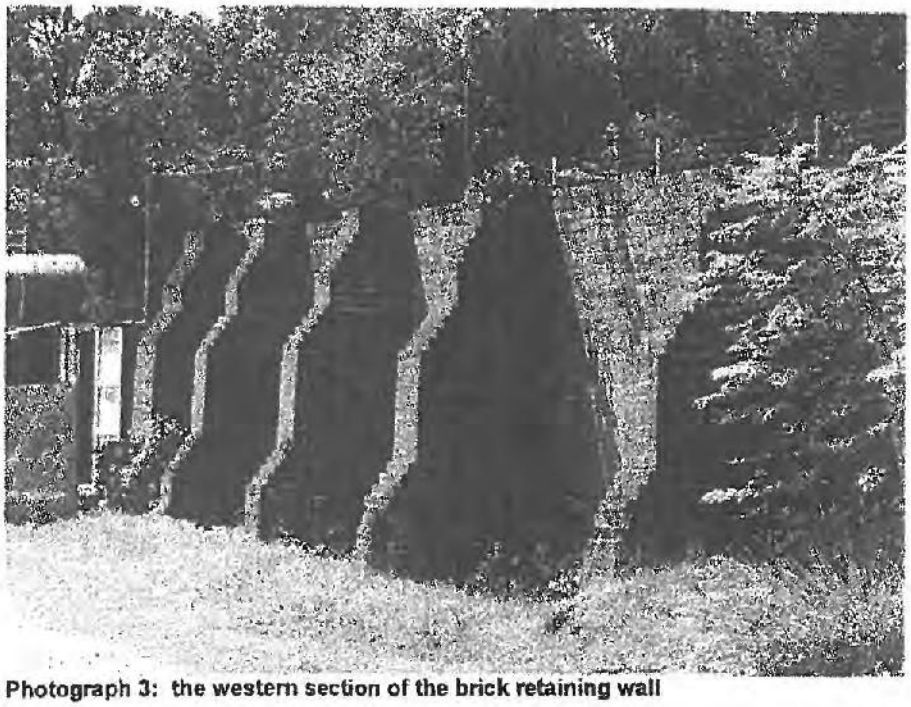
Along the south side of the road is a tarmac covered parking area which rises up to the east behind a brick retaining wall. The wall is a remnant of the former coal bunkers which are now showing signs of failure. Along the southern boundary with the high school and residential blocks are a number of substantial trees.

The former brick pit is now almost filled in and is devoid of vegetation or hard paving. A number of sections of masonry pavement/slabs are evident just east of the curve in the road and are believed to be the foundations of the former kilns [refer to Figure 12].

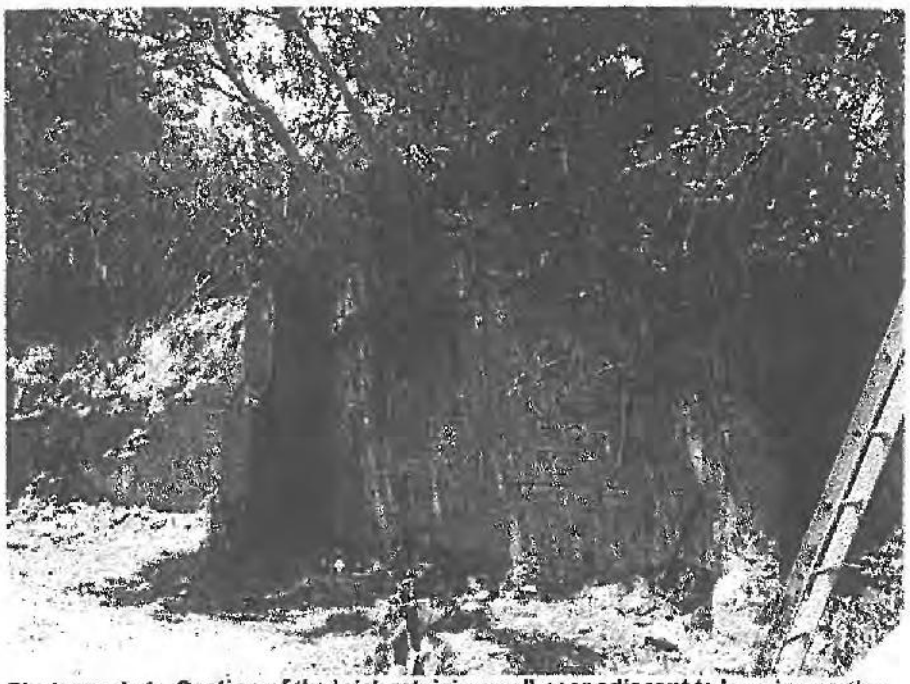
To the north west of the site the land is grassed and has a number of trees, close to where it abuts parkland.

Photograph 1: The Cheltenham Road entrance to the former Burwood Brickworks

Photograph 2: Looking north west from retaining wall over the driveway showing remediated section.



Photograph 3: the western section of the brick retaining wall



Photograph 4: Section of the brick retaining wall near adjacent to housing on the south east

Photograph 5: Looking west with remnant wheel-wash and septic tank in foreground and the former Brickworks Limited head office in the background

Photograph 6: remnant chimney at the rear of the former Brickworks Limited head office in the subdivided section of the former site

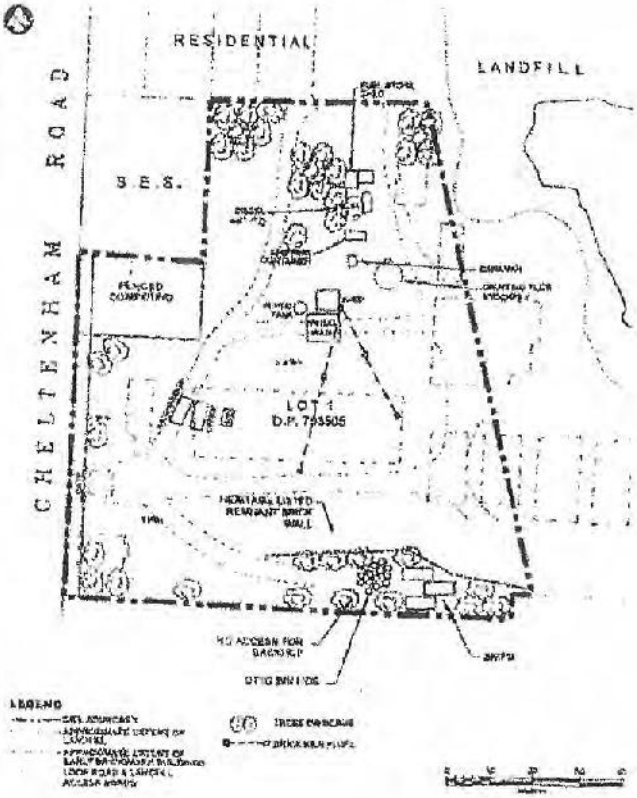


Figure 14: Sketch Plan of site showing location of flues and outline of former buildings, hard stands and kilns
Source: HLA-Enviroscences Limited. (Figure 2, 2002)

3.03 Condition & Integrity

With the exception of sub-surface remains the site retains little evidence of the former brickworks. The pit is now filled in and the above surface infrastructure demolished with the exception of the buttressed retaining wall, remnant of the former coal bunkers. As stated previously in this report there is some evidence of former structures, inspection pits and paving in the south west portion of the site.

The brick retaining wall runs along the southern boundary of the site, part of which supports a bitumen paved car parking area and the other adjacent to residential allotments. The wall is showing signs of failure, evidenced by cracking. The buttresses have sustained physical damage, presumably

caused by trucks, and there is signs of deterioration due to plant growth and water seepage.

3.04 Comparative Analysis

Douglas (2004) in his Report on brickworks in NSW states that seven brickworks with downdraughts kilns still operated at that time. Of these all were established in the late Nineteenth Century and are in regional NSW. Austral Brickworks at Bowral was the last to construct a downdraught kiln.[21] Austral was originally established at Eastwood in 1912 and when decommissioned the presses were moved to the Austral works at Bowral. Douglas (2004) states that the kilns and remains of the brick making and shale crushing plant remain in situ.

Douglas (2004) states that two downdraught kilns and associated flues have been retained at the former Goodlet & Smith Brickworks at Merrylands and integrated with new development on the site.

None of the former brickworks in Burwood remain and many of the former sites are now park land. Although Burwood Brickworks was the longest operating brickwork in Burwood district and the last to close, it was not established until the early Twentieth Century. Stuart (2002, p2) states that Burwood Brickworks was "completely standard in terms of equipment and layout of the site. It is typical of a Sydney brickyard, and does not seem to have been particularly innovative."

There are nine brickworks or former brickworks listed on local environmental plans in NSW of which only four are within the Sydney Metropolitan area. There are no brickworks listed on the State Heritage Inventory. Of the four in the metropolitan area, one is a former brick pit (Thornleigh), one is still operational (Brookvale, c.1914) and one is the former Excelsior Brickworks site (1876-1920) in nearby Summer Hill (Ashfield District).

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[21] Douglas P. (2004). *Comparative Analysis of Brickworks in NSW.*

4.0 ASSESSMENT OF CULTURAL SIGNFICANCE

4.01 Introduction

This section aims to identify the cultural heritage significance of the former Burwood Brickworks site so that any impact that may arise from proposed works on that significance is avoided or mitigated. Identification of cultural heritage significance or cultural significance *means aesthetic, historic, scientific, social or spiritual value for past, present and future generations. It is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects* (Marquis-Kyle P & Walker M. 2004).

The term "heritage status" used in this report refers to prior recognition of a place as an item of cultural significance and includes both cultural and natural values. Recognition of those values may be identified by a statutory or non-statutory listing by a government authority, agency or organization. Places or items with statutory listings are subject to current legislation. Non-statutory listings, while not subject to legislation, reflect the cultural value of the place or item to the community. Recognition of a place or item is essential when considering the future conservation management of a place or item.

4.02 Statutory & Non-Statutory Listings

The site of the former Burwood Brickworks is not listed on any statutory or non-statutory register. It is not listed as a heritage item on Schedule 9 of the Burwood Planning Scheme Ordinance 1979 (the BPSO).

4.03 Assessment of Cultural Significance

4.031 Introduction

A system of evaluation criteria, evolved from definitions in the Heritage Act 1977 (the Act) and encompassing the values in the Australia ICOMOS *Burra Charter* has been developed by the NSW Heritage Office and Department of Urban Affairs and Planning (now the Department of Planning).

The NSW Heritage Assessment Criteria[22] express the values in a detailed form with the aim of maintaining consistency and minimising ambiguity in the assessment process. They are used to determine whether an item is of State (or local) heritage significance. The former third level of significance, that is Regional, is no longer applied.

It is unlikely that most items will meet more than one or two levels of the seven criterion. Using the Criteria, the values of the item are first assessed and then the context in which they are significant, that is in terms of similar items of local or State significance, is considered.

4.32 Assessment of Significance: Burwood Brickworks

Criteria (a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

The former Burwood Brickworks site at Cheltenham Road Burwood is a remnant of a local brickworks, operating from 1912 through to 1978. It was one of five in the Burwood district, the only one to operate in the post-World War 11 period, the longest running and the last to close.. Although not as large or as well known as nearby Excelsior Brickworks, it contributed to the industrial development of the district and its built environment. It became part of the Brickworks Ltd group of brickyards, a consortium established to regulate the brick trade and mitigate the impact of the opening of the state owned brickyard.

Criteria (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 (or the cultural or natural history of the local area)

The property has no particular association with people of importance although it is associated with the many people who worked at the brickworks.

Criteria (c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)

[22] Assessing Heritage Significance. NSW Heritage Office. NSW Heritage Manual Update. August 2000.

The site is now devoid of remnant structures and plant and therefore is no longer an intact example of its kind. Burwood Brickworks engaged available technology and adapted to changes such as the implementation of additional kilns and tractors but it did not display a high or uncommon level of technical achievement.

Criteria (d) an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

The property has no particular association with any community or cultural group other than the place it holds in the memory of former workers and local residents.

Criterion (e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

The brickworks were demolished in the 1980s and the plant removed. The brickpit has been filled in and only remnant paving, footings, the subsurface flues and former coal bunker remain. These have limited potential to yield further information other than to indicate the location of the elements of the operation on the site. The buttressed brick walls of the former coal bunkers remain the only above surface representative structure with any potential to illustrate the former use of the site.

Criterion (f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

Brickworks of this era were not rare in the district or NSW overall but most of those have now been closed and the sites adapted to new uses. Within this district none remain and only the former Excelsior Brickworks site is listed as an item of local heritage significance. The majority of the structures of the Burwood Brickworks have now been demolished and the plant dismantled.

Criterion (g) an item is important in demonstrating the principal characteristics of a class of NSW's

- Cultural or natural places; or
- Cultural or natural environments.

(or a class of the local area's

- Cultural or natural places; or
  Cultural or natural environment)

The subject site does not demonstrate any principal characteristics of a class of cultural or natural places.

4.33 Statement of Significance

Burwood Brickworks was one of several brickworks in the Burwood municipality and contributed to the suburbanisation and industrial development of the area. The brickworks ceased operation in 1978 after 66 years of near-continuous operation. It was the last brickworks in the Burwood district to close and was the only one to continue production into the post-World War II period. Following closure the site was sold and some years later the structures were demolished, the plant removed and the former pit filled in.

While Burwood Brickworks is important to the history of Burwood, with some association to local residents and former workers, it was not unique to the district or to NSW, although intact brickworks of this era are now rare. The brick pit has been filled in and most of the structures demolished or buried. The visible remnant fabric provides a limited understanding of the site. The remnant former coal bunkers and retaining walls, together with the former Brickworks Limited head office building provide the most tangible evidence of the former use of the site.

The former Burwood Brickworks site is of local cultural heritage significance as a representative example of its kind but that significance is diminished by the lack of remnant significant fabric, which limits an understanding of the former use of the site.

4.04 Client Needs & Obligations

Although the subject site is considered to be of local cultural heritage significance it is not a listed heritage item under Schedule 9 of the BPSO and therefore is not subject to the provisions of Clause 79B of that instrument.

The remnant flues and subsurface fabric are subject to the "relics" provisions under Section 139 of the Heritage Act 1977 (the Act). A *relic* under the Act means any deposit, object or material evidence:

(a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
(b) which is 50 or more years old.

Section 139 of the Act states that:

(1) A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

(2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.

Section 139 (4) of the Act allows for exceptions to Section 139 (1) and (2) by order published in the Gazette, in respect of any of the following;

(a) any relic of a specified kind or description,
(b) any disturbance or excavation of a specified kind or description,
(c) any disturbance or excavation of land in a specified location or having specified features or attributes,
(d) any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates:
(i) that there is little likelihood of there being any relics in the land, or
(ii) that any relics in the land are unlikely to have State or local heritage significance.

The Schedule of Exceptions to Section 139 (1) and (2), pursuant to section 139 (4) of the Act is as follows:

Excavation or disturbance of land of the kind specified below does not require an excavation permit under s. 139 of the Heritage Act, provided that the Director of the NSW Heritage Office (the Director) is satisfied that the criteria in (a), (b) or (c) have been met and the person proposing to undertake the excavation or disturbance of land has received a notice advising that the Director is satisfied:

(a) where an archaeological assessment has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that any relics in the land are unlikely to have State or local heritage significance; or

(b) where the excavation or disturbance of land will have a minor impact on archaeological relics; or

(c) where the excavation or disturbance of land involves only the removal of unstratified fill which has been deposited on the land.

2. A person proposing to excavate or disturb land in the manner described in paragraph 1 must write to the Director and describe the proposed excavation or disturbance of land and set out why it satisfies the criteria set out in paragraph 1. If the Director is satisfied that the proposed development meets the criteria set out in paragraph (a), (b) or (c) the Director shall notify the applicant.

4.05 Archaeological Assessment

The HLA-Envirosciences report (Feb 2002) provided an assessment of the archaeological potential of the site. It states that; "The archaeological remains consist of underground flues, and the foundations of kilns, brick press building and the coal storage facility. While the archaeological remains could contribute detailed knowledge about how the works operated and the technology used, the surviving remains can only supply a limited amount of information. For example the foundations of the brickpress building would only provide information about the number of presses used, not their type and nothing at all about the clay preparation which occurred in the floors above the brick presses. Similarly the floor and underground flues from the kilns are only part of the flues used to direct heat through the kilns, substantial flues were incorporated in the above ground structure of the Patent kiln which is now demolished.....the archaeological remains is such that the contribution of knowledge is severely limited and substantive questions are unlikely to be answered by the archaeological remains on site."

4.06 Conclusion

Although the site is not on a statutory heritage register it is considered that the remnant archaeological remains associated with the former brickworks are of local significance. Despite this, those remains have limited potential to yield further information or contribute to interpretation of the former brickworks. In respect of the Act, an application to the Heritage Council for an excavation permit is required for excavation of the site and/or disturbance of those

remains which are considered "relics" under the Act. Although not all the sub-surface remains may be 50 years old these are likely to be the minority. Given that the archaeological remains have been assessed as being of local significance, it is considered that the proposed works do not meet the criteria of the Schedule of Exceptions.

Most of the structures associated with the former brickworks have been demolished, the plant removed and the site filled over to create open space. The brick buttressed wall remains although in need of urgent works to stabilise its condition and stop further deterioration. As little of the original brickworks are evident above ground and the site has undergone remediation it is not recommended to list the site on the BPSO. A more constructive outcome may be in listing the remnant section of the former coal bunker and implementing interpretive measures, linking it to other remnants such as the Cheltenham Road metal gateway and the circular chimney base and Brickworks Ltd head office on the adjoining site.

5.0 ASSESSMENT OF HERITAGE IMPACT

5.01 The Proposal

The site of the former Burwood Brickworks has been earmarked for use as open space since purchase of the site by Burwood Council in 1987. It is proposed that playing fields for the adjoining Burwood Girls High School be provided on the site. To ensure the safety of the playing fields it is considered imperative that the remnant subsurface flues be filled in. This would involve excavation of the relevant sections of the site to expose the top of the flues and partially collapse the remnant structures to allow filling in of the voids with earth. The remnant surface paving and footings would also be buried under the fill required to create playing fields.

The subject site has undergone substantial change; the former brick pit has been filled in and the majority of structures and plant associated with the

brickworks removed. Subsurface flues, remnant paving and the former coal bunker/retaining walls remain. The site is not a heritage item but the flues and sub-surface remnants are considered "relics" under the Heritage Act 1977 (the Act). Excavation likely to expose and/or disturb relics requires an application for a Section 140 Excavation Permit.

5.02 The Assessment Procedure

5.021 Positive Impacts

- The proposal to fill in the sub-surface flues and cover over remnant paving and plant bases will allow the site to be used as open space as was intended by its procurement and re-zoning many years previously and ensure its long term stability.
- The brickworks have been demolished, the site highly disturbed and little evidence remains of that former use. It is intended that the sub-surface flues be left in-situ.
- Excavation provides an opportunity to further investigate the physical nature of the flues. Although unlikely to reveal considerable new information (Stuart,2002) excavation may build on knowledge provided by the ground penetrating radar investigation.
- The information gathered on the location of the flues and their relationship to other elements of the former brickworks should be recorded and used in an interpretation strategy incorporating the remnant above ground structures.
- The subsurface remnants are an archaeological resource but have little potential for interactive interpretation given the lack of above surface infrastructure of plant and especially in view of potential safety issues.
- As open space with public access there is far better potential for interpretation of above ground remnants, allowing an understanding of the former brickworks, its association with and its role in the history of Burwood.

5.022 Detrimental Impacts

- The partial collapse and filling in of the flues will result in some irreversible damage to the remnant fabric but as stated in the archaeological assessment undertaken in 2002 by HLA-Envirosciences, the archaeological potential of the site is considered low given the loss of above ground associated structures and plant since 1982.

5.023 Alternative Options

Given the long standing pre-determined use for the site, demolition of the former operations and extensive land fill of the site to date the construction of playing fields is the most viable use of the land. The flues have been found to be more extensive than originally thought and are considered to represent some risk of collapse in the future. Retention of the flues in situ is considered appropriate cultural management but the voids need to be filled.

To penetrate the flues and pump with either sand or cement would be a costly exercise and not necessarily reduce impact on the structures. This process would require penetrations to be made in regular locations along the flues and the filling with cement would be irreversible. The structural integrity of the flues during the procedure could not be guaranteed with a possibility that the roofs of the tunnels may collapse. There is also no guarantee that the flues had been completely filled.

Alternate options considered for filling the voids included collapsing the flues completely or partially collapsing and backfilling. The preferred option is to partially excavate the flues, which will maintain structural support during the works, collapse the roof section and backfill with earth thus ensuring that all voids are filled while retaining the flues in-situ with minimal intervention.

5.024 Mitigative Measures

The flues have been mapped in the course of preparing this submission, providing essential information on their number and location. While it would be preferable not to disturb the flues it is impetrative that they are made secure and stable given the proposed use of the land. To mitigate impact it is recommended that remnant fabric is disturbed as little as possible, while allowing feasible back filling. Where excavation occurs the physical attributes of the flue should be recorded. Generally enough fabric should be retained to ensure an understanding of the extent and physical dimension of the flues, should the site be re-excavated in the future. All recorded information, including this report, should be deposited with Burwood Library Local Studies. It is further recommended that the information gathered by this report and arising from the proposed works be incorporated into an interpretation plan and that plan be implemented as part of the works.

5.03 Statement of Heritage Impact

Burwood Brickworks was an important element of Burwood's industrial and residential development and the site is considered to be of local heritage significance. The brickworks have now been demolished, a portion of the site subdivided and the brickpit filled in. The significance of the former brickworks has been considerably diminished and the archaeological potential of subsurface remnants is limited. Remnant fabric on the subject site comprises mainly subsurface flues, building foundations and paving together with brick retaining walls believed to be former coal bunkers.

Since purchase of the former brickworks site it has been ear-marked for use as recreational open space and has undergone considerable works that has resulted in the removal of plant and structures and extensive landfill. The current proposal to further develop the site to provide playing fields will require partial excavation of the site to expose and partially collapse the flues followed by back filling of the voids with earth. While the proposed filling in of the sub-surface flues will result in damage to remnant fabric, it will ensure the

safety of the site and will not diminish its significance or archaeological potential.

The proposed works will provide a limited opportunity to gain further understanding of the brickworks and any information gained should be recorded and incorporated into an interpretative strategy. Public access to the site as open space and playing fields provides an opportunity for interpretation of the site and its former use.

6.0 RECOMMENDATIONS

It is recommended that;

- the proposal to partially excavate the flues, demolish minimal top sections of them and back fill the voids with earth be accepted
- the flues be disturbed as little as possible in the process
- information gained regarding the flues and associated structures be recorded
- Information arising from the recording of the site be deposited with Burwood Library Local Studies, together with a copy of this report.
- an interpretation strategy for the site be developed and implemented.
- remedial work be undertaken to stabilise the retaining walls/remnant coal bunkers and prevent further deterioration
- that the walls/former coal bunker be listed as a heritage item on Schedule 9 of the Burwood Planning Scheme Ordinance
- the applicant apply for a Section 140 Excavation Permit, under the provisions of the Act, to allow the work to be undertaken.
- An archaeological excavation program should be developed describing how the excavation and recording is to be undertaken.

7.0 BIBLIOGRAPHY & REFERENCES

Brickworks in Burwood. (2005) Burwood Council.

Gemmel W. (1986) And So We Graft From Six To Six: The Brickmakers of NSW Angus & Robertson, Sydney

Peek N & Pratten C (1996) Working the Clays: the Brickmakers of Ashfield District. Ashfield & District Historical Society. Sydney

Shying B. (1977) The Beginning of Brickwork in Australia. Heathcote, N.S.W. : B.G. Shying

Reports

Structural Report: Former Brickyards at Ashbury and Croydon. 1982. Hughes Truman and Ludlow Pty Ltd.

A Heritage Assessment of the former Burwood Brickworks, Cheltenham Road Burwood. (Feb 2002). HLA-Envirosciences Pty Limited.

Comparative Analysis of Brickworks in NSW. Peter Douglas. 2004. NSW Heritage Office.

Proposed Development of Burwood Brickpits Traffic Impact Study. Ove Arup Transportation/Planning May 1975.

Newspapers (sourced from LH Scrapbook: Brickworks & Brickpits):

Sydney Morning Herald 14 February 1912 (npn)

Austin Courier 10 February 1912,19 August 1970, 19 June 1974, 13 November 1974 (npn)

Local History Vertical File: LH B711.58 BRI

Appendix: Application for Excavation Permit

F Archaeology Advice 2013

TONY LOWE
BA, MA
Casey & Lowe Pty Ltd
Archaeology & Heritage Consultants
420 Marrickville Road, Marrickville NSW 2204
ABN: 32 101 370 129

26 March 2013

Marianna Kucic
Executive Strategic Planner - Heritage Advisor
Burwood Council
1 - 17 Elsie Street
Burwood NSW 2134

Dear Ms Kucic,

Re: Wangal Park, former Burwood Brickworks
Section 139(4) Excavation Permit Exception Notification

Thank you for asking us to advise you on the archaeological implications of the on-going drainage works involved in creating the Wangal Park wetlands and associated amenities. You have provided me with several studies and reports, including:

- HLA-Envirosciences, *A Heritage Assessment of the former Burwood Brickworks, Cheltenham Road, Burwood*, 2002.
- Mayne-Wilson & Associates, *Heritage Character and Values Assessment of the Environs of the proposed Cheltenham Road Park, Burwood*, 2005.
- DCP Heritage, *Cheltenham Park Former Burwood Brickworks, Heritage Impact Assessment for Section 140 Excavation Permit Application*, 2006.
- GBG Australia, reports on results of Ground Penetrating Radar Investigations, 2006 and 2013.

In addition, I attended site today 26 February to inspect remains in two holes which appear to be underground brick flues belonging to the old brickworks (Fig. 1). The flues, the top of which were approximately 500mm below the present ground level, had been exposed during machine excavation for a drainage pit, the location of the first pit being moved when remains had been encountered. I understand that Council commissioned the two GPR reports in order to determine whether there were underground flues along the proposed drainage route and that none had been found in this area.

The heritage reports indicate that the brickworks buildings and kilns were demolished in the 1980s, leaving only a remnant brick wall from the coal storage facility on the southern side of the site, and the brick pit was filled in subsequent years. The brickworks was one of several in the local area, others including Croydon Steam Brickworks to the south and the Excelsior Brickworks to the east (Mayne-Wilson, p.17).

The nature of the potential sub-surface remains was examined in the HLA-Envirosciences report. They found that archaeological remains were likely to be limited to the underground flues and the footings of the demolished buildings. In terms of their significance to the

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tony.lowe@bigpond.com
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operation of the works, the below ground flues would have operated in parallel with aboveground flues which would have directed heat through the upper sections of the kilns. They were found to have a limited ability to provide information about the site. As well as having limited archaeological potential the remaining underground elements were assessed as having a low level of heritage significance (at a Local level). Based on the information to hand and my site inspection, I have no reason to disagree with these findings.

Figure 1: Section of flue with corbelled roof overlain by a concrete slab. Note brick to right with "B I" impression in frog.

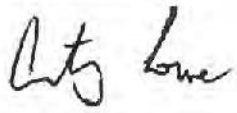
I understand that you have taken advice from the Heritage Branch, Office of Environment & Heritage, that a S139(4) excavation permit exception notification may be appropriate. Based on my review of the site and its potential archaeological, I would think that Criteria B would be applicable:

> the excavation or disturbance of land will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them.

The application should be forwarded to the Heritage Branch with copies of the relevant reports and a copy of this letter. Your covering letter should explain that the proposed pits and drainage trench are limited in size (1.5m^2 and 1.5m wide respectively) and are contained within a narrow easement, so that complete avoidance of the features is not possible but that the flues appear to be spread over a much larger area of the site. You should state that Council has been actively charting the location and orientation of the uncovered flues. I would recommend that we attend site to record major structural elements should this occur and that Council's measures to survey and record the items continue. At the end of the works the material should be collated into an overall report.

Please contact me on 9568 5375 should you require anything additional at this time.

Yours sincerely,



Tony Lowe
Casey & Lowe Pty Ltd

G Letter from Minister for Education 2013

The Hon. Adrian Piccoli MP
Minister for Education

25 JAN 2013

Councillor John Faker
Mayor
Burwood Council
PO Box 240
BURWOOD NSW 1805

RML12/6445

22 JAN 2013

Dear Coun JOHN

I write in response to your letter of 18 December 2012, following our meeting of 17 December 2012, regarding the temporary access road to Wangal Park located on Burwood Girls High School land (your reference: Trim No: 12/55261).

I am advised that the school has plans to construct a fitness track and recreation area on this land this year to support its 2013 Personal Development, Health and Physical Education program and provide its students with uninterrupted access to its playing fields. I understand that the school community is concerned that a further 12 months use of the access road will delay implementing the education program another year.

However, the Department of Education and Communities recognise that the capping required to remediate the park may take time and has advised that it is prepared to agree to an extension on the use of the temporary access road to 12 July 2013, which is the end of the Term 2 school holidays.

Should weather or other unexpected construction issues delay work, the Department is also prepared to grant an absolute termination date of 30 September 2013.

To keep faith with the school community, I urge Council to commence work on the alternate access road immediately and to strive to achieve the 12 July 2013 deadline.

The Department appreciates Council's assurance that it will continue to have appropriate traffic management procedures and communication with Burwood Girls High School to ensure students' safety when truck movements are required across the school site.

The Department has no objections in principle to Council placing pipes in a trench below the temporary access road and entering into a suitable agreement for future access to this area for maintenance purposes. The Department has requested that Council provide construction details and timeframe of the proposal.

In addition, the Department would be happy to progress a land swap to resolve the issue of croachment by the school's playing fields onto Council land.

ours sincerely

Adrian
Minister for

H Metropolitan Local Aboriginal Land Council Letter 2010

METROPOLITAN LOCAL
ABORIGINAL LAND COUNCIL
36 – 38 George Street, Redfern NSW 2016
PO Box 1103 Strawberry Hills, NSW 2012
Telephone: (02) 8394 9666 Fax: (02) 8394 9733
Email: metrolalc@metrolalc.org.au

14th September 2010

To: Robert Teo
Senior Manager
City Services & Projects
Burwood Council

Re: Wangal Park naming

Dear Robert,

Thank you for consulting the Metropolitan Local Aboriginal Land Council on such an important cultural issue to this council.

I have passed your request to our Board of Directors and in turn they have endorsed your request and the naming of your park – Wangal Park.

If you need any further information regarding this letter please do not hesitate to contact me on the above mentioned numbers.

Regards,

Ricky Lyons

Chairperson
Metropolitan Local Aboriginal Land Council

I NSW EPA Surrender Notice 2004 & Variation

Approval of the Surrender of a Licence

Section 80(1) Protection of the Environment Operations Act 1997

BURWOOD COUNCIL,

Trading as CHELTENHAM RD PARK DEVELOPMENT,

ABN 84 362 114 428,

PO BOX 240,

BURWOOD NSW 1805

STANDARD POST

Attention: Mr. Peter Cormican

Notice Number 1038663
File Number 501658
Date 02-Jul-2004

APPROVAL OF THE SURRENDER OF LICENCE NO. 4522

BACKGROUND

A. The following licensee(s):

BURWOOD COUNCIL

84362114428

applied to the Environment Protection Authority ("EPA") to surrender Environment Protection Licence No. 4522 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Scheduled Activity - Premises Based at 34 CHELTENHAM ROAD, CROYDON, NSW.

B. The EPA received the application on 17-Jun-2004.

APPROVAL OF THE SURRENDER OF A LICENCE

1. The surrender of licence No. 4522 is approved.
2. The approval of the surrender is subject to the following conditions:

Approval of the Surrender of a Licence

Section 80(1) Protection of the Environment Operations Act 1997

PART A - GENERAL CONDITIONS

3. The licensee must provide the EPA with an Annual Return in relation to compliance with the conditions of licence No. 4522 during the period beginning on the last licence anniversary date and ending on the date that the surrender of the licence takes effect as set out in paragraph 4 below.

   a) The Annual Return must be supplied to the EPA within 60 days of the date from which this notice operates (see note at the end of this licence).

   b) The content and form of the Annual Return must be in accordance with those licence conditions.

   c) The Annual Return must be signed in accordance with those licence conditions.

4. Except as provided by section 84(2) of the Act, the approval of the surrender of the licence by this notice begins at the expiry of 21 days from when you are given this notice, unless another date is specified in this notice.

5. Section 84(2) of the Act provides that the approval of the surrender of a licence does not operate:

   - until the expiry of the period of 21 days after you are given notice of the decision to approve the surrender of the licence is given, or
   - if an appeal against the decision is lodged within that period, until the Land and Environment Court confirms the decision or the appeal is withdrawn, or
   - until you notify the EPA in writing that no appeal is to be made against the decision,

   whichever first occurs.

PART B - CONDITIONS RELATING TO THE CLOSURE, CAPPING, REHABILITATION AND POST CLOSURE MANAGEMENT AND MONITORING OF THE PREMISES

6. The Council must install landfill gas controls, final capping and sediment and erosion controls, and conduct monitoring at the premises subject to the following conditions.

LANDFILL GAS

7. Landfill gas controls comprising:

    a) a landfill gas emission control perimeter drain with nine (9) sampling points (known as points S1 to S9 inclusive),

    b) two (2) passive landfill gas vents (known as points MV1 and MV2), and

    c) three (3) landfill gas collector wells (known as points W1, W2 and W3)

    must be installed in accordance with drawing number 052.0032/05 "Gas Emission Control Perimeter Drain, February 2004," provided in Appendix 6 of the report "Cheltenham Road Landfill Final Closure Plan", prepared by Hopman Consulting Services, and dated March 2004 *("the Final Closure Plan")*.

8. The media in the perimeter drain must be free draining with a calcium carbonate content of less than 10% by weight.

9. The membrane in the landfill gas perimeter drain (as depicted in drawing number 052.0032/05 in the Final Closure Plan) must have a minimum thickness of 0.7mm and must be installed in accordance with the manufacturer's recommended QA/QC procedures.

10. The landfill gas controls referred to in conditions 7,8 and 9 must be installed: (a) before 30 June 2006 OR (b) within two months after completion of the installation of the landfill capping (refer to conditions 19,20 and 21); whichever occurs the earliest.

11. The Council must maintain the activated carbon filters (as depicted in drawing number 052.0032/05 in the Final Closure Plan) in a manner that ensures their effective operation.

12. The Council must undertake landfill gas monitoring for methane in accordance with the following table:

TABLE 12

Sampling points	Frequency	Method
GW16	Quarterly	Special method 1
GW1 to GW15, GW17 to GW21 and GW 23	upon completion of installation of capping layer then quarterly	Special method 1
Sampling points S1 to S9 inclusive	upon completion of installation of capping layer then quarterly	Special method 1
Gas collector wells W1, W2 and W3	upon completion of installation of capping layer then quarterly	Special method 1

For the purpose of the above table 12:

a) the sampling points referenced in the table are as depicted in drawing number 052.0032/05 provided in appendix 6 of the Final Closure Plan;

b) "Special Method 1" means in accordance with the "Draft Method Statement for Gas Monitoring for Cheltenham Landfill Final Closure Pan" provided as an attachment to the Council's letter of 3 May 2004 to the EPA.

c) In addition to the requirements of the Method Statement in b) above, the Council must record the ambient air pressure at the time of monitoring.

13. Should the results of the methane monitoring required by condition 12 indicate methane concentrations in excess of 1.25% methane (v/v) in GW 16, GW 1 to GW 21 inclusive and/or GW23 the Council must:

a) notify the EPA within 24 hours,

b) undertake as soon as practicable, further monitoring for methane and carbon dioxide in those wells where methane concentrations in excess of 1.25% (v/v) were detected; and

c) within 30 days provide the EPA with a written report on proposed upgrades to the gas management system to ensure that methane concentrations in the well(s) are reduced and remain below 1.25% (v/v) and that landfill gas does not migrate off the premises through the strata.

14. The Council must report to the EPA the results of the gas monitoring required by condition 12 (other than those results required to be reported according to condition 13) by 30 June 2005 and annually thereafter.

GROUNDWATER MONITORING

15. The Council must undertake groundwater monitoring at wells W1, W2 and W3, BC-MW1, BC-MW2, BCMW3, GW 2, GW19 and GW 23, as depicted on drawing number 052.0032/05 provided in appendix 6 of the Final Closure Plan, in accordance with the following table:

Table 15

Pollutant	Units of measure	Frequency	Sampling Method
Standing water level	AHD	Six monthly	In situ measurement
PH	PH	Six monthly	Representative sample
Electrical Conductivity	MS/cm	Six monthly	Representative sample
Arsenic	mg/L	Six monthly	Representative sample
Ammonia	mg/L	Six monthly	Representative sample
Nitrate and Nitrite	mg/L	Six monthly	Representative sample
Total Kjeldahl nitrogen	mg/L	Six monthly	Representative sample
Alkalinity	mg/L	Six monthly	Representative sample
Calcium	mg/L	Six monthly	Representative sample
Cadmium	mg/L	Six monthly	Representative sample
Chloride	mg/L	Six monthly	Representative sample
Chromium	mg/L	Six monthly	Representative sample
Fluoride	mg/L	Six monthly	Representative sample
Iron	mg/L	Six monthly	Representative sample
Magnesium	mg/L	Six monthly	Representative sample
Lead	mg/L	Six monthly	Representative sample
Mercury	mg/L	Six monthly	Representative sample
Nickel	mg/L	Six monthly	Representative sample
Potassium	mg/L	Six monthly	Representative sample
Sodium	mg/L	Six monthly	Representative sample
Sulphate	mg/L	Six monthly	Representative sample
Total Organic Carbon (TOC)	mg/L	Six monthly	Representative sample
Total phenolics	mg/L	Six monthly	Representative sample
Zinc	mg/L	Six monthly	Representative sample
Total Cations	meq/L	Six monthly	Representative sample
Total Anions	meq/L	Six monthly	Representative sample
Actual (Anion/ Cation) difference	meq/L	Six monthly	Representative sample
C6 to C9	mg/L	Six monthly	Representative sample
C9 to C36	mg/L	Six monthly	Representative sample
BTEX	mg/L	Six monthly	Representative sample

16. The Council must conduct the first round of monitoring required in condition 15 (above) no later than six months after the closure of the landfill premises (ie. The date when the last load of waste was accepted). The groundwater monitoring is subsequently required to be conducted every six months for a total period of three (3) years following the completion of landfilling.

17. Should the monitoring results required by conditions 15 and 16 indicate ammonia concentrations in excess of 10 mg/L, (in wells other than W1, W2, W3 and BC-MW2), the Council must:

    d) notify the EPA within 7 days of Council receiving the results; and

    e) within 45 days of Council receiving the results, provide the EPA with a written report on an interpretation of the groundwater monitoring results and advice on whether the data is indication off-site migration of leachate and any proposed mitigation measures.

18. The Council must report to the EPA the results of the groundwater monitoring required by conditions 15 and 16 (other than those results required to be reported by condition 17) by 30 June 2005 and annually thereafter.

LANDFILL CAPPING

19. Landfill capping, comprising a support layer, a seal layer and a revegetation layer must be installed at the premises by 30 April 2006 in accordance with Section 5.2 of the Final Closure Plan and drawing 052.0032/02 provided in Appendix 6 of the Final Closure Plan.

20. The seal and revegetation layers must be Virgin Excavated Natural Material (VENM) as defined in Schedule 1 of the Protection of the Environment Operations Act 1997.

21. The seal layer must have a maximum permeability of 10^{-7} metres per second.

22. Within 6 months of completion of the installation of the landfill cap, the landfill gas perimeter drain and the landfill gas collector wells, the Council must provide the EPA with a written report:

    a) advising of their installation,

    b) providing evidence that the media installed in the landfill gas perimeter drain is free draining and has a calcium carbonate content of less than 10%,

    c) providing the results of the permeability and in situ density testing to validate that the permeability of the clay sealing layer is less than 10^{-7} metres per second,

    d) providing as constructed drawings, including cross sections, of the installed cap and the landfill gas perimeter drain, and

    e) providing construction details of the landfill gas collector wells.

23. The permeability testing required in condition 22(c), must be undertaken at minimum of one test per 1000 cubic metres the material used, and in situ density testing must be undertaken at a minimum of one test per 1000 tonnes of installed material. The permeability testing must be in accordance with Australian Standard AS 1289.6.7.2-2001 : Methods of testing soils for engineering purposes - Soil strength and consolidation tests - Determination of permeability of a soil - Falling head method for a remoulded specimen and AS 1289.6.7.2-2001/Amdt 1-2003 : Methods of testing soils for engineering purposes - Soil strength and consolidation tests - Determination of permeability of a soil.

SEDIMENT AND EROSION CONTROLS

24. Sediment and erosion controls must be installed at the premises in accordance with chapter 6 of the Final Closure Plan and drawings 052.0032/01, 052.0032/02, 052.0032/03 and 052.0032/04 provided in appendix 6 of the Final Closure Plan prior to the commencement of capping works at the premises.
25. These sediment and erosion controls must be maintained at all times during capping works at the premises and until suitable vegetation is established over the cap so as to prevent soil erosion and sedimentation of waterways.

PART C - OTHER CONDITIONS

26. The Council shall prepare and lodge with the EPA a final Volumetric Survey of the premises, as required by Clause 24 of the Protection the Environment Operations Waste Regulation 1996, by 31 July 2004.
27. The Council shall prepare and lodge any outstanding Waste Contributions Monthly Reports (WCMR) required by Clauses 18A to 23A of the Protection the Environment Operations Waste Regulation 1996 with the EPA by 31 August 2004.
28. All activities associated with the closure, capping, rehabilitation and post-closure maintenance and monitoring at the premises must be carried out in a competent manner.

    This includes: (a) the processing, handling, movement and storage of materials and substances used at the premises; and (b) the treatment, storage, processing, reprocessing, transport and disposal of any waste generated by the activity.
29. All plant and equipment installed at the premises or used in connection with the closure, capping, rehabilitation and post-closure maintenance and monitoring activities at the premises must: (a) be maintained in a proper and efficient condition; and (b) be operated in a proper and efficient manner.
30. All activities associated with the closure, capping, rehabilitation and post-closure maintenance and monitoring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

DEFINITIONS

In these conditions;

"the Council", means Burwood Council,

"the EPA" means the Environment Protection Authority as defined in the *Protection of the Environment Administration Act* 1991.

"the Final Closure Plan" means the document "Cheltenham Road Landfill Final Closure Plan", prepared for Burwood Council by Hopman Consulting Services, and dated March 2004.

"the premises" means 34 Cheltenham Road, Croydon, NSW, comprising Lots 1 & 2 DP 793505.

. . . . . .

Mr Steve Beaman

Manager

Sydney Waste

(by Delegation)

Approval of the Surrender of a Licence

Section 80(1) Protection of the Environment Operations Act 1997

INFORMATION ABOUT THIS NOTICE

- Section 287 of the Act enables appeals to be made in connection with decisions about licences within 21 days after you are given notice of the decision.
- In accordance with section 80 of the Act, no fees are refundable on the surrender of a licence.
- On the date that the surrender of your licence takes effect the current licence fee period comes to an end. However, the surrender of your licence does not affect your liability to pay fees owing to the EPA for that licence fee period or for any earlier licence fee period.
- If you have not already paid the administrative fee for the licence fee period which has just come to an end on the surrender of your licence you must still do so. The administrative fee for a licence fee period must be paid no later than 60 days after the beginning of that licence fee period (clause 29 of the *Protection of the Environment Operations (General) Regulation 1998*).
- Any load-based fees payable in relation to the licence fee period ending on the surrender of the licence must be paid no later than 60 days after the surrender of the licence takes effect (clause 31 of the *Protection of the Environment Operations (General) Regulation 1998*).
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Act.
- The reporting period (A3) on your Annual Return must be filled in to reflect the appropriate dates beginning on the last licence anniversary date and ending on the date that the surrender of the licence takes effect.
- The completed Annual Return must be sent by Registered Post no later than 60 days from the end of the reporting period to:

  Regulation Administration Unit

  Environment Protection Authority

  PO Box A290

  SYDNEY SOUTH NSW 1232

- This notice is issued under section 80(1) of the Act.

Our reference: DOC12/29472

General Manager
Burwood Council
PO Box 240
Burwood NSW 1805

Attention: Michael Limnos

ELECTRONIC & STANDARD MAIL

Dear Sir,

Former Cheltenham Road Landfill – Variation to requirements of Surrender Notice No. 1038663 Revegetation Layer of Final Cap

I refer to Burwood Council's correspondence to the Environment Protection Authority (EPA) dated 18 July 2012 requesting a variation to Surrender Notice No. 1038663 (the "Notice") to allow excavated natural material (ENM) to be used in the revegetation layer of Cheltenham landfill cap.

Condition 19 of the Notice requires:

> *The seal and revegetation layers must be Virgin Excavated Natural Material (VENM) as defined in Schedule 1 of the Protection of the Environment Operations Act 1997.*

The EPA has reviewed the analytical results provided and advises that the soil meets the chemical criteria specified in *The Excavated Natural Material Exemption 2008* (attached). The EPA advises that the results also indicate that use of the soil in the revegetation layer will not cause any environmental harm. The EPA permits Council to use the 3, 000 cubic meters of soil from Osbourne Road Manly for use in the revegetation layer of the final cap. Please note all remaining soil required for use in the revegetation layer must be virgin excavated natural material (VENM) in accordance with Condition 19 of the Notice unless otherwise approved by the EPA in writing.

The EPA advises Council to implement proper sediment and erosion controls when stockpiling and land applying the soil and ensure compliance with all other conditions of the Notice.

If you require any further information please contact Christy Groves on (02) 9995 5765.

Yours sincerely

JULIE CURREY
Unit Head Waste Operations
Environment Protection Authority

Enclosed: The Excavated Natural Material Exemption 2008

PO Box A290 Sydney South NSW 1232
59-61 Goulburn St Sydney NSW 2000
Tel: (02) 9995 5000 Fax: (02) 9995 5999
TTY (02) 9211 4723
ABN 43 692 285 758
www.environment.nsw.gov.au

J Ground Penetrating Radar Reports 2006 & 2013

GBG Australia

Suite 4, 8 – 10 Palmer St,
North Parramatta, NSW. 2151.
Tel: 9890 2122. Fax: 9890 2922.
E-Mail: val@gbgoz.com.au.

A.B.N. 77 009 550 869.

30th January 2006

Attention: Robert Teo
Burwood Council
P.O. Box 240
Burwood, NSW 2134.

SUBJECT: GROUND PENETRATING RADAR INVESTIGATION TO MAP THE EXTENTS OF UNDERGROUND FLUES FOR OLD BRICK KILNS AT THE CHELTENHAM ROAD QUARRY, BURWOOD, NSW

Thank you for the opportunity to carry out a Ground Penetrating Radar (GPR) investigation to map the extent of underground flues at the Cheltenham Road Quarry, Burwood. The site work was carried out on the 12th & 13th December, 2005. The following report outlines the methodology involved in the investigation and briefly discusses the results.

Background

The area to be investigated is a section of the old brick quarry thought to contain underground brick flues that used to ventilate the old brick kiln. The site was formally the location of a draft kiln used to produce bricks. The kilns and chimney have since been demolished from the site. The area, marked with pink survey pegs, is approximately 26m x 60m and was excavated to the floor level of the original kiln. (Plates 1, 2, 3 & 4 shown the area surveyed.) This area is within a section of property owned by Burwood Council that is under negotiation to be transferred to the Department of Education and Training. The land is intended to be used for playing fields for the adjoining Burwood Girls High School. The area surveyed is thought to be the location of one of the two kilns on the site.

Two underground flues have previously being mapped from the location of the chimney to the location of the two kilns (Refer to the following documents for more information: - Heritage Assessment 11th March 2002 "A Heritage Assessment of former Burwood Brickworks, Cheltenham Road, Burwood" by HLA-Envirosciences Pty Ltd, Letter 9th August 2002 "Former Burwood Brick Pit" by HLA –Envirosciences Pty Ltd, and Town Planning Report 28th November 2003 "32-36 Cheltenham Road, Burwood" by Urbis JHD).

The purpose of this investigation was to locate the extent of any subsurface flues and/or other features in an area being remediation and to tie these back to the previously identified and mapped flues. The report to Council was to be made available to heritage consultants for their determination of archaeological significance of the findings.

Plate 1: Site looking South-West

Plate 2: Site looking South

Plate 3: Site looking North-East

Plate 4: Site looking North-West

Methodology & Equipment

GPR is a non-destructive technique that can resolve changes within materials below the surface. The technique works by passing pulses of radio energy into the materials. This energy propagates through each material as a function of its electrical properties (i.e. its conductivity and capacitance). The pulse wave is reflected from interfaces between materials of dissimilar electrical properties, such as between soil and air pockets. A radar gram profile of continuous scans is built up along a line of traverse.

The subsurface information was gathered by using both 200MHz and 400MHz ground coupled antennas. The frequency used will always be a compromise between depth of penetration and resolution. The higher the frequency used the better is the resolution but the lower is the depth of penetration. Also, the higher the frequency the more clutter, caused by rocks and rubble, will be present. The depth of penetration achievable with any particular antenna is also dependant on the soil type, the ground moisture content and the ground conductivity. These antennas were selected to provide the best results given the ground conditions and the type and depth of target to be resolved. The effective depth achieved using the selected antennas were 2200mm, 1200mm respectively. (Plate 5 & 6 shows comparative radargrams.)

Data was collect on a two metre grid marked out on site. The antenna was scanned over each grid line at a slow speed (approx. 10-20m/min). Chainage was referenced to marks painted on the ground. An arbitrary chainage datum was selected at the South East corner of the site. The location of the survey pegs were noted on the final plan so that the information could be relocated to the site plan. Data was recorded at a scan rate of 48scans/s. This equates to a scan every 5mm or less to provide a high linear resolution.

The antenna was connected, via a 2m cable, to a GSSI Sir 3000 digital control and data acquisition system. The continuous digital data stream was recorded to memory for later downloading, processing and analysis. The raw data profile was viewed on site for quality assurance purposes.

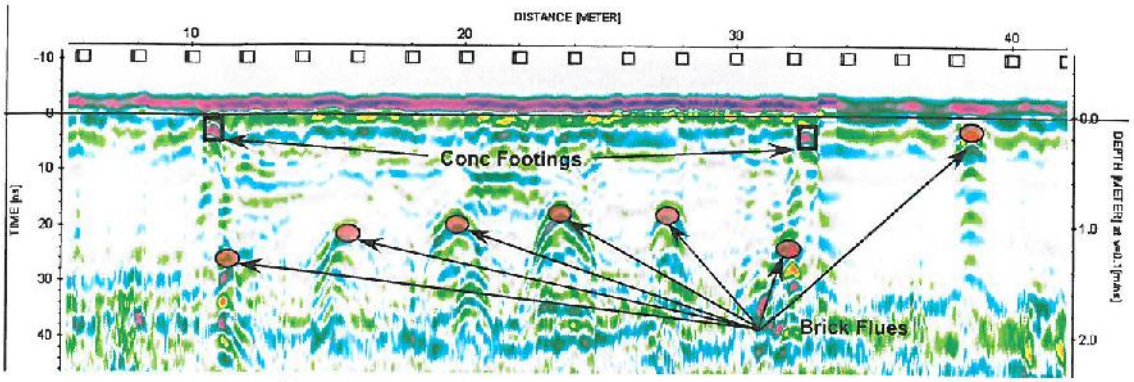


Plate 5: Typical 200MHz radargram along line L16.

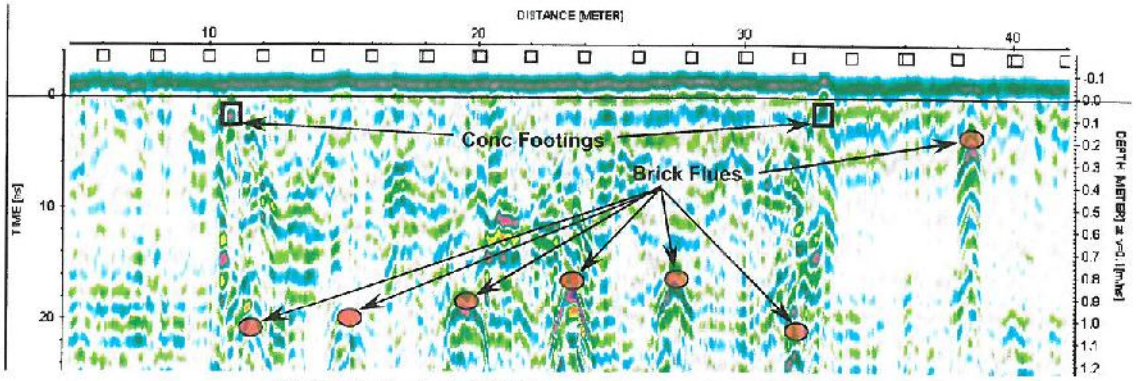


Plate 6: Typical 400MHz radargram along line L16.

Results

Refer to drawing GBGA0293-01.

In the southern half of the investigation site there is evidence of a pre-existing structure. There are two reinforced concrete slabs about 4m wide and 22m long, situated side by side and 8m apart. There is a transverse concrete strip footing extending at each end of the slabs. There is some remnant brick floor either side of the two slabs. There are also a number of holes which may be flue vents or collapsed section of flue. (Refer to drawing GBGA0293-01.) It may be possible to access the flues by remote video camera through these holes in order to get a better idea as to the size and direction and extent of the flue network.

GBG had some difficulty with the GPR establishing the continuity of the flues as they were not always clearly evident on parallel GPR lines. This could be the result of the flues being partially filled with silt or partly collapsed. Also, the ground conditions were not ideal because of the clay content, rubble and disturb fill material. The GPR was not able to resolve information below the concrete slabs because the steel reinforcement was too dense. There was however sufficient evidence to suggest a network of flues under the foundation as plotted on the attached drawing.

The GPR data suggests that there are possibly two types of flues; major and minor, as indicated on the drawings. The GPR data suggests that the major flues are approximately

1m wide and approximately 700mm to 1000mm deep. Three lines of major flues were found running North-South and six lines running East-West.

In addition there is a major flue to the North of the building footprint. This area has been excavated to approximately half a metre below the original floor level and has exposed the top of the flue. The west end of the flue may have been removed as it was not evident in the GPR data. The possible direction of the flue has been plotted based on soil disturbance evident in the GPR data.

A number of the flues converge to a point on the NE of the building footprint. It is also likely that the flues extend further to the East and to the West of the area investigated.

On one side of one of the concrete slabs a number of parabolic reflections similar to that of the major flues were noted. These have been labelled with "?" marks on the drawing and are at a depth of approximately 800mm. Their shape indicates that they should run in the East-West direction. However, they don't appear to go anywhere. It is possible that they related to the building foundations rather than to the flues.

The GPR data suggests that the minor flues are approximately 400 mm wide and approximately 200 to 300 mm deep. In some cases a deeper interface at approximately 800 to 900mm is evident below these flues indicating that these flues may be both slender and deep. All the minor flues tend to run in a North-South direction on either side of a major flue.

Additional GPR lines were done to the west of the investigation site to try and locate the direction of the flues. This area had not been excavated and has up to a metre of fill above the kiln floor level. No signal characteristic of a flue was detected in this area. It may be that the signal from the flue is just too weak and two deep to be pickup in this area under the soil condition present. However, two areas of high amplitude response were noted. One area near the fence is likely to be from a concrete slab associated with the road. The second area could possibly be a concrete pit cover associated with the junction point in the flue. The most likely direction the flue takes to the chimney has been plotted on the drawing. The GPR survey results have been superimposed on the sketch of the former brick pit site provided in the HLA report. Note that the building footprint on the sketch does not match the location on site.

Some brick portals filled with brick rubble had been excavated to the NW of the site (see Plate 7 below). Additional GPR lines done to the West of these features did not show any evidence that they extend much further than what is already exposed.

Plate 7: Brick Portals North West of investigation area

Additional GPR lines were done between the access pit and the chain wire fence for the two main flues extending out from the chimney. This was to locate the extent and direction of the flues and to look for any addition flues branching off. However this has proved unsuccessful in this occasion as no signal characteristic of a flue was detected. Again this may be because the signal from the flue is just too weak and too deep to be pickup in this area under the soil conditions present. The full extent of the survey area is shown on the second drawing GBGA0293-02. The drawing is superimposed onto an aerial photograph of the site obtained through Google Earth™. The date at which this photo was taken is not known however it appears to show the old truck washing station said to be the location of the chimney. However, this photo appears to show another chimney, as evident by the long shadow, located over the access pit to the SW of the site. Historic Photographs available through department of Lands, NSW may provide more information.

In conclusion, we have identified a network of flues in the investigation site using GPR as shown in the attached drawings. We have not been able to trace the extent of flues outside this area due to the increased cover of material and lack of signal penetration.

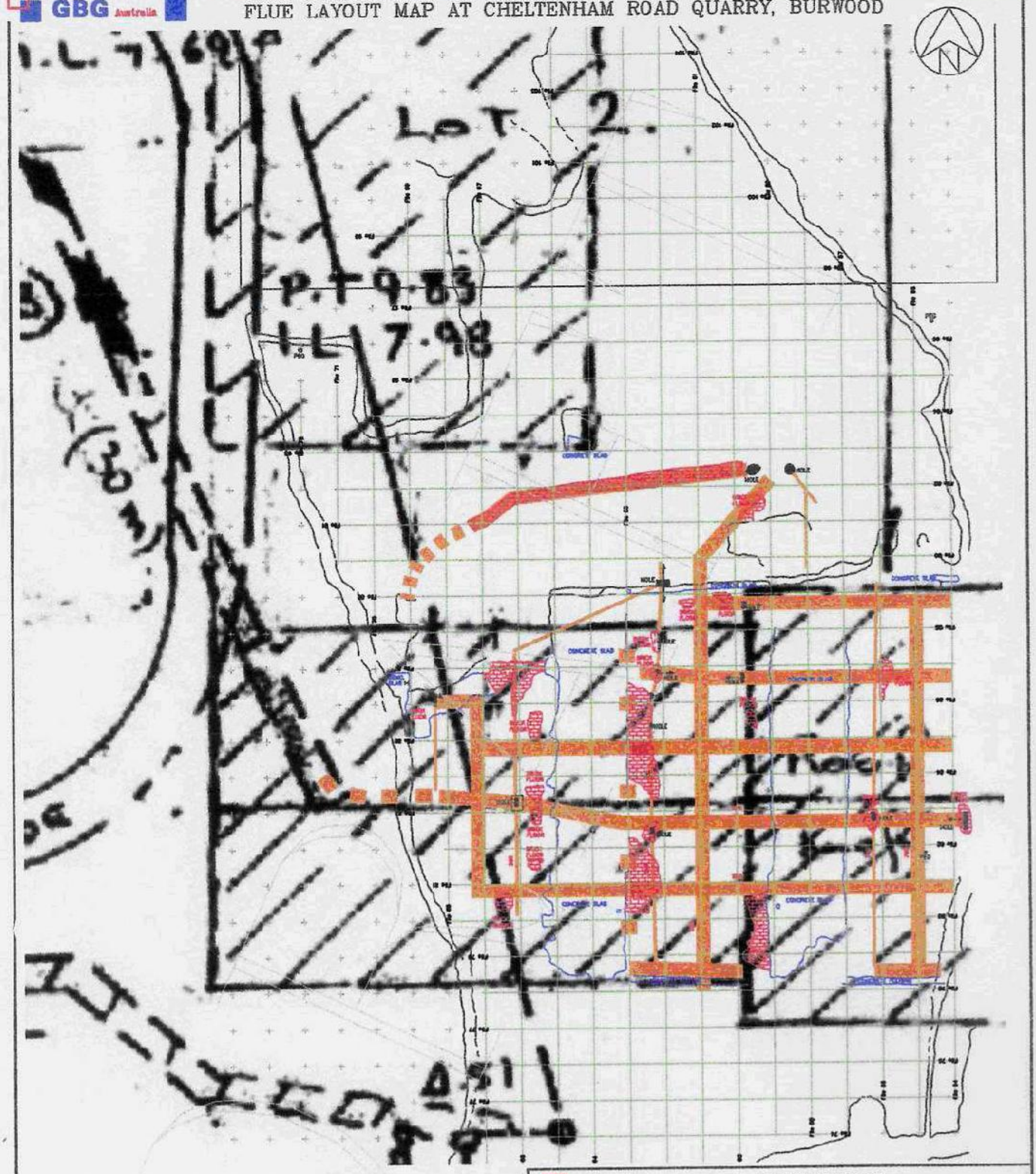
We trust that this information satisfies your requirements. If you require clarification on any points arising from this investigation please contact me.

Yours faithfully,

V. Donazzolo

Val Donazzolo
Investigation Engineer
GBG Australia Pty Ltd

FLUE LAYOUT MAP AT CHELTENHAM ROAD QUARRY, BURWOOD



LEGEND

- MAIN BRICK FLUE
- POSSIBLE MAIN BRICK FLUE
- POSSIBLE MINOR FLUE
- EXCAVATED AREA
- CONCRETE
- BRICK
- PEG SURVEY PEGS
- HOLE TO FLUE
- SURVEY GRID

GBG Australia

A.B.N. 77 009 550 869

NON DESTRUCTIVE TESTING

Suite 4, 8 - 10 Palmer Street, Parramatta NSW 2151, Australia

Telephone: (02) 9890 2122 Facsimile: (02) 9890 2922

CLIENT: HOPMAN CONSULTING SERVICES PTY LTD

TITLE: GPR INVESTIGATION TO MAP THE EXTENT OF UNDERGROUND FLUES FOR OLD BRICK KILN AT CHELTENHAM ROAD QUARRY, BURWOOD

DRAWN: BROOK	PROJECT MANAGER: S.A.W.	CADFILE: GBGA0293	
SCALE: 1:200	DATE: 11 JANUARY 2006	DRG No: GBGA0293-01	REV: A A3

18 Fennell Street,
North Parramatta, NSW. 2151.
Tel: 9890 2122. Fax: 9890 2922.
E-Mail: info@gbgoz.com.au.

A.B.N. 77 009 550 869.

8th February 2013

Attention: Michael Limnos
Burwood Council
PO Box 240
Burwood, NSW, 1805

SUBJECT: NON-DESTRUCTIVE INVESTIGATION USING GROUND PENETRATING RADAR TO LOCATE SUBSURFACE FLUES AT CHELTENHAM ROAD QUARRY, BURWOOD, NSW.

GBG Australia Pty Ltd carried out non-destructive-testing on the 6th February 2013 at Cheltenham Road Quarry, Burwood, NSW. This investigation used Ground Penetrating Radar (GPR). The object of the investigation was to determine the location of any underground heritage flues, prior to demolition and construction.

Theory of Techniques

GPR is a non destructive technique that provides high resolution reflection imaging of the subsurface. The technique works by pulsing electro-magnetic energy in the form of radio waves into the subsurface with a transmitting antenna. This energy propagates through the subsurface material as a function of its electrical properties which are in turn a function of its physical and chemical properties. Reflection of energy occurs at boundaries between media which have contrasting electrical properties such as a between steel reinforcement and concrete. These reflections are detected by the receiving antenna and converted into electrical signals. A radar-gram profile is built up of individual scans collected along a selected line path. A sample radar-gram has been selected from the data and shown as Figure 1. The recorded reflections can be analysed in terms of shape, phase, travel time and signal amplitude to provide information about a target's size, depth and orientation. Antennae of higher frequency provide higher resolution data but penetrate to shallower depths, whilst lower frequency antennae provide deeper penetration with decreased resolution. The depth of penetration achievable with an antenna of a particular frequency is also dependant on the local subsurface conditions.

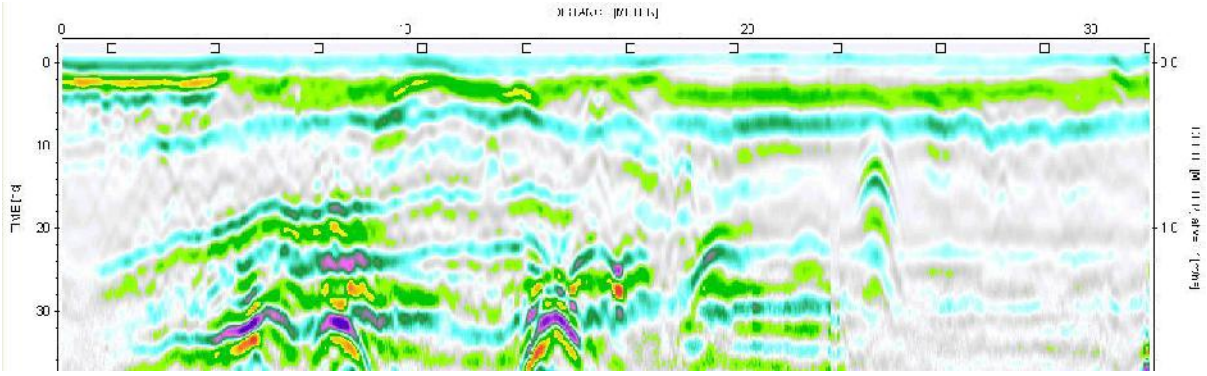


Figure 1: Sample Radargram from the site showing high amounts of underground objects and disturbances within the area east of the playing field.

Methodology

The GPR data was collected using a GSSI SIR3000 acquisition system with 200 MHz and 400 MHz centre frequency surface coupled antennas.

Profile lines were collected at approximately 0.5m spacings longitudinally along the road, with 12m transverse lines. Lines were collected where possible in the area east of the sports field due to metallic and earth mound obstructions. Collection was completed by pushing the antenna over the surface at a constant rate. The system was set to record a two-way-travel time of 40 ns with the 200Mhz and 25 ns with the 400MHz which equates to an effective depth of approximately 2m and 1.3m respectively.

On-site quality assurance and interpretation of the data was conducted by viewing the raw profile lines. Areas and objects of interest were marked on site with either yellow marker paint or a stake in the ground. Although on site marking had been completed, the further processing and analysis was carried out at our Sydney office, in order to locate further subsurface structures.

Figure 2: Site location to the south of the playing fields.

Results

Further study of the data in the office revealed that the area east of the playing field shows a large number of sub surface structures and disturbances, not originally noted on site, which may be linked with kiln flues or previous quarry construction. This area can be seen in Figure 3, below.

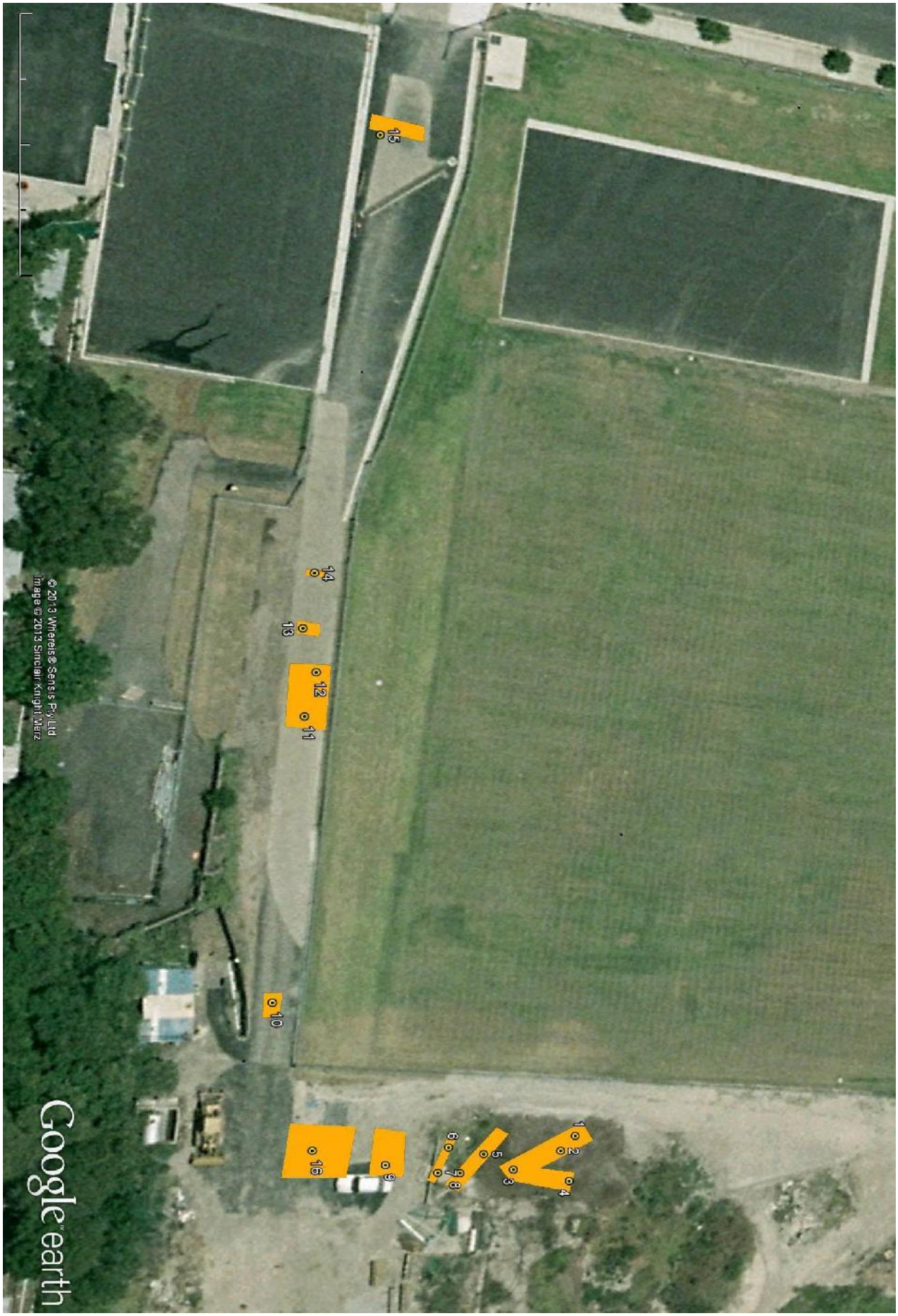
Some objects were isolated, sporadic, with the full extent not being able to be mapped due to obstructions on site. It is recommended to keep construction minimal in this area, with full caution being taken should it happen. Possible sub-surface structures and estimated paths/ ground disturbance have been highlighted in orange on the location plan at the back of the report.

Post processing of the data shows the depth of objects located in the areas south (road section) and east of the playing field ranging from 400-1000mm depth. The depths are shown in the table below and correlate with the object number on the location plan.

Figure 3: Site location to the east of the playing fields.

Object Number	*Number of Objects and Comments*	*Depth (mm)*
1	2 objects noted	400,1000
2	2 objects noted	400,1000
3	2 objects noted	400,1000
4	2 objects noted	400,1000
5	1 object/structure	800-1000
6	1 object/structure	800-1000
7	1 object/structure	800-1000
8	1 object/structure	800-1000
9	1 object/structure	800
10	Possible structure	400
11	Possible structure	600
12	Possible structure	600
13	1 object/structure	600
14	1 object/structure	600
15	1 object/structure	800-1000
16	1 object/ground disturbance	600

SITE LOCATION PLAN



DISCLAIMER: Although every effort has been made to accurately locate and plot subsurface structures within the areas specified, GBG Australia cannot guarantee that all relevant information has been obtained. This information should be used in conjunction with any plans available and adequate control measures must be in place before any digging takes place

I hope that this provides you with the information required. If you require clarification on any points arising from this investigation do not hesitate to contact me.

For and on behalf of

GBG AUSTRALIA PTY LTD

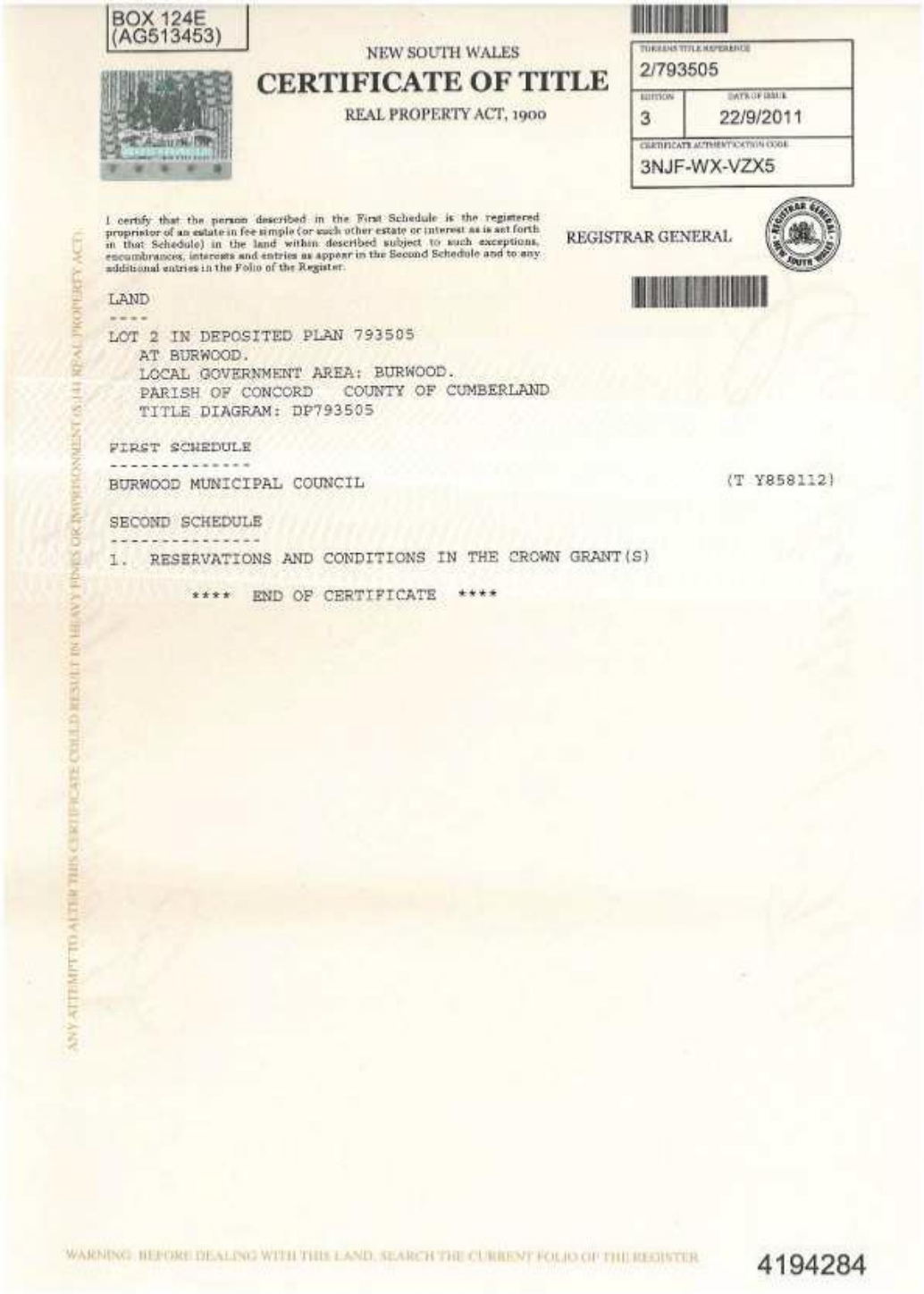
JACK ELLIS

Geophysicist

K Police Crime Risk Assessment Report (pending) 2013

To be inserted

L Certificates of Title 2011



BOX 124E
(AG513453)

NEW SOUTH WALES

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900

TORRENS TITLE REFERENCE
2/793505

EDITION 3 | DATE OF ISSUE 22/9/2011

CERTIFICATE AUTHENTICATION CODE
3NJF-WX-VZX5

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set forth in that Schedule) in the land within described subject to such exceptions, encumbrances, interests and entries as appear in the Second Schedule and to any additional entries in the Folio of the Register.

REGISTRAR GENERAL

LAND

LOT 2 IN DEPOSITED PLAN 793505
AT BURWOOD.
LOCAL GOVERNMENT AREA: BURWOOD.
PARISH OF CONCORD COUNTY OF CUMBERLAND
TITLE DIAGRAM: DP793505

FIRST SCHEDULE

BURWOOD MUNICIPAL COUNCIL (T Y858112)

SECOND SCHEDULE
---
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

**** END OF CERTIFICATE ****

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT).

WARNING: BEFORE DEALING WITH THIS LAND, SEARCH THE CURRENT FOLIO OF THE REGISTER

4194284

BOX 124E
(AG513453)

NEW SOUTH WALES

CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1900

TORRENS TITLE REFERENCE	
3/793505	
EDITION	DATE OF ISSUE
3	22/9/2011
CERTIFICATE AUTHENTICATION CODE	
DV29-VJ-FRCF	

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set forth in that Schedule) in the land within described subject to such exceptions, encumbrances, interests and entries as appear in the Second Schedule and to any additional entries in the Folio of the Register.

REGISTRAR GENERAL

LAND

LOT 3 IN DEPOSITED PLAN 793505
AT BURWOOD.
LOCAL GOVERNMENT AREA: BURWOOD.
PARISH OF CONCORD COUNTY OF CUMBERLAND
TITLE DIAGRAM: DP793505

FIRST SCHEDULE

BURWOOD MUNICIPAL COUNCIL (T Y858112)

SECOND SCHEDULE
---
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

**** END OF CERTIFICATE ****

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT).

WARNING: BEFORE DEALING WITH THIS LAND, SEARCH THE CURRENT FOLIO OF THE REGISTER

4194285

M Analysis of 2010 Community Consultation Results

Burwood Council
heritage ▪ progress ▪ pride

Analysis of the Wangal Park Community Consultation and Recommendations for Amendment of the Wangal Park Working Draft Sketch Master Plan

General overview of community consultation and responses

A total of 750 residents around Wangal Park were provided with Council's proposed Wangal Park Working Draft Sketch Master Plan (WPWDSMP) and Plan of Management. Residents were also provided with a pre-paid envelope and a response form. 76 responses were received by Council at COB 10 December, 2011. This represents a 10% response to Council's request for community feed back on the proposed Wangal Park Development.

The following is a brief analysis of the salient responses related to the design of the (WPWDSMP). Council's Urban Services staff has made suggested recommendations for amendments to the (WPWDSMP) for Council's consideration.

Please note that an * denotes a percentage of the total responses received by Council.

Location of respondents in relation to Wangal Park

35 respondents (*46%) are living in streets adjoining Wangal Park.

13 respondents (*17%) are living in streets up to two blocks away from Wangal Park.

12 respondents (*16%) are students from high schools in the Burwood LGA.

4 respondents (*5%) are living in the greater Burwood LGA.

4 respondents (*5%) are living within other LGAs in the Inner West.

Common responses

21 responses (*28%) support the skate park.

19 responses (*25%) oppose soccer field.

18 responses (*24%) are concerned about the impact that the Wangal Park development will have on local traffic and parking conditions.

11 responses (*14%) either suggested or expressed conditional support for the skate park if it were moved to a more central location in the park, away from residents.

Access

Eleven (*14%) respondents expressed concern over access to Wangal Park. Of these eleven responses, nine expressed concern over restricted access to the D.E.T. sporting facilities. A further six of these nine respondents used strong emphasis and language in reference to the D.E.T. fenced facilities.

“Am extremely disappointed that the playing fields and courts etc are school property only. Rate payers should have access.”

“Please consider to build a tennis court or two for local community as well as a basketball field. Currently there is one locked and belonged to Burwood High school that local residents can't have access. What a shame!”

“The Parcel of land belonging to the Education Department is crucial to the management of the Park, as Cheltenham Road is the overwhelmingly logical main entrance to the Park.”

n.b. also see attachments B, C, & F for quotes.

One respondent expressed concern that residents to the east of Wangal Park must walk along the entire northern or southern perimeter in order to enter the park.

One respondent noted that D.E.T. fencing also restricts access from the street into Wangal Park.

To note that there are zero written responses provided by Burwood Girls High School or The Department of Education and Training, opposing or supporting, the Wangal Park development (in particular over access issues).

RECOMMENDATION
That: Council continue negotiations with D.E.T. and Burwood Girls High School to achieve a Memorandum of Understanding over the shared access to Wangal Park, via Cheltenham Road, and for the community to have access to the D.E.T. owned playing facilities out of school hours.

Wetlands

14 (*18%) respondents made reference to the proposed wetlands.
Of these 14, 10 indicated that they want the 3rd existing eastern most pond to remain in Wangal Park as part of the new wetland ecosystem. One respondent expressed support for removal of the existing eastern pond. One response had concerns over the installation of the wetlands that included safety of children near an unfenced water body and three respondents had concerns of an increase in ‘nuisance’ wildlife such as Ibis birds, bats and mosquitoes. Two respondents indicated that the pond should be retained to provide a haven for existing wildlife in the park.

RECOMMENDATION
That: Council is asked to consider the retention of the 3rd existing eastern most pond to be incorporated into the overall wetland system design. Retention of this pond will require relocating the proposed skate park and reconfiguration of the shared pathway layout. The retention of the 3rd pond will be dependant on approval from Department of Environment and Climate Change.

Soccer Field

20 (*26%) respondents made reference to the proposed soccer/playing field. Of these 20, 19 opposed the inclusion of a soccer/playing field, with one respondent requesting council provide more detail on the proposed soccer field. 6 respondents used strong emphasis and language in opposition to the soccer/playing field.

Zero respondents expressed support for the soccer/playing field.

Reasons for opposition include the already existing soccer field in Blair Park, potential traffic and parking congestion during scheduled games, noise pollution and floodlighting adversely affecting neighbouring residents. There is a general view that Wangal Park should be for passive recreation.

RECOMMENDATION
That: Council does not proceed with the proposed development of a soccer field. This will allow for the retention of the 3rd eastern most pond, as above, and accommodate the relocation of the skate park to a more central location in the park. Furthermore, future parking designs and traffic modelling for the road network around the park may be investigated with the knowledge that the traffic generation rate will be reduced as there will be no soccer field.

That: Wangal Park be categorised for passive recreation (beyond the parcel of land owned by D.E.T).

Recreation

18 (*24%) respondents made reference to recreation facilities other than the skate park and soccer/playing field. The majority of these were suggestions rather than support or opposition to the WPWDSMP. Suggestions include the addition of a hall for youth activities and a day care, basketball ring, netball courts, tennis courts, kids bike track and racks, and fitness measuring posts. One respondent expressed opposition to a dog off-leash area.

RECOMMENDATION
That: Wangal Park be categorised for passive recreation as a local park. That consideration be given for a mini (or half) basket ball practice court be included in the final master plan. That an unfenced dog off-leash area be provided in a central part of the park (there are dog off-leash areas in Henley and Grant Parks but none in the northern part of Burwood). That fitness equipment and distance markers be installed around the shared path as noted on the WPWDSMP.

Skate Park

41 (*54%) respondents made reference to the skate park.
Nine respondents of those 41 oppose the inclusion of a skate park. Of these nine, six respondents cited noise and security issues as the basis for their opposition. 21 respondents support the skate park. 11 respondents either suggested or expressed conditional support for the skate park if it were moved to a more central location in the park, away from residents.

RECOMMENDATION
That: Council considers the inclusion of the proposed skate park. However, the skate park is to be relocated to a more central location within Wangal Park to minimise any noise affecting surrounding residential properties. The skate park relocation can be accommodated if the proposed soccer field is not included in the Wangal Park development. Burwood Council does not have a skate park. A skate park is considered a vital facility for the youth of Burwood.

Parking / Traffic

18 (*24%) respondents made reference to the impact that the development of Wangal Park will have on local traffic and parking conditions. Of these 18, 11 were strongly concerned about negative affects of increased traffic. Four respondents requested more information from Council regarding traffic calming strategies. Two respondents opposed the purchase of properties on Royce Ave for car parks.

To note that strong language was more prevalent in responses concerning parking than any other issue raised by the community.

RECOMMENDATION
That: Wangal Park be categorised for passive recreation as a local park. Without the inclusion of a soccer field future parking designs and traffic modelling for the road network around the park may be investigated with the knowledge that traffic generation will be far less as there will be no soccer field. Residents will be encouraged to walk and ride to Wangal Park.

That: Council does not compulsorily acquire residential property in Royce Avenue. However, Council may consider property acquisitions in Royce Avenue, should they become available, and pending appropriate funding.

Security

16 (*21%) respondents made reference to security issues.
Seven respondents either suggested or insisted on fencing and locking of amenities to combat criminal activity. Three respondents expressed concern about park users entering or looking into properties adjoining the Park. Suggestions for mitigating this problem include: trees to be planted away from fence to stop park users climbing/looking in, and permission from Council to build higher fences. Three respondents expressed concern about loitering and anti-social behaviour caused by Wangal Park amenities. Two respondents

requested more information from Council on security strategies to be implemented.

RECOMMENDATION
That: Council further consider security issues which may include fencing the amenities block. That Council consider the final design of the park to provide for open passive surveillance in and out of the park. That proposed tree planting to be set (at distance to be determined) away for the surrounding residential properties.

That: Council not fence off and lock the park at this stage.

That: Council note that a solar lighting network will provide lighting through out the park. This will allow surveillance at all times.

N Park User Questionnaire & Results 2005

CHELTENHAM ROAD PARK

draft plan of management

Burwood City Council is preparing a Draft Plan of Management for Cheltenham Road Park to guide development and management of this new community open space.

Questionnaire and Invitation to:

Community Workshop

6.30pm Monday 30th May 2005 at Burwood Council

How to be involved

The existing Cheltenham Road Landfill facility has been closed and Burwood Council has identified the opportunity to rehabilitate the site to provide a new community park.

Council's aim is to environmentally rehabilitate the landfill area providing an attractive landscaped parkland that can fulfil a number of functions to meet local and district community needs.

Your involvement will help to ensure that community needs and concerns are addressed in the draft plan. You are invited to contribute in one or more of the following ways:

Complete the Questionnaire

On the reverse side of this brochure and return to Burwood Council in the reply paid envelope provided.

Community Workshops

A community workshop will be held on the **30th May 2005 at Burwood Council, Conder Street Burwood** to discuss the potential community role of the park and issues that need to addressed in it's implementation and ongoing management.

Public Exhibition

Council proposes to place the Draft Plan of Management on public exhibition at a range of venues.

Contact the Study Team

Sarah Chapple or Adam Hunter
Environmental Partnership
2 River Street Birchgrove NSW 2041
ph: 9555 1033 fax: 9818 5292
email: sarah.c@epnsw.com.au

Robert Teo
Burwood City Council
2 Conder Street
PO Box 240
Burwood NSW 2805
ph: 9911 9911 fax: 9911 9900
email: robert.teo@burwood.nsw.gov.au

plan of management plan of management plan of management

A new park in Burwood

the first steps to a new park

Since the closure of the Cheltenham Road landfill Council has been working on strategies to rehabilitate the site to provide a new community park.

The first steps involve the creation of an environmental management system that includes:

- clean fill capping of the landfill
- control of drainage
- control of landfill gases

The works to implement these measures have commenced.

what might the park be like

It is proposed that the park might cater for a range of community recreational uses in additional to providing visual and environmental improvements to the landfill site.

The park should compliment other local parks in providing for activities and experiences that are not currently catered for adequately. Some potential features that the park **could include** are described:

- **village green grassed area:**

Central grassed open space that allows for several playing fields to cater for use by Burwood Girls High and several local junior sports clubs, but also provides an informal open grass space for family passive recreation.

- **pathway system:**

Linking the new park to Blair Park and Burwood Girls High School in addition to adjoining residential streets.

- **improved playgrounds:**

The park development would provide an opportunity to provide improved play spaces on the site that cater for a wide range of age groups and relate well to adjoining attractive landscaped spaces with seating and shade.

- **environmental improvements:**

The park rehabilitation would provide the opportunity to enhance native vegetation on the site

It is also proposed that a stormwater management wetland be provided in the vicinity of the existing site detention pond that can assist in water management on the site and provide an opportunity for water recycling for irrigation of grassed areas. The wetland would also provide habitat potential for birds etc.

QUESTIONNAIRE

Cheltenham Road Park

How would you like to use Cheltenham Road Park?

Please tick the appropriate box.

1. How often would you expect that you may visit the new park when completed?

Every day ☐
Several times a week ☐
About once a week ☐
About once a fortnight ☐
About once a month ☐
About 2-6 times a year ☐
About once a year ☐
Less than once a year ☐
Not sure/don't know ☐

2. When would you be most likely to visit the park?

Weekdays ☐
Weekends ☐
Public holidays ☐
Special events ☐

3. Roughly how long do think you would stay in the park?

Less than 15 mins ☐
Half hour ☐
Hour ☐
2 hours ☐
3 hours or more ☐

4. How would you get to the park?

Walk ☐
Car ☐
Bicycle ☐
Other ☐

5. Where do you live?

Burwood ☐
Other (provide postcode) .....

6. How many people in your family/household who would use the park fall into the following age groups?

0-8 years .....
9-14 years .....
15-21 years .....
22-35 years .....
36-64 years .....
65+ years .....

Existing site photos






7. Which of the following park features would you use / support?

Open grassed areas ☐
Pathway links ☐
Wetland / irrigation pond ☐
Toddlers playspace ☐
11-14 yrs playspace ☐
Fitness / exercise equipment ☐
Seats ☐
Picnic tables ☐
Barbeques ☐
Playing field ☐
Multi-purpose courts (eg. Basketball / Netball /Volleyball) ☐
Tennis courts ☐
Events put on in the park ☐
Toilets ☐
Litter / dog bins ☐
Parking spaces ☐
Other (Specify): .....
.....
.....
.....

8. What are the important landscape improvements needed for the park?

Shade trees ☐
Native plant species ☐
Landscaping adjoining residences ☐
Floral displays ☐
Shade trees ☐
Other - list in space opposite

BURWOOD COUNCIL
heritage ■ progress ■ pride

If you have any further comments you would like to make, please feel free to attach a separate sheet.

Examples of potential improvements







10. Any other comments / suggestions?

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Please include your details below if you would like to receive further information during the course of the project.

Name: .....
Address: .....
.....
Email: .....

Please fold and post back to Council by 3rd June 2005

2458 Cheltenham Road Park
Questionnaire Results
May 2005

No.	Question	Response	Response Rate / 113
1	**How often would you expect that you may visit the new park when completed?**	Every day	30
		Several times a week	50
		About once a week	17
		About once a fortnight	9
		About once a month	3
		About 2-6 times a year	3
		About once a year	0
		Less than once a year	0
		Not sure / don't know	4
2	**When would you be most likely to visit the park?**	Weekdays	78
		Weekends	85
		Public holidays	29
		Special events	29
3	**Roughly how long do you think would stay in the park**	Less than 15 mins	1
		Half hour	34
		Hour	66
		2 hours	23
		3 hours or more	6
4	**How would you get to the park?**	Walk	103
		Car	7
		Bicycle	23
		Other	5
5	**Where do you live**	Burwood	46
		Croydon	65
6	**How many people in your family / household who would use the park fall into the following age groups?**	0-8 years	59
		9-14 years	34
		15-21 years	39
		22-35 years	61
		36-64 years	138
		65+ years	43

2458 Cheltenham Road Park
Questionnaire Results
May 2005

No.	Question	Response	Response Rate / 113
7	**Which of the following park features would you use support?**	Open grassed areas	99
		Pathway links	89
		Wetland / irrigation pond	72
		Toddlers playspace	54
		11-14 years playspace	46
		Fitness / Exercise equipment	63
		Seats	97
		Picnic tables	84
		Barbeques	70
		Playing field	52
		Multi purpose courts	38
		Tennis courts	45
		Events put on in the park	55
		Toilets	91
		Litter / dog bins	74
		Parking spaces	42
8	**What are the important landscape improvements needed for the park?**	Shade trees	94
		Native plant species	76
		Landscaping adjoining residences	50
		Floral displays	48
9	**Any other comments suggestions?**	Main park entry via Cheltenham Road	2
		Carparking facilities out of view of adjoining residents	1
		Adequate parking provision	2
		Dog off leash area	6
		Provision of fauna habitat	5
		Interpretation of heritage of the site	3
		Security and surveillance	12
		Adequate lighting	7
		Buffer zone between residential properties and park	3
		Quiet areas	1
		No dogs permitted	1
		Bicycle tracks / pathways	13
		Childrens cycling track	6
		Park connections (to Blair Park)	3
		No sport	2
		Memorial garden	1
		BMX type facility	4
		5-11 years play equipment	2
		Teenage play area	2
		Skate facility	5

2458 Cheltenham Road Park
Questionnaire Results
May 2005

No.	Question	Response	Response Rate / 113
9	**Any other comments suggestions? Continued**	Solar lighting / Environmentally friendly park - recycling of waste etc	5
		Swimming Pool	1
		Community Hall	1
		Traffic plan required for adjoining streets	4
		Bushland theme / wilderness area	2
		No raised areas	2
		Cricket Pitch	1
		Tennis hitup walls	1
		Noise restrictions	2
		Café / kiosk facility	1
		Lake / water features / water play	5
		Universal access playground	1
		Disabled access	3
		Maintenance - clean and safe park	2
		Amphitheatre	2
		Weekend markets	1
		Mini putt putt course	2
		Gazebo	1
		Indoor equipment / playland	1
		Krispy Kreme	1
		Outdoor cinema events	1

O Community Workshop Forum Minutes 2005

Community Workshop 1

6.30-8.30pm, Monday May 30, 2005, Burwood Council

Attendees:
18 Community Members, Council Staff 3, Gary Mortimer – Department of Education and Training, 2 Study Team

Apologies:
N/A

No.	Item
1.0	**INTRODUCTION**
1.1	Rolly Lawford (RL) from Burwood Council welcomed all present and provided a brief introduction to current Council projects within the Burwood area and specifically the Cheltenham Road Park project.
2.0	**STUDY TEAM PRESENTATION**
2.1	Adam Hunter (AH) from Environmental Partnership (Landscape Architects and lead consultants) gave a brief introductory presentation which covered the following areas: • Aims of the Workshop • Objectives of the Plan of Management (POM) • Key Steps of the Plan of Management • Site Timeline • Background Strategies • Preliminary Site Issues
2.2	**Aims of the Workshop** • Provide an outline of the project • Facilitate discussion regarding community values and roles of the Cheltenham Road site • Facilitate discussion about pressures and opportunities that will affect planning and management of the park The next workshop will present design options and examples that consider and address the defined values, roles and issues as identified by the initial workshop and study team investigations.
2.3	**Objectives of the Plan of Management** To provide a coordinated framework for the management of the Park in accordance with the Local Government Acts including: • Review relevant background information related to the site • Identify the important values of Cheltenham Road Park • Provide Burwood Council with a series of actions to protect and improve park values • Prepare a Concept Masterplan to reflect required improvement works. • Format the POM to enable implementation and assessment of these actions over time A plan of management is required for Cheltenham Road Park to: • Guide the design, enhancement and management of the park as a new community open space • Coordinate responses to identified issues
2.4	**Key Steps of the Plan of Management** • Identify Values – Important qualities of the park that we want to protect • Identify Outcomes – Our objectives for the park • Identify Issues – Problems / opportunities that may effect values • Identify Strategies – Ways of achieving the objectives for the park • Masterplan – Concept landscape design for the park • Action Plan – Specific tasks required to implement strategies

No.	Item
2.5	**Site Timeline**

• Pre 1912	Heritage investigations under way currently
• 1912-1918	Brickworks commenced
• 1952-1953	Brickworks closed temporarily
• 1954-1978	Brickworks operated intermittently
• 1978	Brickworks closed - site sold to NSW Government
• 1982	Brickworks demolished by Department of Planning
• 1989	Burwood Council purchased 4.3 hectares with objective of operating as landfill and restoring as a park
• 2004	Landfill Closed
• 2004	Lot 1 (1.103ha) sold to Department of Education and Training

2.6 **Background Strategies**

Specialist Studies as Part of Plan of Management

- Cultural Heritage Review (Aboriginal and European)
- Flora and fauna values including arboricultural review
- Engineering issues

Previous Studies

- Flora, Fauna and Tree Assessment April 2005
- Cheltenham Road Landfill Final Closure Plan 2004
- Burwood Council Open Space Assessment 2004
- Heritage Assessment of the former Burwood Brickworks 2002
- POM Cheltenham Road park 2001
- Burwood Council Recreation Study 2001
- Cheltenham Road Open Space POM 1996

Burwood Council Open Space Assessment

Some details of the strategy were outlined due to its importance to open space management in Burwood.

Prepared to provide a strategic direction for future provision, development and community requirements for open space.

The study identified in consideration of projected population growth in Burwood there will be an:

- Increased demand for public sporting facilities
- Additional need for large open spaces which cater for more passive recreation activities such as walking, picnics and family activity.

Broad Strategy of the Open Space Assessment

The document's overall approach to providing and developing open space is recommended as:

1. Focus on establishing quality significant parks and sportsgrounds, i.e.:
   - Burwood Park
   - Cheltenham Road Site
   - Henley Park and Grant Park
2. Focus on improving the appeal and usability of existing smaller parks. Additional small parks are not essential and instead the emphasis should be on improving the quality and value of the existing small parks.
3. Place an emphasis on strengthening the uniqueness and quality of open space across the Burwood Council area.

No.	Item
	This approach will contribute to achieving quality open space that will support recreation and sport demands and participation in the Burwood local government area. The Assessment determined that redevelopment of the Cheltenham Road site provides a unique opportunity to address key open space issues. Specific open space directions for Cheltenham Road included: • Bushland and conservation values • Development of an 'integrated' park which provides for unique recreation and sporting experiences • Inclusion of a sporting component potentially incorporating playing fields and a cricket pitch • Provide linkages to Blair Park • Improve accessibility to adjoining areas and address strong 'enclosure' of park *Population Characteristics* Main implications for open space in Burwood are: • There will be a need for open spaces that cater for children as well as adults, i.e. sporting facilities and playgrounds as well as walking paths and places to exercise. • Open space will need to support older people, including accessible spaces and facilities. • Consideration should be given to the needs of various cultural groups, including opportunities for activities and any barriers such as language. • Park design and facilities should reflect the cultural diversity of the area. • There will be a need for affordable recreation and sport opportunities, hence the value of open space. • The relatively large proportion of apartments and flats will increase the need for and value of open space, particularly around the Town Centre. *Particular needs for the Cheltenham Road Tip Site as identified by the assessment included:* • Play equipment and spaces • Grassed area for games • Walking and cycle trails • Seating and shelters • Picnic areas • Landscaping and unique and appealing settings • Amenities • Car parking
2.7	**Preliminary Review of Park Site** AH noted that the overall 'park' site comprises three lots (refer attachment) • Lot 1 Western section of the park • Lot 2 Central and eastern area of park including the main landfill area • Lot 3 North west corner of the site (SES building location) Some preliminary issues as noted by the study team: • Access into the park • Enclosure of eastern section of the park • Views from and within the park • Land ownership • Drainage / water management

No.	Item
2.8	**Initial Feedback / Discussion** • *The group questioned how the previous Plan of Management & Masterplan studies fit into the new planning for the park and why a new study was required* AH explained that the current Plan of Management study was part of an ongoing planning process for the site. With the Landfill Closure Plan now complete the parameters of the site from an environmental engineering point of view are identified and will inform the study. The previous plan of management studies did not have the same level of information available and as such formed part of the process in development of the Closure Plan for the site. The Burwood Council Open Space Assessment was also completed since the last POM was undertaken and this sets a new direction for open space in Burwood. AH emphasised that part of the POM process is to review previous studies any previous concept directions for the site may be relevant if they address identified values and issues. • *Several community members queried whether traffic management of the streets surrounding the Cheltenham Road Park site was included as part of the POM study* AH stated that traffic management was not part of the study, however if specific parking issues were identified as part of the study process design solutions for the park may consider and address these issues as they specifically relate to the park (ie. Park entrances, parking etc). RL stated that Council is currently undertaking studies of the entire Burwood area in regards to ongoing traffic management but that this was considered as a separate project to the POM. • *What are the objectives of the Department of Education and Training in relation to Lot 1 of the site* AH invited Garry Mortimer from the Department of Education and Training (DET) to comment. Mr. Mortimer stated that the purchase of the land known as Lot 1 was currently being finalized and would be secured by the end of the financial year. DET had looked to acquire the land to serve as an extension of the school to facilitate an active playing area. Preliminary facilities that are being considered are a hockey field and several netball courts. AH emphasized that due to the cooperative approach of DET and Council there is an opportunity to provide an integrated open space and recreational facility within the park. AH suggested that any sports fields could potentially be a seamless feature of the park rather than a 'fenced off' area minimizing the visual and physical impact of these facilities within the overall appearance and function of the park.
3.0	**WORKSHOP DISCUSSIONS** An open discussion forum discussed the following: • Values / Roles of the park • Issues and Opportunities
3.1	**Values / roles of the park** • *Shared Use of Space* The group identified that given the nature of the park boundaries and the involvement of DET, that a shared use of space was desirable. The shared use of the park would lend itself to a multipurpose / integrated park that incorporates both passive and active recreation whilst limiting area of sporting facilities which could potentially dominate the park both physically and visually. • *Aesthetic Appeal* It was suggested as desirable to have a visually unique and aesthetically pleasing park landscape that is different to the typical 'municipal' style of park. This could potentially incorporate a bushland setting to areas of the park contributing to an urban bushland environment. • *Ecological / Environmental Values* The site provides an opportunity to create a park that responds to environmentally sustainable best practice and potentially serves an educational role to local schools and park users.

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	• *Linkages & Connections* Role of the park as part of a broader open space / park system including linkages to the proposed Cheltenham Road Cycleway link to Canada Bay. Potential linkages to Blair Park will require close consultation with Burwood Girls High School due to access issues. Need to also consider internal linkages within the park site and access to and from different areas of the park. • *Privacy & Security* Members of the group noted that they felt the value of privacy and security had not been effectively addressed in previous studies. Planning should recognise the importance of the park's role as a 'good neighbour'. The meeting generally noted that the treatment of the site boundaries would be important in establishing a 'safe' park environment. Several group members suggested that it may be preferable to have a park that could be locked at night. Others noted that it was preferable to address the issues and values as identified to create a park that meets the privacy and security needs of the users and adjoining residents without resorting to a 'locked' park environment. • *Leisure & Sporting Recreation* Park provides opportunity to accommodate a range of formal (eg. organised sport) and informal (eg walking, family play) sporting activities. • *Diversity* Potential to reflect the diversity of the Burwood area and community through park design. Role of the park as a refuge from the surrounding urban environment should be explored. • *Catering for a range of groups* There is a need to cater for both adults, older children as well as toddlers within the park. Currently spaces for adolescents are not readily provided and there are potential social issues created by marginalising community groups. The park should ultimately cater for a range of users. • *Possible Café* A member of the group suggested that the inclusion of a café / restaurant would encourage use of the park by a variety of users and that Centennial Park was an example (at a larger scale) of a successful inclusion of a restaurant / café into a park setting. Other members of the group suggested that this type of facility could be too commercial in a park area. AH noted that such uses would need to be evaluated against their potential impact on other park values. • *Engaging the Community* Potential to include the community not only in the preliminary stages of the project but through to implementation and ongoing management of the park as an important community open space.

No.	Item
3.2	**Issues** • *Rubbish Management* Need for careful placement of bins in proximity to high use areas such as potential café, barbeque facilities etc. Council vehicular access is also required in order to remove rubbish from the site – possible location of bins close to vehicular path access. There is potential to emphasise sustainable waste management as a positive strategy by incorporating effective recycling of waste. This may also tie into the educational role of the park. • *Access* Vehicular access onto the site would need to be effectively managed, as there has been problems in Blair Park with illegal vehicular access. Minimal vehicular access (Council / maintenance vehicle and emergency access only) was preferable. AH suggested there is potential for any bicycle paths on the site to also serve as the necessary vehicular access routes. AH noted that the site is required to be 'universally accessible' which would provide equal access for all users of the park including disabled and elderly. • *Security & Safety* Some residents noted burglary issues with access from the landfill site into adjoining properties. AH suggested a range of strategies would need to be reviewed in determining the preferred treatment. It was noted that police input from the local area should be sought as to local issues and potential approaches to security. • *Dog Walking* Incorporation of dog walking facilities without compromising the use and function of the park by other users is desirable. • *Traffic* The group identified that traffic and parking had been an ongoing in surrounding streets in particular through traffic in peak hours. A member of the group noted that the signals to Parramatta Road and Cheltenham Road had initially been installed as a 'temporary' measure to facilitate access for trucks using the landfill site. RL stated that Council would examine this issue as part of the broader traffic studies for the Burwood area. • *Parking* The group generally discussed that losing significant park area to car parking would not be desirable. AH noted that there would be a base level of parking required to facilitate the park, however this would be located to minimize the physical and visual impacts on the park. A member of the group queried as to whether the parking 'load' would be shared between the school and Council. AH stated that this would be considered in the planning process and in consultation with the School and DET. • *SES Building* Robert Teo (Burwood Council) noted that Council is currently looking for alternative locations for the SES headquarters and was hopeful that this would be possible as the SES building site provides an opportunity for increased access into the park. • *Level of Use* Members of the group inquired as to the level of use of the park if it were to be established as a regional park. AH noted that the access issues and size of the park determine the site's role as a district park rather than a regional facility. AH further commented that due to the residential context of the park that the park would probably serve a dual role as both a local park for the immediate surrounding residents and a district park for users of the greater Burwood and Croydon area.

No.	Item
	• *Relationship between Council & DET* Potential conflicts between Council and the DET with planning, development and ongoing management of the park where flagged. A member of the group inquired if there is any zoning restrictions preventing the DET from building on the Lot 1 land in the future. RT stated that there are no restrictions to the use and function of the land. AH emphasized that it is positive that DET was involved in the planning process and that effective consultation would be an ongoing part of the study. The ultimate aim would be to create a total park that meets both Council's and the Schools needs. • *Vehicular access* Access would preferably be restricted to maintenance and emergency vehicles only. • *Picnics* The park should be a desirable area for picnics with potential incorporation of facilities to support these uses. AH noted that the placement of these type of activities was critical and should consider the privacy and security of the park environment.
4.0	**WHERE TO FROM HERE?** AH outlined key aspects of the Plan of Management process from here: • Study team to prepare draft concept designs addressing the values and issues as identified • AH stated that the group should feel free to contact the study team if any other values or issues arise or if there are any comments in regard to the meeting notes. Environmental Partnership (NSW) Pty Ltd (Adam Hunter or Sarah Chapple) - 9555 1033 Burwood Council (Robert Teo) – 9911 9911 • Community Workshop No. 2 – The group generally discussed that a Wednesday evening would be preferred for the next Workshop with a later start at 7pm. **Wednesday the 20th of July 2005 at 7pm** at Council's Administration Centre was confirmed by Council.

Workshop Ended 8.30pm

Next Workshop : Wednesday 20th of July 2005 at 7pm

Community Workshop 2

7.00-9.00pm, Wednesday July 20, 2005, Burwood Council

Attendees:
25 Community Members, 4 Council Staff, 2 Study Team

Apologies:
N/A

No.	Item
1.0	**INTRODUCTION**

1.1	• Adam Hunter (AH) from Environmental Partnership (Landscape Architects and lead consultants) thanked the attendees for taking part in the second workshop.
	• AH invited Rolly Lawford (Burwood Council) to comment on the timeline for completion. RL stated that the project is running slightly behind schedule, however it is anticipated that final capping works to the landfill area will be completed in October 2005. RL also commented that a temporary grassed entry area to Cheltenham Road will be opened to the public in the coming weeks.
	• AH noted that as part of the POM process other studies have been undertaken including:
	  • Heritage Assessment by Mayne Wilson & Associates, Heritage Architects
	  Offers potential for interpretation of the sites past role and history from a heritage point of view.
	  • Environmental Assessment by EcoLogical Australia, Environmental Planning & Management
	  Highlights potential habitat and ecological opportunities for the site.
	• These additional studies provide a greater framework for decision making in regards to future design and use of the park.

2.0	**STUDY TEAM PRESENTATION**
2.1	**Study Area** • AH provided a summary of the land ownership boundaries and noted that the Department of Education and Training has ownership of Lot 2, which includes the majority of the Cheltenham Road frontage. It was also noted that the Department of Education and Training has been part of the study process and that it is positive that a cooperative development and management relationship can be established between the school and Council. • AH stated that the needs of the School had been identified previously as a hockey field and two netball courts, and that these elements were being designed into the park as seamless features as a resource for both the School and the wider community.
2.2	**Key Steps of the Plan of Management** • Identify Values – Important qualities of the park that we want to protect • Identify Outcomes – Our objectives for the park • Identify Issues – Problems / opportunities that may effect values • Identify Strategies – Ways of achieving the objectives for the park • Masterplan – Concept landscape design for the park • Action Plan – Specific tasks required to implement strategies AH noted that the action plan also identifies the implementation priorities for the park, the first of which would generally incorporate the development of the landscape fabric of the park to begin development of the site as an attractive setting in which to recreate.
2.3	**Workshop 1 - Values** The initial workshop discussions developed a set of values for the park which included the following: • *Shared Use of Space* The group identified that given the nature of the park boundaries and the involvement of DET, that a shared use of space was desirable. The shared use of the park would lend itself to a multipurpose / integrated park that incorporates both passive and active recreation whilst limiting area of sporting facilities, which could potentially dominate the park both physically and visually.

No.	Item
	• *Aesthetic Appeal* It was suggested as desirable to have a visually unique and aesthetically pleasing park landscape that is different to the typical 'municipal' style of park. This could potentially incorporate a bushland setting to areas of the park contributing to an urban bushland environment. • *Ecological / Environmental Values* The site provides an opportunity to create a park that responds to environmentally sustainable best practice and potentially serves an educational role to local schools and park users. • *Linkages / Connections* Role of the park as part of a broader open space / park system including linkages to the proposed Cheltenham Road Cycleway link to Canada Bay and Blair Park. Need to also consider internal linkages within the park site and access to and from different areas of the park. • *Privacy & Security* Planning should recognise the importance of the park's role as a 'good neighbour'. The meeting generally noted that the treatment of the site boundaries would be important in establishing a 'safe' park environment. • *Leisure & Sporting Recreation* Park provides opportunity to accommodate a range of formal (eg. organised sport) and informal (eg walking, family play) sporting activities. • *Diversity* Potential to reflect the diversity of the Burwood area and community through park design. Role of the park as a refuge from the surrounding urban environment should be explored. • *Catering for a range of age groups* There is a need to cater for both adults, older children as well as toddlers within the park. Currently spaces for adolescents are not readily provided and there are potential social issues created by marginalising community groups. The park should ultimately cater for a range of users. • *Possible Café* Potential inclusion of a café / restaurant would encourage use of the park by a variety of users. AH noted that establishment of a café facility maybe a long-term objective that can be assessed once recreational uses and facilities are established on site. • *Engaging the Community* Potential to include the community not only in the preliminary stages of the project but through to implementation and ongoing management of the park as an important community open space.
2.4	**Site Issues** • AH provided a brief summary of the immediate site issues that were identified and discussed at the initial workshop. • The achievable water quality of the pond will be a critical component in determining use of the pond and potential for water recycling etc. AH noted that Council has considered the water body to be a major component of the site's development and further ecological advice has identified that given appropriate planting the pond may serve a potential habitat role for the park. • AH stated that as previously noted the potential ownership / usage conflicts between the School and Council is a key issue that needs to be addressed through careful planning and management of the park. AH noted that Council are seeking a 'landswap' agreement with the School to establish greater through access, however this has not been formalized to date. • AH stated that one of the most important issues affecting the park is the enclosure by adjoining residential properties, and that the boundary treatments seek a balance between the privacy and security of residents and the optimization of open space for park users.

No.	Item
2.5	**Planning Principles** • AH stated that the study team had from both the site issues and the identified values for the park established some basic planning principles which begin to inform design options for the park as presented in a simple diagram for the site. • As previously noted the School has expressed desire for the inclusion of a hockey field and two netball courts to the park to serve as an extension of their available sporting / recreation space. Given these parameters it follows that the most appropriate location for the playing fields is adjoining the School boundary, which serves to provide optimal access for the School and also limits the potential impacts of these facilities on adjoining residents. • Passive or informal recreation opportunities are then focused to the eastern section of the park, which again minimizes potential impacts (eg. Noise) to adjoining residences. • The greatest opportunity for parking is afforded by Cheltenham Road, and this may consider several configuration options such as off street 'in park' parking or on street parking provisions. It is also noted that this area also features and ties into the Cheltenham Road cycleway, which connects into the greater open space areas of Canada Bay. • There may be potential to have play spaces in several locations across the park that are further identified in the planning options. • The concept of a loop path to provide access around and through the park is important to creating a pleasant park experience and enables use by people walking, jogging or children on bicycles etc. The path also considers potential connections into Blair Park, which may in the future provide even greater opportunities for recreation. • AH stated that as discussed, the boundary treatments are critical and need to consider that the relationship to the park from the southern boundary is very different to that of the northern and eastern boundaries. The southern section provides a far greater slope / level change, whereas the northern and southern sections of the park provide a far more flat topography. AH also noted that from his discussions with other Council's and the study teams examination of other park boundary situations the more 'open' type vegetation provides a more workable edge as it optimizes passive surveillance to the boundaries.
3.0	**DESIGN OPTIONS**
3.1	**Option A**

Grassed playing fields

- The initial design option provides a basic response to placement of the playing fields in a north-south orientation against the boundary of the School. AH stated that it was the study teams recommendation that both the hockey field and netball courts be a grassed surface as opposed to hard surfaced courts, however this would need to be further discussed with the School.

Open grassed common

- The main function of the large village green space is to provide an open area, which allows for informal recreation, and provides an open park character to this section.

Amenity block

- The location of the amenities block responds to a proximity to both the playing fields and the park frontage to Cheltenham Road. The location (in the area of the SES building) also provides the simplest, cheapest position as services such as power and water are already within this area.

Playground

- Two playground facilities are proposed, a smaller area in a similar position to the existing play facilities to Monash Parade, which may provide a toddlers type facility, and a larger facility located in the southern area of the site adjoining the playing fields. The inclusion of a larger facility provides greater opportunity for a diversity of play structures and can appeal to a wider range of age groups.

Pond - Riparian / wetland planting

- The proximity of the loop pathway to the pond provides potential opportunities for heritage and environmental interpretation to this area.
- Wetland planting adjoins the pond area, effectively breaking down the regular shape of the water body and providing habitat opportunities for urban generalist fauna species.

Native grasses

- Native grass planting adjoining the pond area and residential housing to Royce Avenue provides a low level ground covering which optimizes visual surveillance across this section of the park.

No.	Item
	Carparking
	• The parking option provides an 'in and out' configuration which optimizes the number of parking spaces provided but is perhaps negatively offset by the 'land take' impact of the parking located within the park setting.
	Full strata boundary embankment planting
	• Planting to the southern boundary offers potential area for intensive revegetation works to occur with higher intensity planting focused to the lower areas of the bank to minimize impacts to adjoining residents including solar access. This area also potentially provides a more bushland character offering a different park experience to the more formal maintained grass areas.
	Trees in native grass boundary planting
	• Native grass planting to the residential boundary areas in the northern and eastern section for the park provides an alternative to maintained grass and is more efficient from a maintenance point of view. Canopy trees are also included in this boundary treatment area, however are planted relatively sparsely to allow views through to adjoining properties and fencelines and enhance passive surveillance into and out of the park.
	Skateboard area
	• A skate 'bowl' facility is indicated adjoining the pond and is potentially worked into the basin depression of the pond providing an informal amphitheatre, which looks down onto the skating activity below.
	Fitness area
	• An outdoor gym / fitness facility is indicated adjoining the major play space, offering a different park recreation opportunity and experience.
3.2	**Option B**
	Grassed playing fields
	• This option locates the playing fields further south into the school lands, which opens up greater park area for non-sporting use. This option would need to be discussed in detail with the School and further investigation of the earthworks required due to the level changes into the School area.
	Open grassed common
	• Similarly to Option A, the central grassed area provides opportunity for informal recreation.
	Amenity block
	• The amenities block is positioned to the southern boundary area of the site and is within close proximity to the playing fields.
	Playground
	• A single, large play facility is proposed to the eastern side of the site. AH stated that one of the issues that needs to be considered for the playground in this location is its proximity to Cheltenham Road which may mean the facility would need to be fenced.
	Pond - Riparian / wetland planting
	• As with Option A, a path adjoins the pond / wetland area providing potential interpretation opportunities. • Wetland planting adjoins the pond area, effectively breaking down the regular shape of the water body and providing habitat opportunities for urban generalist fauna species.
	Native grasses
	• Native grass planting adjoining the pond area and residential housing to Royce Avenue provides a low level ground covering which optimizes visual surveillance across this section of the park.
	Carparking
	• The carparking is restricted to on street provision with the full extent of the Cheltenham Road frontage providing 90 degree parking. This provides optimum parking provision but dominates the visual appearance of the park frontage.
	Trees in maintained grass embankment planting
	• Maintained grass with canopy tree planting is proposed to the southern boundary embankment to maximize the available park area.

No.	Item

Trees in maintained grass boundary planting

- Maintained grass with canopy tree planting is again proposed to the northern and eastern boundaries to maximize the available park area and enable greatest visual surveillance through this area.

3.3 **Option C**

Grassed playing fields

- The playing fields have been orientated on an angle, which still provides optimum playing orientation but opens up a greater area to the Cheltenham Road frontage providing a more desirable park entry and character.

Open grassed common

- The open grassed area is complemented by large, flat terraces which incorporate low sitting walls to optimize views over the site and provide more intimate grassed spaces on the southern edge for activities such as family picnics.

Amenity block

- Similarly to Option B the amenities building is located in close proximity to the playing fields to the southern area of the park.

Playground

- Two play facilities are proposed, with the larger play facility focused to the south eastern corner of the site to optimize this area as the highest point offering views across the site and towards surrounding areas.

Pond- Riparian / wetland planting

- Similarly to the previous options the pond and wetland planting provides a potential focus for heritage and environmental interpretation as well as a habitat for local fauna species.

Native grasses

- Native grass planting adjoining the pond area and residential housing to Royce Avenue provides a low level ground covering which optimizes visual surveillance across this section of the park.

Carparking

- The carparking configuration again incorporates an on street 90 degree angle system (as with Option B) however the extent and provision of parking has been greatly reduced to provide a more open entry to Cheltenham Road.

Trees in maintained grass embankment planting

- Maintained grass with canopy tree planting is proposed to the southern boundary embankment to maximize the available park area.

Trees in native grass boundary planting

- Native grass planting to the residential boundary areas in the northern and eastern section for the park provides an alternative to maintained grass and is far more efficient from a maintenance point of view. Canopy trees are also included in this boundary treatment area, however are planted relatively sparsely to optimize views through to adjoining properties and enhance passive surveillance into and out of the park.

Skateboard area

- A skate trail facility is indicated connecting the northern and southern sections of the site. AH stated that this facility may also provide for children on bikes and rollerbladers etc. It is also possible that noise minimizing materials could be implemented to this area to minimize any potential noise impacts to adjoining park uses.

Amphitheatre

- The sloped nature of the southern boundary begins to provide opportunity for an informal amphitheatre area to the lower area of the bank potentially providing an outdoor class room space or for low key community events held in the park.

No.	Item
4.0	**WORKSHOP DISCUSSIONS**
	An open discussion forum discussed the park element configuration of the three options presented and additional community issues.
4.1	**Design Options – Park Elements**

Carparking

- Several residents expressed concern regarding the level of parking provided for the park and the management of the parking in this area as there are existing parking issues associated with events held at the School every 2-4 weeks on weekends.
- It was stated that the speed of traffic to Cheltenham Road is also an issue and that this may create impacts on increased pedestrian use of the area once the park is developed.

  RL stated that Council will make every provision for appropriate parking to facilitate the park and that an overall traffic / parking review and strategy was being formulated for the Burwood area, however this should be considered separate to the POM study.
- It was suggested that implementation of 'resident only' parking would be an appropriate management strategy to be utilized in many of the areas adjoining the park.
- AH stated that as possible, parking and traffic issues would be addressed within the POM as they directly affect / impact upon the use and management of the park. Parking at a minimum would be required to meet Council's planning controls and regulations. AH also noted that vehicular access into the park should be limited to maintenance and emergency vehicles only.
- A member of the group suggested that underground parking provision would overcome the parking issues in the area and not inhibit the park character. AH stated that the cost of undertaking underground parking was considerable and that there is an issue of using the available funds for park development most effectively to provide greatest benefit to the community
- It was generally noted that the 'drive in, drive out' parking configuration was preferred as it provided the maximum number of parking spaces with the greatest level of pedestrian safety.
- It was suggested that the parking could incorporate the existing driveway area adjoining the School.

Open Grassed 'Village Green

- A member of the group noted that the Option C was preferred as it provided two separate sections to the village green area, separated by the pathways. This effectively enables more active informal recreation to occur in one area such as ball games, and other activities such as picnics to occur in the other adjoining space.

Playing Fields

- It was generally noted that the skewed playing fields as indicated in Option C provided an interesting design solution to the provision of this sporting recreation area, and that the opening up of the Cheltenham Road frontage was desirable to maintain an inviting park character.

Amenities

- It was generally discussed that the amenities facilities should provide equal access for users and should have a close siting relationship with the major playground facility.

Playgrounds

- It was suggested that the playground facilities should be accessible to all users and that this could potentially incorporate a 'Liberty Swing' which provides for wheelchair access.
- AH noted that the accessibility of all facilities was a natural progression from the identified values of diversity and the park catering for a range of age groups.
- A general preference for the major playground facility to be located towards the Cheltenham Road side of the park adjoining the playing fields was noted.
- It was also stated that a strong commitment to maintenance of playground and other facilities within the park was required.

Skate Facilities

- It was generally noted that a skate facility would be supported given it was of 'low impact' to surrounding residents and other park uses.
- It was also noted that the skate facility should be confined to a section of the park and removed from adjoining pathways.
- AH stated that the skate facility should be subject to Council's strategic vision for provision across the LGA.

No.	Item
	Pathways • It was stated that a track is required to the area adjoining the frontages of Royce Avenue and Monash Parade as there is no existing footpath in this area. • Several members of the group stated that there may be potential conflicts between cyclists and pedestrians using the major loop path through the park. AH stated that it was envisaged that the path would generally be limited to cycle use by children and would not promote high speed cycling through this area as it does not provide a through route access. • AH noted that the major path would be of a hard surface; however smaller paths could potential incorporate materials such as crushed sandstone offering a different park experience. ***Pond*** • The safety of the pond was questioned by several members of the group. AH noted that the desirable design solution would be to implement banks of 1:6 grade, which would effectively mean that the boundary to the pond would not require fencing. However, if a barrier was required it would be designed as a feature of the landscape to this area. AH also noted that all areas of the park would be required to meet the necessary Council and Government codes for health and safety. • It was generally commented that it would be desirable to have the pond / water body looking as natural as possible. AH stated that the use of the wetland planting area adjoining the major water body would aim to create a relatively natural look. • It was noted by a member of the group that provisions should be made to limit the number of mosquitoes that inhabit the pond area. AH stated that this generally related to the aeration of the water and that if recycling of water was possible that this would ensure that the water was in a constant aeration process. • Members of the group inquired as to habitat provision for the blue tongue lizards that exist on site. AH noted that the lizards had not been identified in either of the recent environmental studies however the habitat area adjoining the pond could potentially provide for the lizards as well as other fauna species. ***Boundary Planting*** • It was generally agreed that tree planting within native grasses was the preferred boundary treatment. A member of the group noted that tree planting should detract from residents' solar access to their properties. AH responded that the location and species of tree planting would consider solar access and would not increase overshadowing effects to backyards. • AH also pointed out to maintain clear views across the site implementation of landscape works would need to be staged to enable appropriate tree growth to enhance the passive surveillance of the site. • It was generally discussed that there is an issue associated with the visual appearance of the fence lines surrounding the park and it may be appropriate for Council to pursue a unified treatment to the adjoining fences. ***Amphitheatre*** • It was noted that this would not be a formal feature of the park, rather it utilizes that natural grade of the site. ***Public Art*** • It was suggested that a local public artist could be involved in the design development of the project to provide artwork features within the park. AH stated that it would be recommended that a public artist be involved in the design development of the project and that other opportunities such as art installations could be implemented within the park, providing a further aspect of community use.

No.	Item
4.2	**General Comments / Issues**

Funding

- A member of the group inquired if any of the preliminary options had been costed as all options should be costed and designs created to reflect Council's immediate budgetary requirements.
- AH stated that the costing of the proposals is one of the next steps when the masterplan is more defined and that the POM is a long term planning document that does not seek to limit the opportunities of the park, but optimize the sites development through a staged implementation process. Part of the process of determining an Action Plan for the site is determining both the immediate priorities and the more longer-term visions for the site. These are also setout with potential funding opportunities and the design and POM process provides Council with the direction for the amount of funding that should be allocated for the park development.
- AH further noted that Council has strong commitment to the development and management of all of the three large parks in the Local Government Area – Burwood Park, Henley / Grant Park and now Cheltenham Road Park.
- It was inquired if the Department of Education and Training would be contributing to funding of the project. RL stated that yes, DET was contributing to the POM process and that the amount of contribution funding for implementation works were under negotiations.

Ownership & Boundaries

- Several members of the group expressed concern regarding the potential for the School to completely monopolise the Cheltenham Road frontage.
- AH stated that the development of the park with close consultation with the school could be seen as a unique opportunity to meet both the needs of the general community and the School and that the co-management of facilities would ensure that the development and use of the park was sustainable into the future.
- RL noted that there is currently a licence agreement between DET and Council permitting through access to the site and this effectively maintained the area as open space.

Security

- Members of the group inquired as to the security of the site as the proposed landscape seemed to provide optimum opportunity for undesirable activities including vandalism of the site and dumping of rubbish. It was suggested that intensive lighting to the site boundaries in particular would prevent any anti-social behaviour
- AH noted that in previous experience the increased use of the area will provide greater security than currently exists on the site, and that an effectively managed landscape that incorporates the concepts of passive surveillance will provide a desired level of security for adjoining residents and park users. AH also commented that intensive lighting can often contribute to the incidence of crime in an area and that any lighting provision would need to ensure that there is no negative impacts on adjoining residents.
- AH also stated that the study team and Council have liaison with the local police station and that it was unfortunate they were unable to attend the workshop session.

Off Leash Dog Area

- AH stated that off leash dog areas needed to be considered as part of Council's strategic direction for provision of these facilities across the LGA. A potential method would incorporate programmed times when off leash walking was permitted.
- It was noted that there is off leash provision currently within Henley Park.

Where to from here?

- A member of the working group inquired as to the process in formulating the final design option for the masterplan.
- AH stated that over the following weeks the study team would continue to develop a preferred option, which incorporates both the comments from the workshop discussions and from meetings held with Council. Once a preferred design has been approved by Council this will go to public exhibition, where comments will be received and any amendments required would be undertaken prior to the plan being adopted by Council. AH noted that it would be desirable to have the POM in place (adopted by Council) by December 2005.
- AH noted that implementation works would depend on funding, but may begin in mid 2006.

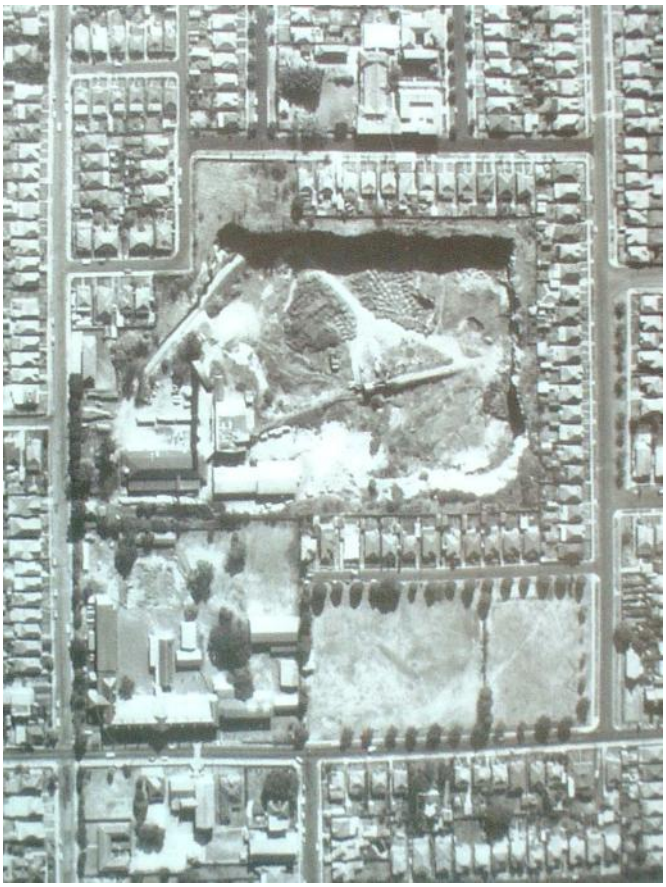
Workshop Ended 9.20pm

P Heritage Character and Values Assessment 2005

HERITAGE CHARACTER AND VALUES ASSESSMENT

of the

ENVIRONS OF PROPOSED CHELTENHAM ROAD PARK, BURWOOD



Prepared for

Environmental Partnership

by

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1.0 Introduction

Burwood Council in conjunction with the Department of Education and Training (DET) is planning to convert the site of the former Burwood Brickworks into a park, suitable for various forms of active recreation, as well as passive. The part of the site (lot 1) closest to Cheltenham Road is owned by DET and would be used by Burwood Girls High School as a week day outdoor space and for sporting activities, along with being available for general public use after hours and for weekend sports. The large pit excavated by the brickworks has been filled by Council contractors, and grading work is approaching completion. At Council's request, a Plan of Management is being drawn up by Environmental Partnership of Birchgrove for this site, which has involved, *inter alia*, consultations with the neighbouring community.

Although the brickworks have been previously assessed for their (residual) heritage value, the values and character of the surrounding environment has not yet been. Council and the community considered it desirable that these should be identified and taken into account in the course of preparation of the Plan of Management and its concept landscape master plan. Accordingly, Environmental Partnership requested Mayne-Wilson & Associates, Conservation Landscape Architects, to investigate the historical evolution of the landscape of the surrounding area and identify its distinctive character and values. This report has been prepared to fulfill that brief.

1.1 The Study Area

The area covered by this report is contained within the aerial photograph below:

Figure L1 The proposed Cheltenham Road Park is largely contained within the area outlined in black. Cheltenham Rd. is at the far left, Queens St. along the bottom, Acton St. at the right, and Monash Pde. across the top. Source: Burwood Council.

1.2 Methodology and Structure

Mayne-Wilson & Associates (MWA) have obtained and analysed research material held in the Burwood and Strathfield Libraries, as well as the Mitchell Library. (A list of sources consulted is attached to the end of this report.) They have read the *Heritage Assessment of the Former Burwood Brickworks* prepared for the Land Management Branch of (then) Planning NSW by HLA Envirosciences in March 2002 and noted the comments on it by the NSW Heritage Office. They have also obtained and analysed land title documents and old aerial photographs from the Lands Department, as well as a series of plans of the area obtained from Sydney Water. From these diverse sources MWA has been able to compile a picture of the evolution of the study area both pre and post European settlement.

1.3 Authorship

This Study has been prepared by Warwick Mayne-Wilson, Director of MWA, with assistance from Ari Anderson of his office, who undertook much of the research and data entry.

1.4 Limitations

As the principal focus of this study is on the area surrounding the former Burwood Brickworks, the authors have only selected information from a wide range of material that they consider to be directly relevant to their brief. It does not enter into a discussion as to whether the former Brickworks should or should not be listed in the Burwood LEP as a place of local significance (as suggested by the NSW Heritage Office in 2003), nor on whether the remarkably consistent housing stock around it (mostly California Bungalows 1925-29) should be further assessed as warranting some form of conservation. It also does not attempt to trace all the changes in land titles and subdivision histories of the properties surrounding the former brickworks, but has included the major ones.

2.0 Historical Overview

2.1 The Landscape

The area bounded by Cheltenham Rd., Queens St., Acton St. and Monash Pde. was originally gently undulating land, comprising clays and shales from the Wianamatta Shales which cover most of the Cumberland Plain. It originally supported open forest of Turpentines and Ironbark, with a thin shrub understorey and rich grasses, a result of patchwork fire burning by the Aboriginal clans in the course of hunting. Other species were *Allocasuarina torulosa, Eucalyptus globoidea, E. resinifera,* and *E. tereticornis*.

2.2 Aboriginal Occupation

The Burwood Municipality was once inhabited by the Wangal clan of the Darug tribe. The Wangal clan's country was known as Wanne and it extended from the suburbs of Balmain, Birchgrove and Leichhardt in the east to Silverwater and Auburn in the west[1]. Neighbouring clans of the Darug tribe were the Cadigal to the east, the Wallumedegal on the northern shore of the Parramatta River, the Wategora to the west and the Bediagal to the south-west.

It is unknown how long the Wangal clan lived around the Burwood area, but it is known that the Darug tribe generally were living around Sydney for at least 10,000 years. No relics of the former Aboriginal occupation of Burwood Municipality have been identified, due to a combination of environmental and geological factors (absence of caves and sandstone rock features) and the nature of early European settlement (extensive land clearing for grazing)[2].

[1] Guider, M., *Aboriginal History of Burwood Municipality*, 1997.
[2] ibid.

Being centrally located on the ridge between the Cook and Parramatta rivers, the Burwood municipality was an integral part of the Wangal clan's territory[3]. During the summer most of their food was gathered from the estuarine areas of their land along the two rivers. The Burwood area was also accessible to the Wangal people by canoe from the Cook and Parramatta rivers or by using the native pathway from Sydney to Parramatta. It is likely that the Wangal people did not use the Burwood municipal area for permanent shelter as there are no rock overhangs or shelters suitable for camping; however, they would have frequented this area to gather plant foods and animals[4].

2.3 European Settlement of Burwood

The Burwood Heritage Study considers there to be four key periods in post-European habitation of Burwood:

i. Land grants and rural estates 1794-1854;
ii. Sydney to Parramatta railway and the country villas 1855-1873;
iii. Municipal Government and gentleman's villas 1874-1918; and
iv. Suburban consolidation 1919-present.

The land which now makes up Burwood was cleared of Turpentine-Ironbark Forest[5] in the early nineteenth century to create grazing pastures. Settlement of the Burwood area occurred first as a side benefit of the construction of a road from Sydney to Rose Hill near Parramatta. By 1793, under the instruction of Lieutenant Governor Grose, nine huts had been built in the area and sixty acres of timber had been cleared. This was the beginning of what became known as the Longbottom Government Farm, actually located in what is now Concord.

At the same time, small farms were developing in the district. The first known settler in Burwood was a free woman named Sarah Nelson, who received a grant of fifteen acres in November 1794 (see Figure H1). The land came to be known as Nelson Farm and was accessed from Parramatta Road via a bush track, which ran slightly to the east of Cheltenham Road. James Brackenrig, a private in the NSW Corps, received a grant of twenty-five acres in December 1794. This land was situated closer to Parramatta Road than Nelson Farm, being bounded by Queen Street, Lang Street, Acton Street and Parramatta Road (the parcel of land to the east of the former Burwood Brickworks site). This Brackenrig allotment was eventually subsumed by the Ashfield Park Estate.

In August 1796, former convict Dennis Connor received a thirty acre grant bounded on the east by the Brackenrig grant (see Figure H1). Connor's property included Blair Park (to the south of the subject site) and Acton St. By 1802, Connor had cleared fourteen acres and had nine acres under cultivation[6]. Part of the Cheltenham Park site is situated on the south-western portion of the Connor grant. The western portion of the proposed park site is situated on a grant given to Captain Thomas Rowley in August 1803 by Governor Hunter. Rowley named this land *Burwood* after the *Burwood Farm* he lived on in his native Cornwall. Subsequent grants issued by Governor King expanded the *Burwood Estate* to 750 acres. It would appear that Rowley never resided on this acreage, rather living out his life at his *Kingston Farm* property in the Stanmore area. However, *Burwood Estate* was reputedly used by Rowley for the depasturing of merino sheep, bought from the same batch as those purchased by John Macarthur of *Elizabeth Farm*[7].

[3] ibid.
[4] ibid.
[5] Benson & Howell, *Taken for Granted*, 1990, Kangaroo Press
[6] Dunlop, E., *Harvest of the Years*, 1974.
[7] ibid.

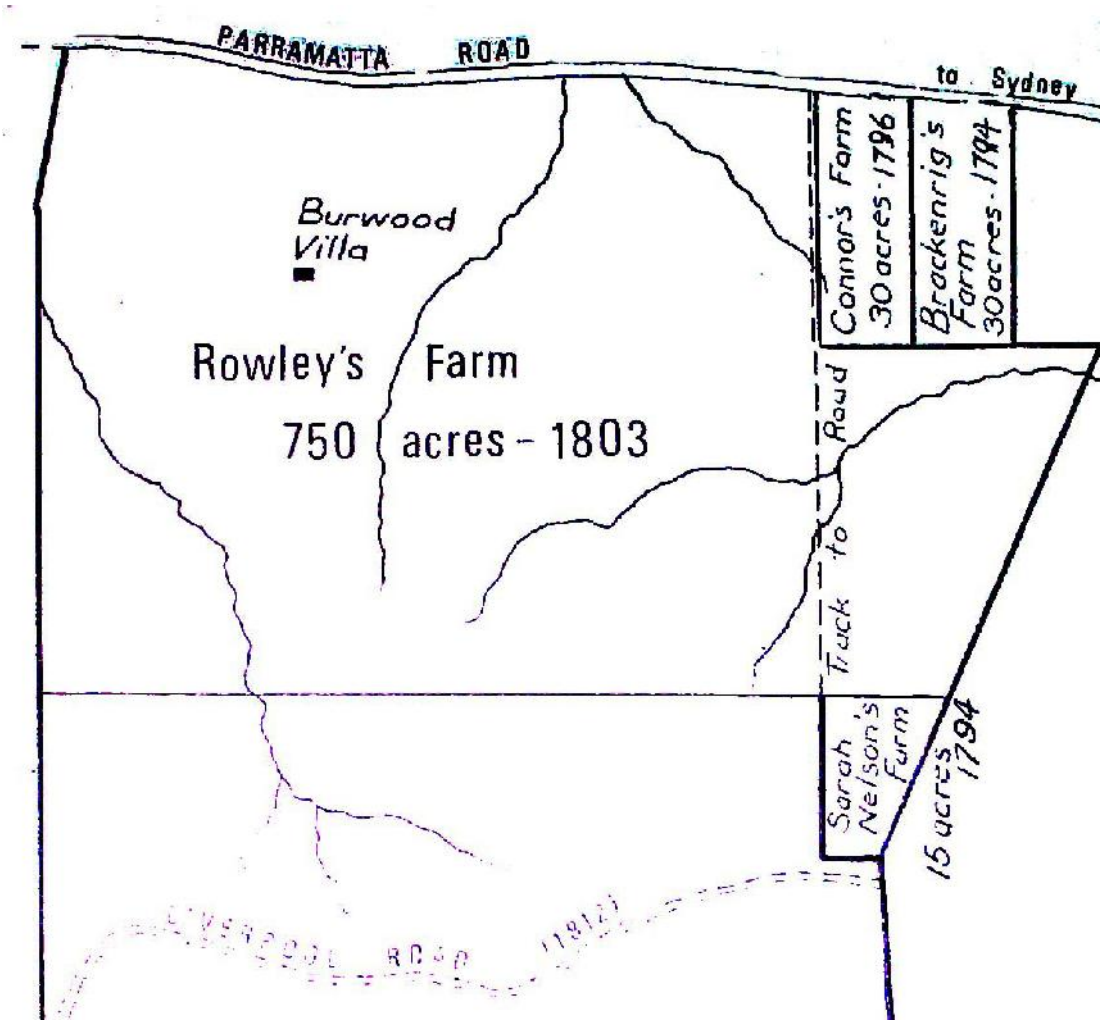

Figure H1 – Map showing the locations of the first land grants in Burwood.
Source: Dunlop, E., *Harvest of the Years*, 1974

Until the 1830s, Burwood consisted of several inns and two or three huge estates. The first significant house constructed in Burwood was *Burwood Villa* (see Figure H2), built by Rowley's successor, Alexander Riley (see below). This estate was described by Joseph Lycett in 1824:

This Estate is within eight miles of Sydney.....comprising a square of one thousand acres.....and is a remarkable instance of how speedily the forest in New South Wales can be cleared of its superfluous timber, and rendered contributable to the comforts and luxuries of man; for, within three years of the felling of the first tree on this estate, the whole was enclosed and subdivided, five hundred acres more or less cleared; a desirable Villa-House, with every convenient appendage, was erected; artificial grasses were growing, in aid of the natural pasture; and a garden of four acres was in full cultivation.....

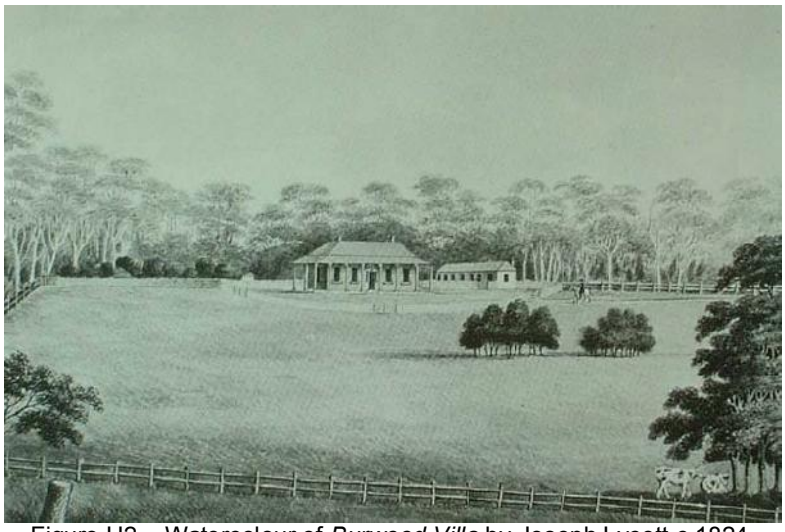

Figure H2 – Watercolour of *Burwood Villa* by Joseph Lycett c.1824.
Source: Benson & Howell, *Taken for Granted*, 1990, Kangaroo Press.

Alexander Riley, who bought the *Burwood Estate* c.1812, completed in the villa in 1814 and resided in it until 1817. The residence was not demolished until 1937. After Rowley's death in 1833, his children were successful in regaining possession of the whole 750 acre *Burwood Estate*, part of which had been incorrectly sold off to his executor. Following this re-acquisition, *Burwood Estate* was subdivided amongst Rowley's children or their spouses, and four lots were created. It was at this time that the first streets were formed, to provide access from each allotment to the adjoining highways[8].

It would appear that the first subdivision of one of the four *Burwood Estate* allotments was proposed in 1834 by John Lucas. This was proposed on part of his 213 acre lot, directly to the south of Queen Street. In 1834, the *Sydney Morning Herald* advertised allotments of the *Burwood Estate* with Shingle Oak, Iron and Stringy Bark, Mahogany, Blue Gum, etc. An 1884 parish map by surveyors Higginbotham and Robinson suggests that this subdivision was successful, as the allotments created in 1834 are largely evident on that plan.

Whilst the *Burwood Estate* was 'opened-up' in the 1830s, and the Village of Burwood was laid out in 1835[9], little settlement occurred between Liverpool Road and Parramatta Road before 1855[10].

In 1866, Balliere's *Gazetteer* described Burwood as "…a postal village and railway station…(with a) few small dairy farms and market gardens…but no factories of any kind"[11]. However, quarrying in the Burwood area had began by 1866, on the site of a small volcanic outcrop between Livingstone Street and Woodside Avenue.

From the time when the railway to Parramatta was built in 1855, however, land prices quickly rose and landowners throughout Burwood began to subdivide their lots, if they had not already done this in previous years. Each subdivision required new access roads and by the end of this period of rapid subdivision, much of the existing street form throughout the suburb had been developed[12].

[8] ibid.

[9] Burwood Heritage Study.
[10] Dunlop, E., *Harvest of the Years*, 1974.
[11] Burwood Heritage Study.
[12] ibid.

From this period, Sydney businessmen moved to this district and built mansions on consolidated blocks which formed estates up to twenty acres. The choice of Burwood for the establishment of such grand homes was substantially due to the belief in its health-giving climate. Indeed, it became a fashionable semi-rural retreat from Sydney.

The 1879 Ra*ilway Guide to New South Wales* describes the land around Croydon and Burwood as being

> an agreeable bit of home scenery; diversified by gardens and trees … where nature has not yet been improved away. Streets intersect this tract, whereon stand villas and gardens belonging to Sydney people, displaying a considerable amount of domestic comfort, originality and even elegance of design. Vistas of pleasant country roadways....and then the sombre Eucalypts, intervening market gardens, and rural homesteads……

On 27th March 1874, the district of Burwood was gazetted as a Borough. Between 1874 and 1900, Burwood's population rose from approximately 1,250 to 7,400. From the 1870s interest in the area as a place of residence on the outskirts of the city continued to increase and the character began to change from rural estates to generous suburban allotments.

Until 1890, streets through the suburb remained in a basic state. Kerbing and guttering, if present, had been laid using hardwood slabs and hewn stone (Figure H3). Street lighting mains, however, were laid through the suburb in 1882-83. In the late 1890s, Council implemented concrete guttering and extensive street drainage works in the interest of health and economy. By 1924, approximately 43 miles of streets had been formed with formal kerbs and gutters[13].

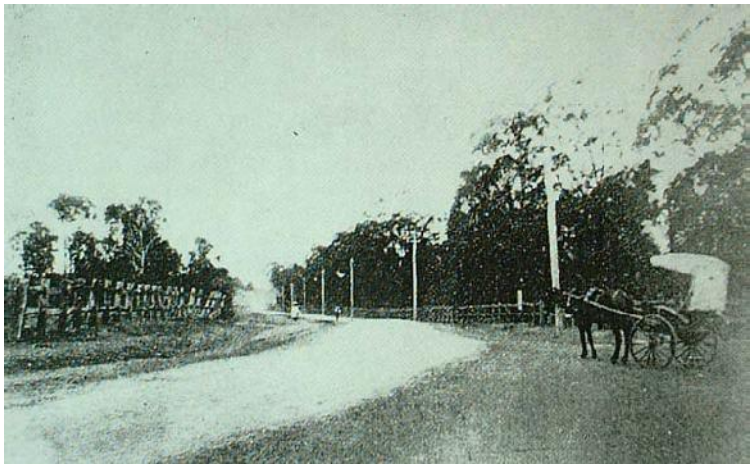

Figure H3 – Liverpool Road near Burwood in 1908. Photo: The Sun.
Source: Dunlop, E., *Harvest of the Years*, 1974

Prior to 1912, Burwood Council had a tree-planting program which included mainly Brush Box and Camphor Laurels. When it was realized that these trees affected service lines, a new street tree program was sought. The new scheme consisted mainly of Phoenix palms, 478 of which had been planted throughout Burwood's streets by 1924[14].

Following the completion of the Ashfield to Burwood tram line in 1901 higher density suburban development began. Although parts of Burwood, like Croydon and Haberfield, developed as a Federation period suburb, the study area remained largely unchanged during that time. Instead,

[13] Burwood Municipal Jubilee 1874-1924, pp39.
[14] Burwood Municipal Jubilee 1874-1924, pp39.

subdivision and housing development was delayed until the mid to late 1920s. By 1930, most natural vegetation throughout Burwood had been removed, and the large villa estates largely broken up, along with their spacious gardens and grounds.

The first half of the twentieth century in Burwood was a period of steady development. The population grew from 7,400 in 1900 to 20,200 in 1929, but then hardly changed until the late 1940s. This was largely due to Burwood having become a fully occupied suburb, with few tracts of land available for purchase.

As in many other Council areas, the Government made considerable sums of money available during the Depression for unemployment relief works. Major drainage and improvement works were carried out during the early 1930s, including the grading and leveling of Blair Park (located to the south of the subject site).

2.4 Historical Development of the Study Area Site

A plan of Cheltenham (the name sometimes used on old plans instead of Burwood) from 1854 (Figure H4) suggests that no residential allotments had been created along the eastern side of Cheltenham Road, in the block between Queen Street and Parramatta Road by that time. It would appear, however, that mansions had been built at least near the junction of Queen Street and Cheltenham Road by the late 1860s.

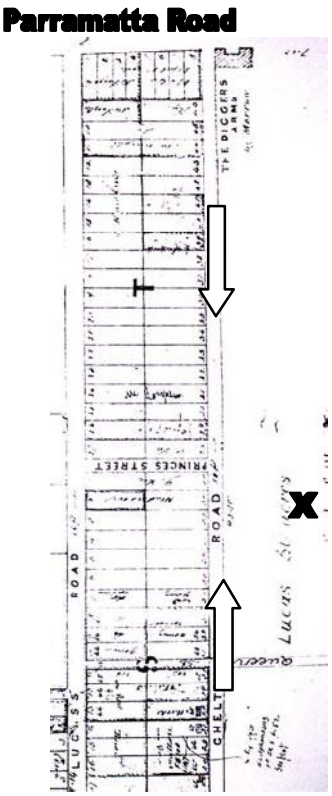

Figure H4 The 'X' marks the approximate location of the Brickworks. Source: Mitchell Library maps card catalogue.

A house originally owned by merchant captain Henry Fox, named "Evandale" was built in 1868 on part of what is now Blair Park, and the descendants of Fox continued to live in that house in 1924. Meanwhile, during the 1860s, Captain Mayne lived on the corner of Cheltenham Road and Queen

Street in a property called "View Bank"[15]. (The residences are shown on a Higginbotham/Robinson survey of Burwood from 1884 - see Figure H5). Another residence shown on that plan, located closer to Acton St, approximately half way between Queen Street and Parramatta Road may be "Humberstone" built in 1869 by solicitor John Dawson. This property included 24 acres of parkland[16]. This residence appears from aerial photo evidence to have remained in existence until at least 1950, when it looks to have been converted into another facility (as part of a church site) and then finally demolished. Another substantial residence, called "Sobroan College" stood set back from Cheltenham Road, behind the location of the existing State Emergency Services building (see Figures H6, H7, H8 and H9). It was also later demolished.

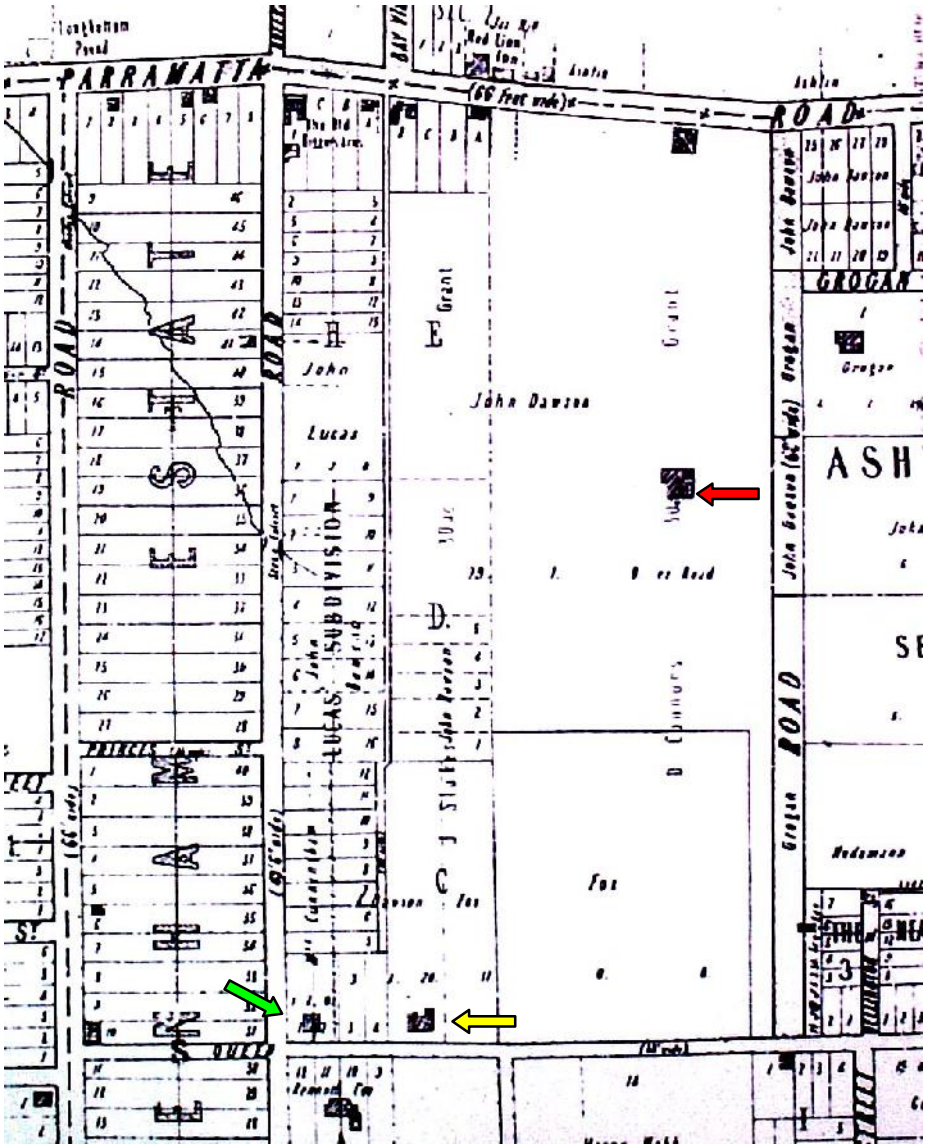

Figure H5 – Parish Map of Burwood prepared by Higginbotham and Robinson in 1884. The house arrowed red may be "Humberstone" built by John Dawson, set in its 24 acres of parkland. The residence arrowed yellow was "Evandale", probably built by the Fox family and the property arrowed green was "View Bank", probably built by Captain Mayne. Source: Mitchell Library maps card catalogue.

[15] Burwood Municipal Jubilee 1874-1924, pp39.
[16] Burwood Heritage Study, pp.28.

Further research would have to be commissioned to ascertain when Dawson acquired an interest in [part of] Dennis Connor's original grant and the chain of transfer from Connor to subsequent owners. The Higginbotham/Robinson survey of Burwood from 1884 suggests that residential allotments may have been created by that time along the Cheltenham Road frontage to the Cheltenham Park site. It is unclear however how many of these subdivided allotments were purchased and built on.

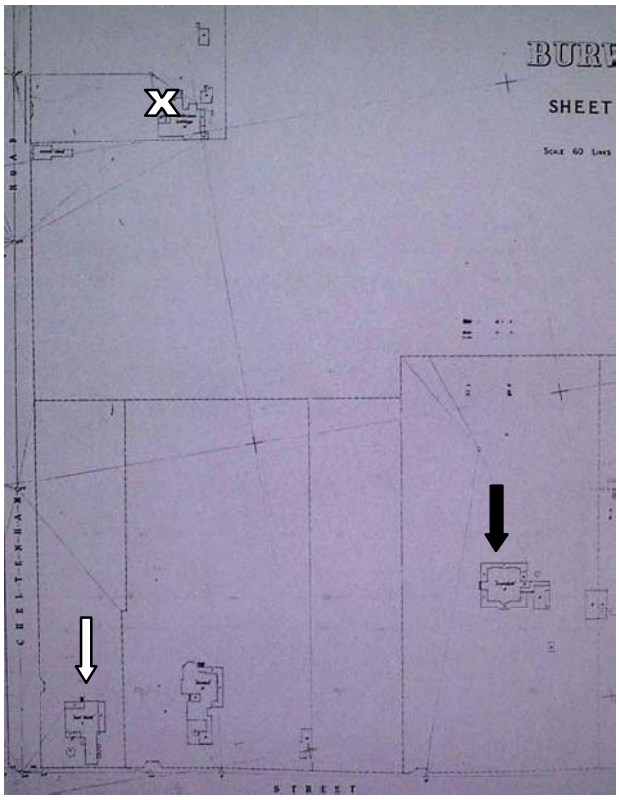

Figure H6 – Survey by Surveyor H. Shute dated 24th October 1891. The building marked 'X' was "Sobraon College", a largely wooden building which seems to have been demolished pre-1930. The residence marked with a white arrow was "View Bank" and the residence marked with a black arrow was "Evansdale". The name and original owner of the property between these two residences has not been identified. Source: Sydney Water plan room PWD 972 - 1544.

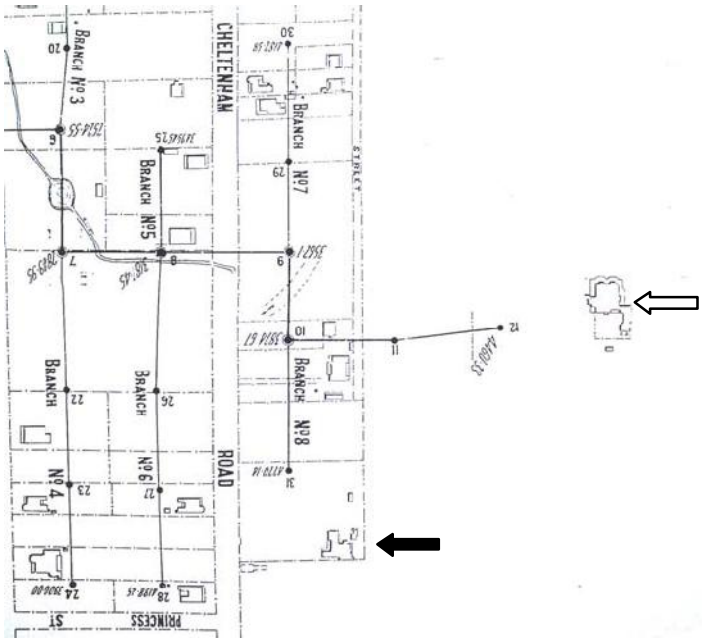

Figure H7 – A section of a 1910 sewerage survey plan of the Burwood area. A largely wooden building named "Sobraon College" (arrowed black) was located just to the south of the alignment of Royce Avenue (not laid out by this date). The building arrowed white is likely to have been a property called "Humberstone" built by John Dawson. Aerial photographic evidence suggests that this building remained largely intact until after 1951. Source: Sydney Water plan room Govt Cont 364.

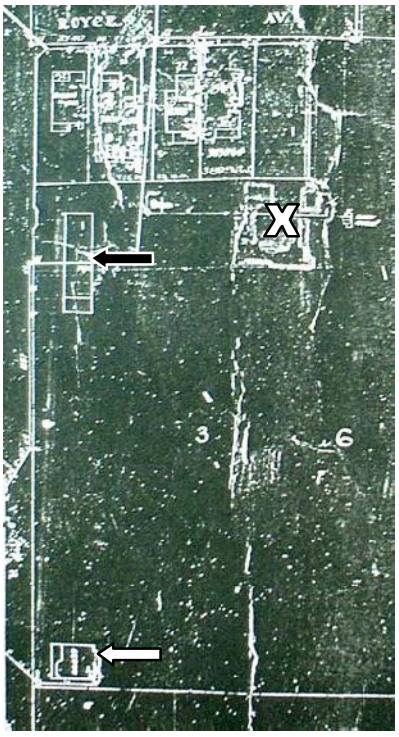

Figure H8 – Undated Sydney Water Blackwattle sheet showing the original brickworks office (arrowed white) and the later office built c.1956 (arrowed black), which subsequently became the SES headquarters. The building marked 'X' was "Sobraon College". Royce Avenue is at the top of the image and Cheltenham Street is at the left. Source: Sydney Water plan room BW216 INS.

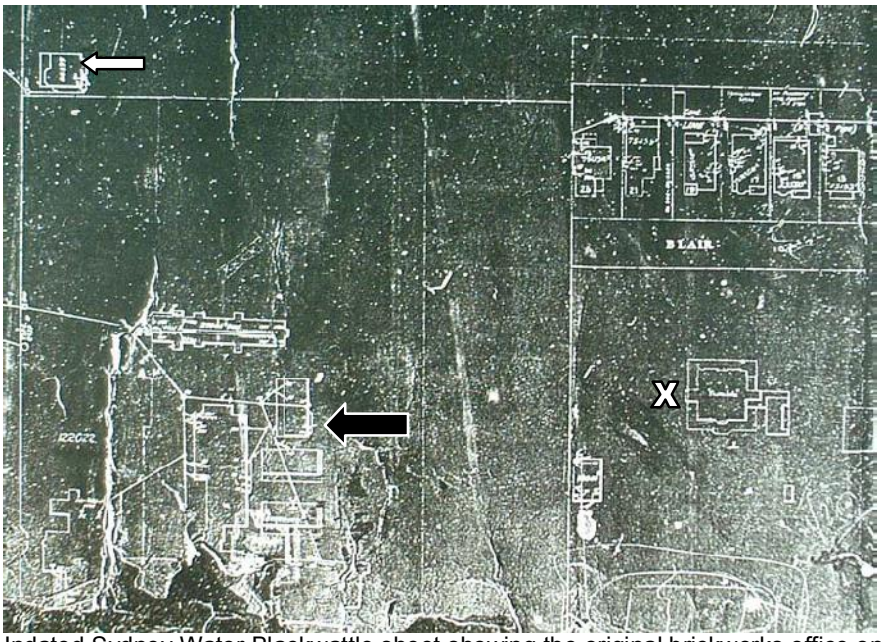

Figure H9 – Undated Sydney Water Blackwattle sheet showing the original brickworks office on Cheltenham Road (arrowed white) and Burwood Girls High School buildings (arrowed black). The building marked 'X' was "Evandale", probably built by the Fox family. The exact date of demolition of "Evandale" has not been found, but as this plan was issued in 1938, it seems that the residence was not removed until the 1940s. It does not appear on the 1951 aerial photograph. The residences in Blair Avenue (upper right) had been built by the time of this survey. Source: Sydney Water plan room BW216 INS.

2.5 The Burwood Brickworks site

Limited industrial development took place in Burwood in the 19th century, but it was with the development of brickpits that Burwood and adjoining suburbs found a significant industry for almost a century. Brickpits had existed in the area from the late 1850s or early 1860s, and in 1876 a small factory opened in Lang Street, Croydon, which was later taken over by the Excelsior Brick Company. Several years later, the Croydon Steam Brickworks opened in Webb Street. The earliest brickworks were hand-worked pots where the bricks were dried in the sun rather than kiln-burnt. This brickworks continued in production until 1930[17]. The Excelsior Brick Company closed in 1920 and this was closely followed by the shutting down of the Croydon Steam Brickworks. This brickpit was used as a garbage pit for many years before a factory was built on the site[18].

The Burwood Brickworks in Cheltenham Road (the subject site) began production in 1913 over part of John Dawson's former estate (Figure H10 & H11). First set up by The Suburban Land and Investment Company Limited, the brickpit was eventually taken over by Brickworks Limited (which oversaw the production in many suburban yards) in 1934. The Suburban Land and Investment Company Limited (see Figure H12) was only issued with a land title for the Cheltenham Road site in 1918, the land they purchased measuring 37 acres 3 roods and 27 ¼ perches. It included the majority of the lands contained by Parramatta Road, Cheltenham Road, Queen Street and Acton Street. The portion bought by The Suburban Land and Investment Company Limited straddled the boundary of two original land grants, those given to Dennis Connor (30 acres in 1796) and Thomas Rowley (750 acres in 1803).

[17] Dunlop, E., *Harvest of the Years*, 1974.

[18] Howe, G., *Heart of the City*, 1999, Ancestral Trail Publications.

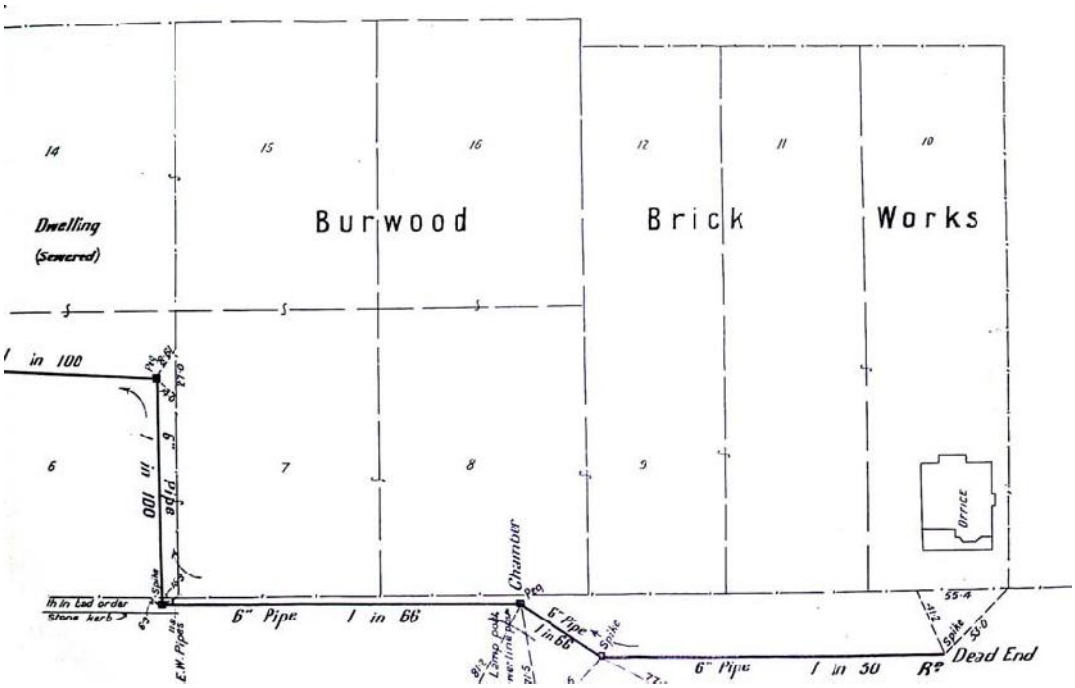

Figure H10 – A 1913 Sydney Water plan showing the site of the original brickworks office (at right) on Cheltenham Road. The lot that it was situated on is lot 10 of one of several subdivisions that occurred pre-1884 along the eastern side of this portion of Cheltenham Road.
Source: Sydney Water plan room SO1364.

Figure H11 – Advertisement for the Burwood Brickworks in the Burwood Municipal Jubilee 1874-1924.

Figure H12 – The 37 acre 3 rood and 27¼ perch plan of the land owned by The Suburban Land and Investment Company Limited on title in 1918. Note the land owned by the Fox family - (the large 'cut-out' fronting Queen Street at the base of the plan). Source: LTO.

Between 1923 and 1926 The Suburban Land and Investment Company Limited undertook several subdivisions of their Cheltenham Road holding, hiving off 15 acres at the northern end of the lot (Figure H13) and subsequently selling off the south-western corner of their property, a zone of approximately 4 acres edged by Queen Street and Cheltenham Road (Figures H14, H15 and H16). In 1926 the company purchased portions of the lot facing Queen Street owned by the Fox family. These parcels were likely later sold to Council for the establishment of Blair Park, although it is clear from land title documents that a part of The Suburban Land and Investment Company Limited holding was already being leased to Council in 1926.

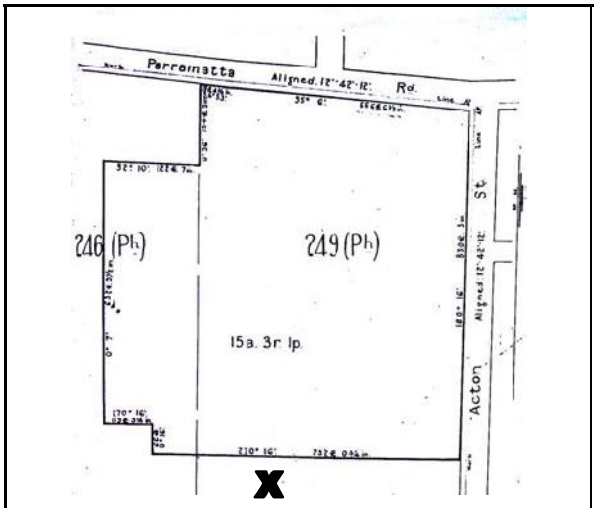

Figure H13 – The northern 15 acre portion of the lot bought by The Suburban Land and Investment Company Limited sold to Thomas Burke in 1923. The former Burwood Brickworks is marked approximately by the black cross. Source: LTO.

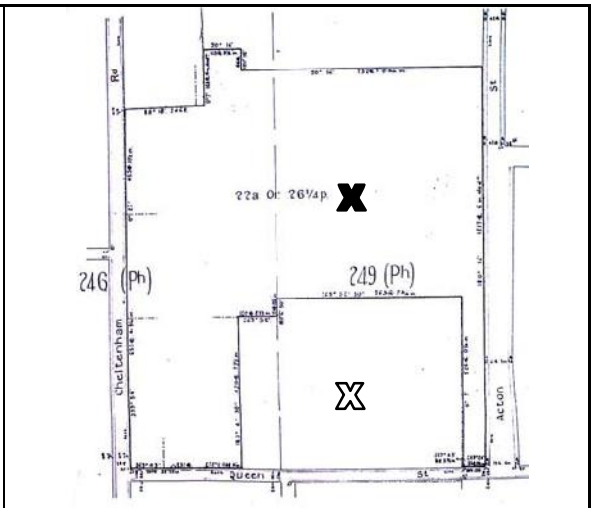

Figure H14 – The land retained by The Suburban Land and Investment Company Limited following its major subdivision c.1923. The site of the former brickworks is marked approximately by the black cross. The white cross shows the site of Blair Park. Source: LTO.

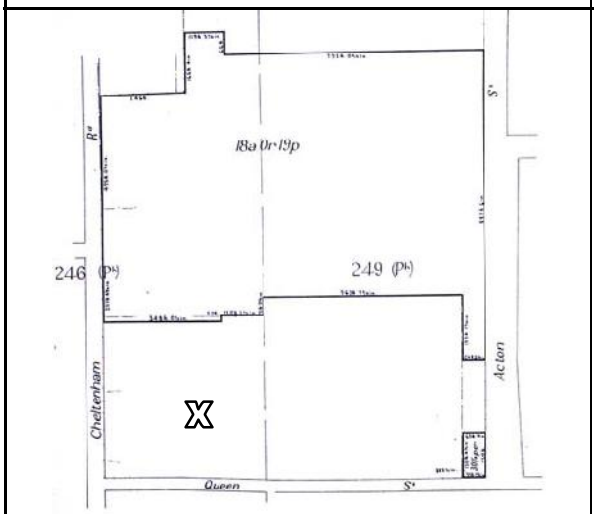

Figure H15 – The land retained by The Suburban Land and Investment Company Limited in 1925 following the sale of the zone at the corner of Queen St. and Cheltenham Rd (marked by cross). Source: LTO.

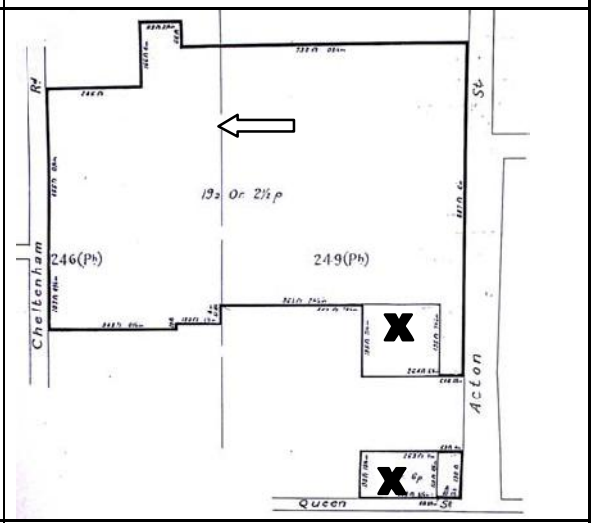

Figure H16 – The land owned by The Suburban Land and Investment Company Limited in 1926 following acquisition of lots owned by the Fox family (marked by crosses). The line arrowed white was the boundary of Connor's 30 acre grant (right side of line) and Rowley's 750 acre grant (left side of line). Source: LTO.

The Burwood Brickworks and the Croydon Steam Brickworks reputedly provided most of the bricks for the bungalows and cottages built in Burwood prior to 1930. The development of brickworks, such as those in Cheltenham Road, did not occur without resident protest regarding smoke, dust and noise.

In 1929, The Suburban Land and Investment Company subdivided their landholding to create sixty-one building lots around the northern, eastern and southern perimeters of their Cheltenham Road brickpit[19] (see Figure H17 & H18). The company attempted to divert criticism away from the operation of the brickpits by naming the subdivision to the south of the site *Blair Park Estate*. It would appear that the result of this subdivision was the Blair Park grading works undertaken by Depression unemployment relief works. This subdivision may have been the first one proposed along the section of Acton St. bordering the brickpit.

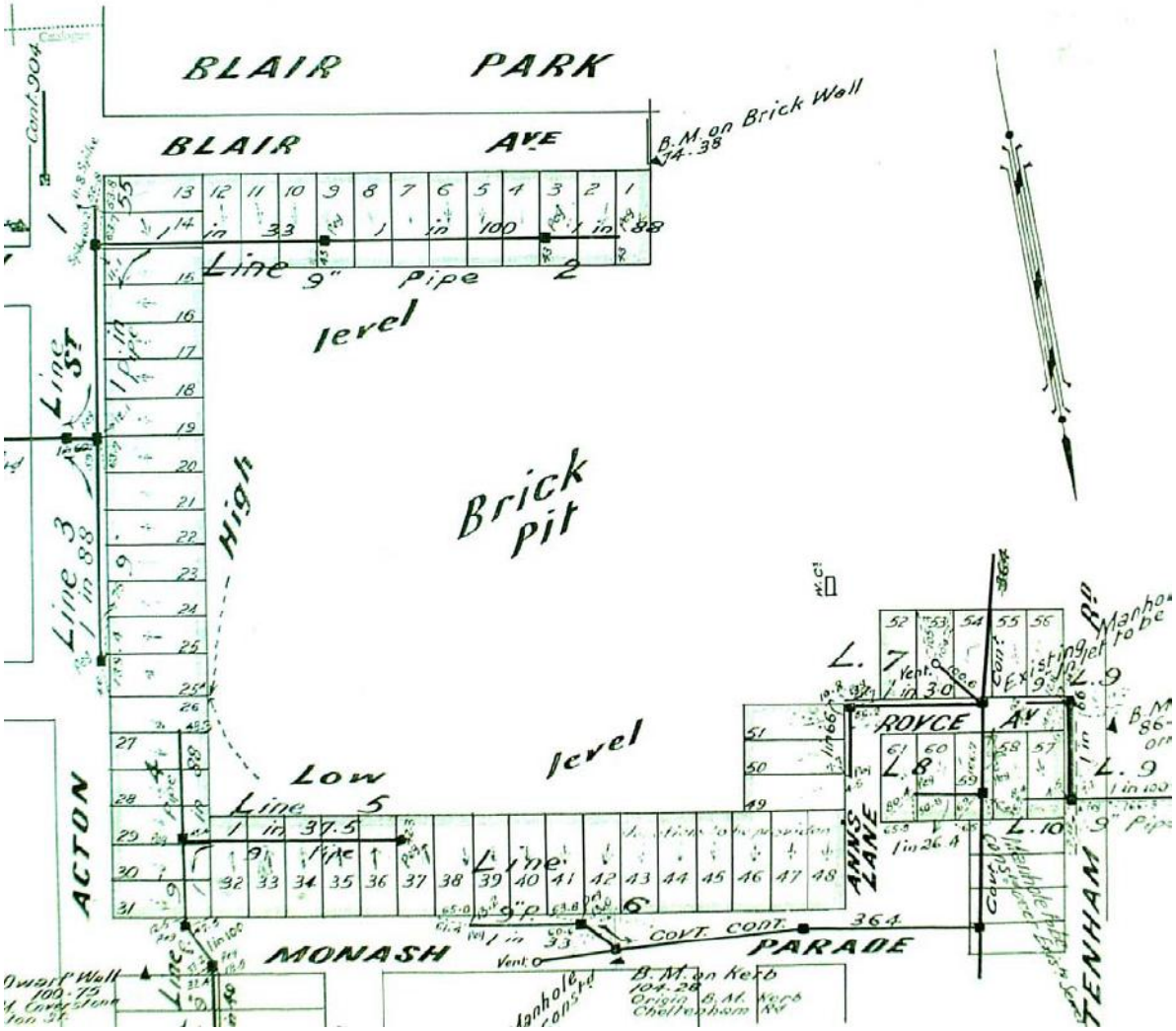

Figure H17 – A Sydney Water survey plan from 1929 showing subdivided lots around the Burwood Brickworks. This plan was oriented with south up the page, so that Cheltenham Rd. is on the far right. Approximately two thirds of these allotments were built on by the end of 1930. Note the notations for the levels within the brickpit. Royce Avenue was created as a result of this 1929 subdivision. Source: Sydney Water plan room Cont 2140.

[19] Peek and Pratten, *Working the Clays*, 1996, Ashfield & District Historcial Society.

Figure H18 – 1930 aerial photograph of the Burwood Brickworks, showing (black arrows) the residential subdivision carried out in 1929. Within a year most of the lots created around the eastern and northern sides of the pit had been built on. Burwood Girls High School had just been completed and opened at the south-west corner of the study area, and Blair Park was largely formed (although the residence called "Evansdale" (arrowed white) still stood on it). Source: Lands Department.

The Burwood Brickworks closed down briefly in 1952 as a result of the building recession. However, by 1956 two new kilns had been constructed at the site and a new head office building had been erected (see Figure H21 & H22). This new building provided the headquarters for Brickworks Limited and remains standing today, used by the State Emergency Services.

Figure H19 - c.1948 photograph showing the proximity of the Burwood Brickworks (white cross) to the site of the former Croydon Steam Brickworks (bottom) and the Excelsior Brickworks (right). Source: Peek and Pratten, *Working the Clays*, 1996, Ashfield & District Historcial Society.

Figure H20 – 1951 aerial photograph of the Burwood Brickworks. Note the new housing between the brickpit and Blair Park, which appears to have been built by 1938. The factory is at centre left and the first office building (arrowed white) had not yet been replaced. Source: Lands Department.

Figure H21 – Advertisement for Brickworks Ltd. showing its new head office building in Cheltenham Road. Source: Peek and Pratten, *Working the Clays*, 1996, Ashfield & District Historical Society.

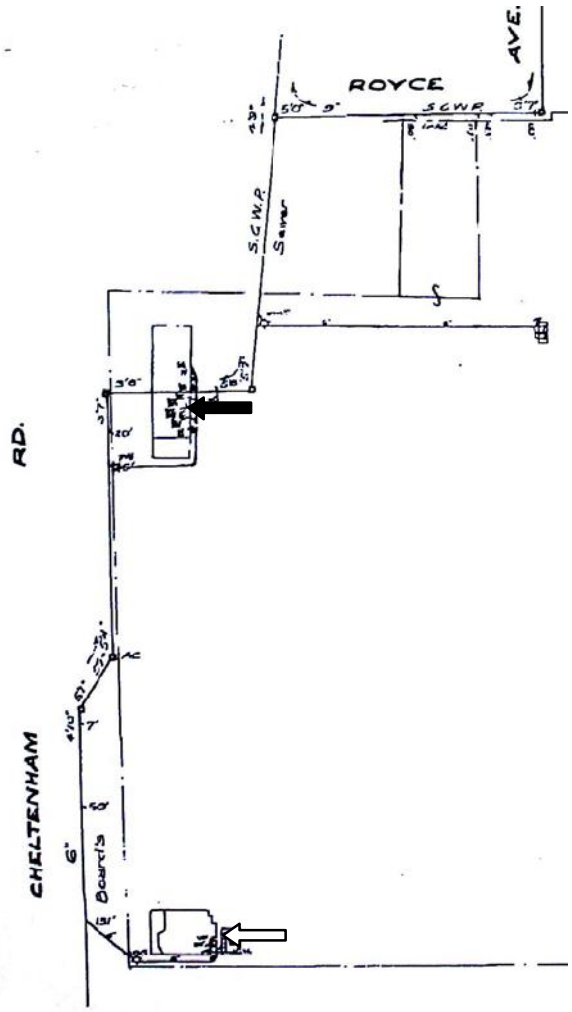

Figure H22 – Undated Sydney Water plan showing the original brickworks office (arrowed white) and the later office built c.1956 (arrowed black). This later building is currently used by the State Emergency Services. Source: Sydney Water plan room HSSD 369304.

Figure H23 – 1970 aerial photograph of the Burwood Brickworks showing the dramatic expansion of the pit since 1951 towards the rear fence of the properties around the north, east and southern sides of the operation. Source: Lands Department.

The Burwood Brickworks ceased production between 1976 and 1978. It was at this time that an imaginative idea was formulated for the future use of the Burwood brickpit site. A company called Classic Projects planned to use the site for a $17 million housing scheme for 1,400 people in 576 homes. The concept eliminated the filling of the brickpit and was said to include underground parking for 1,000 cars and an underground road system. The idea was reputedly modeled on the Munich Olympic Village[20].

[20] Peek and Pratten, *Working the Clays*, 1996, Ashfield & District Historcial Society.

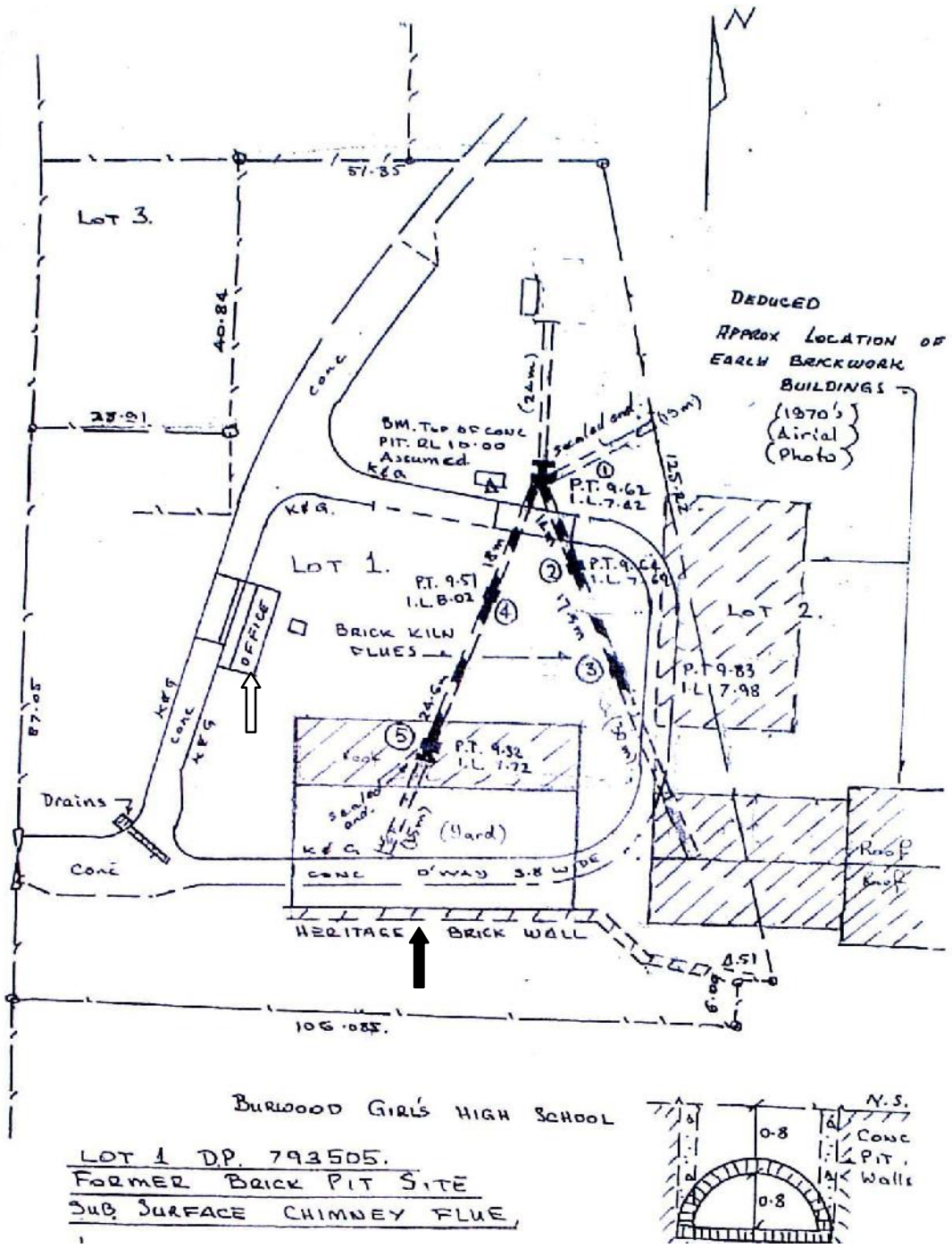

Figure H24 – Sketch plan of the historical elements near the entry to the former brickworks site from Cheltenham Rd. The existing brick wall is shown by the black arrow. The concrete caps over the former air vents (flues) are located over the two black-hatched lines (at the centre of the image). The second office building is arrowed white. Source: Heritage Assessment, HLA Envirosciences.2002.

Around 1982, the Department of Environment and Planning commissioned a report on the site to be prepared, at which time the brickworks buildings seem to have been demolished. The 4.3 hectare Cheltenham Road brickpit site was acquired by Burwood Council in 1989 from the Department of Planning and was used as a landfill until 2004.

3.0 Physical Analysis

The area bounded by Cheltenham Rd., Queen St., Acton St. and Monash Parade was originally gently rolling land supporting an open forest of Cumberland Plain vegetation. This topography and its underlying clay soils supported grazing and, later, extensive gardens of villa estates in the second half of the 19th century. It also nourished late 19th century and early 20th century street plantings of Brush Box *(Lophostemon confertus)* and Camphor Laurel *(Cinnamomum camphora),* and later Phoenix Palms (*Phoenix canariensis)* and Hills Figs *(Ficus hillii)*. These plantings are still thriving today, as shown in the images below. Because most of the streets for the subdivision were laid out after the garden city precepts began to influence suburban design (i.e. from the mid 1870s), they have wider verges, with space for tree plantings, unlike Cheltenham Rd. which was laid out earlier. The gracious avenues of Brush Box, with some rows of Phoenix Palms, are a distinguishing feature of the streetscapes of this and adjacent areas.

Figure S1 - Spacious Acton Street, lined with Brush Box trees and California Bungalows. Photo: MWA 2005.

Figure S2 - An extra-wide verge in Acton St., planted with Phoenix palms as well as Brush Box. Photo: MWA 2005.

Of the villas built in the second half of the 19th century, only a few survive in the surrounding area, although none within the study area. Subdivisions in the later part of the 19th century created some small lots on which a few small clusters of typical Victorian terrace houses were built, but again, these are located just beyond the study area.

Figure S3 - One of the remaining late 19th century Victorian villas abutting Queen St., opposite Blair Park. Photo: MWA 2005.

Figure S4 - Examples of Californian Bungalows along Cheltenham St and a 19th century villa beyond. Photo: MWA 2005.

Some flavour of the original estates is retained in the form of Blair Park, formed from the early estate owned by the Fox family, while the spacious grounds of the Burwood Girls High School were derived from those of the villa *View Bank*, built by Captain Mayne in the late 1860s and demolished when the High School was built in 1929.

Figure S5 - Burwood Girls High School, 1929, on the corner of Cheltenham Rd. and Queens St. It is heritage-listed. Photo: MWA 2005.

Figure S6 - Blair Park, with its spacious oval and a row of Hills Figs along its southern boundary with Queen St. Photo: MWA 2005.

The lack of intensive subdivision of the original Rowley and Connor grants during the Federation period (c.1895-1915) also ensured the availability of this open estate land for the development of the brickworks.

A key date in the development of the lands surrounding the Burwood Brickworks site was 1929. It was in that year that the first residential subdivision was proposed along the site's Acton St, Monash Parade and Blair Park frontages. Significant leveling works were carried out on the land that now makes up Blair Park in that year to establish a public recreation area. Concurrently, Burwood Girls High School was opened on the corner of Queen Street and Cheltenham Road. The 'L' shaped southern end of Royce Avenue, at the north-west corner of the former brickpit, was formed as a result of the 1929 subdivision by The Suburban Land and Investment Company Limited. The majority of the housing stock in the streets surrounding the subject site dates from the mid to late 1920s. See Figures H17 to H20 above.

Figure S7 -Typical California bungalow style houses in Monash Pde. north of the brickworks site. Photo: MWA 2005.

Figure S8 - Good examples of this bungalow style in Acton St., although a few houses have been mutilated. Photo: MWA 2005.

The Cheltenham Park site exhibits few signs of its former use as a substantial brickworks. In preparation for the development of the park, an enormous volume of fill has been imported over the

last several years to create a level surface over the site. The only identified elements which relate to the former brickworks site are a buttressed brick wall, likely to have formed part of the factory building (in the south-west corner of the property), concrete caps covering air circulation tunnels under the site and the second brickworks office building (now used by the SES).

Figure S9 - The new concrete covers within this grassed space indicate the location of the remnant flues of the former brickworks. Part of the walls of the latter's above-ground buildings are seen in the background. Photo: MWA 2005.

Figure S10 - Remains of the brickwork's walls along the edge of the lot separating it from the Girls School site. Photo: MWA 2005.

Figure S11 - View along Cheltenham Rd. with the later office of the Brickworks, now used by the State Emergency Services. Lot 1 owned by DET is in the background at far right. Photo: MWA 2005.

Figure S12 - View along Cheltenham Rd. showing the prevalence of California bungalows along it. These will address the new park. Photo: MWA 2005.

The following images depict the present state of works involved in the infilling of the brickpit. As is evident, these works are nearing completion.

Figure S13 - The pond in the center indicates the lowest point now in the pit, into which water has collected. The rear of housing along Acton St. lines the horizon. That along Monash Pde. is at far left. Photo: MWA 2005.

Figure S14 - Stockpiles of topsoil along the Blair Avenue boundary of the brickpit site, with completed ground works on the right. Photo: MWA 2005.

4.0 Heritage and Other Values

4.1 The Former Brickworks

A heritage study of the Burwood Brickworks itself was prepared by HLA Envirosciences Pty. Ltd. in March 2002 for the Land Management Branch of Planning NSW. It contains the following Statement of Significance:

> The Burwood Brickworks is significant as being representative of the many brickworks established in the Burwood/Ashfield district around the turn of the [19th – 20th] Century to capitalize on the expansion or urban housing into this area. The brickworks were one of the founding members of Brickworks Ltd., which formed a monopoly of Sydney's brickmaking industry from 1924. The plant used was typical of brickworks in the Sydney area. The kilns and buildings were demolished after 1982 and so the site lacks remains of sufficient integrity.
>
> In terms of grading of significance, the remains of the Burwood brickworks site must be seen as falling into the "Little Significance" category, given their lack of integrity and low archaeological potential".

In response, the NSW Heritage Office wrote to the Property Project Manager of Planning NSW in February 2003 that:

> "it is considered that the remnant archaeological remains associated with the former Burwood Brockworks have local significance, not 'little significance' because they represent a significant local industry that was pivotal to the development of the area."

The NSW Heritage Office, in its response, continued that:

> "*In situ* retention of the archaeological remains is the optimal management recommendation for this archaeological resource because it has value in representing a significant local industry. NSW's former brickwork sites are increasingly being destroyed in order to facilitate new development and few intact examples now exist.
>
> Plans for utilizing the land for playing fields could be adapted to ensure that there is no impact on the remnant archaeological resource. Options such as increasing the height of the ground level will provide protection for the archaeological remains and ensure their preservation."

Burwood Council has taken action to protect the entrances to three flues that were identified in the HLA Envirosciences report by providing concrete covers over them (see Figure S9 above). It would thus appear that the Heritage Council's advice, at least on the practical issue of protecting the remains, has been adopted.

Nevertheless, the Burwood Brickworks have not been listed on the Burwood LEP as a heritage item or place. It is of passing interest that the Burwood Girls High School, built on the corner of Cheltenham Rd. and Queen St. in 1929 has, however, been listed.

4.2 Study Area's Character and Values

A key purpose of this report was to identify the distinctive values of the 'precinct' in which the former Burwood Brickworks was set. These include both historical values as well as aesthetic and social values, together with a summation of what constitutes its distinctive character. A categorization of these values is set out below. It should be noted that they are not expressed as 'heritage' values, because this is not a heritage study and the elements in question – apart from Burwood Girls High School – are not considered to be of sufficient significance to warrant heritage listing *per se*.

4.2.1 The Landscape

The landscape is very nearly flat, and offers no views outward or inward. The only 'prospects' are those within the former brickworks site toward the rear yards of adjacent properties, and along the main streets. The clay soils support good tree growth, evident along the streets and the boundary of Blair Park, as well as in private yards. There are a few Eucalypts in the vicinity of the (now) SES building and within the grounds of the High School which may be remnants (or more likely regenerations) of the original open forest community and which, if confirmed, may warrant preservation. Given the thorough clearing of the area during the 19th century, however, it would be misleading to denote this as remnant urban bushland.

The spatial quality of Blair Park, the grounds of the High School, and the potentially large sports fields of the proposed Cheltenham Road park are evocative reminders of the spacious 19th century villa estates, to which the few remaining villas just beyond the study area still attest. The proposed new park will serve to conserve that earlier sense of spaciousness. (It may also be desirable to draw attention to this via interpretative signage with appropriate images.)

4.2.2 The Streetscape

For the most part, the streets bounding the study area are typical of those within the wider Burwood urban area, featuring grassed verges (of varying widths) with Brush Box, Camphor Laurel or Phoenix Palm plantings. The regular facades of the Californian bungalow style housing along the streets provide a harmonious rhythm and reassuring consistency as one moves along them. In tandem with the standardised tree plantings, this composite 'picture' evokes a clear image of the late 1920s and perhaps warrants later consideration for treatment as a conservation area.

4.2.3 The Buildings

As noted above, by far the greater part of the housing stock are the Californian bungalows of the mid to late 1920s, with a few remnant late Victorian era villas on the fringe, and a few more recent structures interposed between. This consistency and harmony of built structures is perhaps the most telling and effective resource for understanding and interpreting the origins and development of the study area in a relatively holistic way.

5.0 Conclusion

It is to be hoped that Council and the local community will recognize and respect the above-identified values and character, and that those planning future development and changes within the study area will take these particular qualities into account.

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SO 1364
Cont 2140

Q Flora, Fauna & Tree Assessment 2005

Flora, Fauna and Tree Assessment

Proposed Regrading and Subdivision of Lots 1 and 2 DP 793505, Cheltenham Park, Croydon.

April 2005

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Table of Contents

1. Introduction

AES was requested by Environmental Planning Pty Ltd to undertake a flora, fauna and tree assessment of a proposed regrading and subdivision site at Lots 1 and 2 DP 793505, Cheltenham Park, Croydon (the site). The aims of this assessment are to determine:

- whether the proposal is likely to cause a "significant effect on threatened species, populations or ecological communities or their habitats", based on the eight factors listed in Section 5A of the *Environmental Planning and Assessment Act, 1979* as amended by the *Threatened Species Conservation Act 1995*, (and hence whether a species impact statement is required);
- impacts on threatened species and ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (and hence whether referral to Environment Australia is required); and
- the significance of trees at the site.

The main findings of the assessment are as follows:

- The site's vegetation consists of planted trees, weeds and grass. The only remnants of pre-existing vegetation are a Forest Red Gum (*Eucalyptus tereticornis*) and a Rough-barked Apple (*Angophora floribunda*) on the southern boundary of the site. On their own, these trees do not represent any endangered ecological community.
- The only threatened flora species recorded was *Eucalyptus nicholli*. This species is listed as vulnerable on the *Threatened Species Conservation Act* and the *Environment Protection and Biodiversity Conservation Act*. *Eucalyptus nicholli* originates from northern NSW and has been planted at the site. Even if it were to be removed, the proposed development would not have significant effect on this species, or its habitat.
- The proposed development is unlikely to have a significant effect on this species. Therefore, referral to Environment Australia is not required.
- No threatened fauna species were detected during the survey. Nor is the site suitable habitat for any threatened fauna species.
- The proposed development is unlikely to have a significant effect on threatened species, populations or ecological communities, or their habitats.
- A species impact statement is not required. Referral to Environment Australia is not required.
- The site's eucalypts provide habitat for fauna and visual relief. They should be retained where possible and appropriate.

2. Methodology

Fieldwork was undertaken on 05/04/05 using the following methods.

2.1 Vegetation

The vegetation of the site is described based on the dominant tree species and the height and cover of the tree layer. The site was surveyed for plant species by walking transects. Plants not readily identified in the field were collected for identification using standard texts. Checks were made against the Schedules of the *Threatened Species Conservation Act* and the *Environment Protection and Biodiversity Conservation Act* as well as Briggs & Leigh (1995) for species of conservation significance. The objectives and general

principles of Burwood Council's Tree Preservation Order are also observed in reference to assessment of tree significance.

2.2 Fauna

The vegetation description was used to describe the different fauna habitats that occur on the site. The habitat surrounding the site was also investigated to gain an appreciation of the relative importance of the habitat that occurs on the site.

Notes were made of the availability of specific sources of native fauna food and shelter, such as dense shrubs, flowering trees, tree hollows and rock outcrops. The presence, or lack, of particular fauna habitat requirements was noted to enable predictions of species that would be likely to utilise the site.

3. Vegetation Description

Most of the site is entirely cleared of vegetation having been used as a quarry then subsequently filled and levelled. Vegetation is confined to the edges of the site. Along the western boundary are a number of Camphor Laurels (*Cinnamomum camphora*) with some Sydney Blue Gums (*Eucalyptus saligna*) a little further in. The northern boundary has no trees and dense shrubby growth of Green Wattle (*Acacia decurrens*) and weeds. The eastern boundary has only a few planted Mugga Ironbarks (*Eucalyptus sideroxylon*). Along the southern boundary there is a large Forest Red Gum (*Eucalyptus tereticornis*) and a Rough-barked Apple (*Angophora floribunda*), which are the only trees on site remaining from the pre-existing vegetation. Elsewhere along the southern boundary there are planted eucalypts and dense growth of the weed African Olive (*Olea europaea ssp africana*).

4. Significance of the Site's Trees

Appendix A lists all trees on the site, their height, diameter at breast height, general condition, and SULE (safe and useful life expectancy) rating.

The Forest Red Gum and the Rough-barked Apple are of particular significance as they are remnants of the pre-existing existing vegetation. Benson & Howell (1990) indicates that the vegetation of the general area was Sydney Turpentine-Ironbark Forest. However, these two species are not typical of that community and may be present due to a local difference in the underlying geology. The Forest Red Gum is in good condition and retainable, whereas the Rough-barked Apple is likely to decline in the medium term.

The Sydney Blue Gums, Mugga Ironbarks and other planted eucalypts provide habitat for birds and some visual relief from the barren landscape of the site. Similarly the Camphor Laurels along Cheltenham Road screen the site from the street and provide habitat for a colony of Figbirds (*Sphecotheres vieilloti*). Nevertheless they may cause damage to nearby pavements and could readily be replaced with more suitable trees.

Whilst the Forest Red Gum and the Rough-barked Apple are remnants of pre-existing Cumberland Plain Woodland, they cannot be considered examples of the community as defined for he purposes of the *Threatened Species Conservation Act* and the *Environment Protection and Biodiversity Conservation Act.*

5. Threatened Species

Eucalyptus nicholli, an individual of which occurs along the southern boundary, is listed as vulnerable on the *Threatened Species Conservation Act* and the *Environment Protection and Biodiversity Conservation Act*. It occurs naturally in woodlands in between Niangala and Glen Innes (Harden, 2002) and is widely used as a specimen tree in Sydney and elsewhere.

No threatened fauna or flora species were detected at the site and none are considered likely to occur.

6. Legislative Considerations

6.1 *Threatened Species Conservation Act*

Eucalyptus nicholli is listed as a vulnerable species on the *Threatened Species Conservation Act*. The following eight factors listed in section 5A of the *Environmental Planning and assessment Act* are considered to determine whether the proposed development would have a significant effect on this species, or its habitat.

(a) in the case of a threatened species, whether the life cycle of the species is likely to be disrupted such that a viable local population of the species is likely to be placed at risk of extinction,
Eucalyptus nicholli does not occur naturally at Croydon, being a planted specimen well out of its range. No local populations will be affected by the proposed development.

(b) in the case of an endangered population, whether the life cycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised,
No endangered populations occur on the site.

(c) in relation to the regional distribution of the habitat of a threatened species, population or ecological community, whether a significant area of known habitat is to be modified or removed,
Burwood does not represent natural habitat for *Eucalyptus nicholli*. There will be no modification or removal of habitat for this species.

(d) whether an area of known habitat is likely to become isolated from currently interconnecting or proximate areas of habitat for a threatened species, population or ecological community,
As the site does not represent natural habitat, the individual within it would not contribute in any way to the maintenance of other populations. The proposed development will not result in isolation of habitat.

(e) whether critical habitat will be affected,
Critical habitat is yet to be defined.

(f) whether a threatened species, population or ecological community, or their habitats, are adequately represented in conservation reserves (or other similar protected areas) in the region,

Eucalyptus nicholli does not occur naturally in the region. The proposed development will not affect its conservation status.

(g) whether the development or activity proposed is of a class of development or activity that is recognised as a threatening process,
The proposed development is not a threat to the species.

(h) whether any threatened species, population or ecological community is at the limit of its known distribution
The species is well outside the normal limit of its distribution. The proposed development will not affect its natural distribution in any regard.

Conclusion
There is unlikely to be a significant effect on *Eucalyptus nicholli*, or its habitat.

6.2 *Environment Protection and Biodiversity Conservation Act*

Eucalyptus nicholli is listed as a vulnerable species on the *Environment Protection and Biodiversity Conservation Act*. The following factors are used as guidelines to determine whether the proposed development will have a significant impact on this matter of National Environmental Significance.

An action has, will have, or is likely to have a significant impact on a vulnerable species if it does, will, or is likely to:

- *lead to a long-term decrease in the size of an important population*[1] *of a species, or*

The site population does not qualify as an important population.

- *reduce the area of occupancy of an important population,*

The site population does not qualify as an important population.

- *(or) fragment an existing important population into two or more populations,*

The site population does not qualify as an important population.

- *(or) adversely affect habitat critical to the survival of a species,*

As the plant is a common horticultural species well outside its natural range, the site is not critical to the survival of the species.

- *(or) disrupt the breeding cycle of an important population,*

The site population does not qualify as an important population.

- *(or) modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline,*

The action is unlikely to result in the species' decline.

[1] An important population is one that is necessary for a species' long-term survival and recovery. This may include populations that are:
- key source populations either for breeding or dispersal,
- populations that are necessary for maintaining genetic diversity, and/or
- populations that are near the limit of the species range.

- *(or) result in invasive species that are harmful a vulnerable species becoming established in the vulnerable species' habitat,*

The site is not natural habitat. Therefore, this question is not relevant.

- *(or) interferes substantially with the recovery of the species.*

The site is not important to the recovery of the species.

Conclusion

The proposed action is unlikely to have a significant effect on *Eucalyptus nicholli.*

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Appendix: Tree Schedule, Cheltenham Park, Croydon
(see attached plan for location of trees numbered below)

Tree No. and Species	Height (m)	Diameter at Breast Height (cm)	Condition	SULE
1. *Eucalyptus saligna*	15	80	good	2C
2. *Eucalyptus saligna*	15	20	moderate	2C
3. *Eucalyptus saligna*	17	35	good	2C
4. *Eucalyptus saligna*	8	20	good	2C
5. *Eucalyptus sp*	10	2x20	poor	4C
6. *Eucalyptus saligna*	12	50	moderate	2D
7. *Eucalyptus saligna*	12	50	moderate	2D
8. *Acacia decurrens*	7	20	poor	3A
9. *Eucalyptus sideroxylon*	7	20	good	1A
10. *Eucalyptus sideroxylon*	5	20	good	1A
11. *Acacia decurrens*	5	15	poor	3A
12. *Eucalyptus sideroxylon*	5	30	moderate	2A
13. *Eucalyptus sp*	9	40	moderate	2A
14. *Eucalyptus nicholli*	7	100	moderate	3A
15. *Eucalyptus tereticornis*	18	110	good	1A
16. *Eucalyptus sideroxylon*	7	25	moderate	3A
17. *Jacaranda mimosifolia*	8	Multi	good	2A
18. *Eucalyptus sp*	15	60	good	2A
19. *Angophora floribunda*	14	2x40	moderate	2A
20. *Eucalyptus microcorys*	7	30	moderate	5B
21. *Lophostemon confertus*	10	100	good	1A
22. *Eucalyptus saligna*	15	100	good	4C
23. *Eucalyptus saligna*	12	30	moderate	2C
24. *Cinnamomum camphora*	15	60	good	2C
25. *Cinnamomum camphora*	15	60	good	2C
26. *Cinnamomum camphora*	15	60	good	2C
27. *Cinnamomum camphora*	15	multi	good	2C
28. *Cinnamomum camphora*	15	multi	good	2C
29. *Cinnamomum camphora*	15	multi	good	2C
30. *Cinnamomum camphora*	15	multi	good	2C
31. *Cinnamomum camphora*	15	multi	good	2C
32. *Cinnamomum camphora*	15	30	good	2C
33. *Cinnamomum camphora*	16	35	good	2C
34. *Cinnamomum camphora*	16	35	good	2C

Explanation of SULE (safe and useful life expectancy) Categories

1. **Long SULE** – tree appeared retainable at time of assessment for over 40 years with acceptable degree of risk assuming reasonable maintenance.
    A. Structurally sound trees located in positions that can accommodate future growth.
    B. Trees which could be made suitable for long-term retention by remedial care.
    C. Trees of special significance which would warrant extraordinary efforts to secure their long-term retention.

2. **Medium SULE** – tree appeared retainable at time of assessment for over 15-40 years with acceptable degree of risk assuming reasonable maintenance.
    A. Trees which may only live from 15-40 years.
    B. Trees which may live for 40 years but would be removed for safety or nuisance reasons.
    C. Trees which may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.
    D. Trees which could be made suitable for retention in the medium term by remedial care.

3. **Short SULE** – tree appeared retainable at time of assessment for over 5-15 years with acceptable degree of risk assuming reasonable maintenance.
    A. Trees which may only live from 5-15 years.
    B. Trees which may live for 15 years but would be removed for safety or nuisance reasons.
    C. Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.
    D. Trees which could be made suitable for retention in the medium term by remedial care.

4. Removal – trees that should be removed within the next five years.
    A. Dead, dying, suppressed or declining trees.
    B. Dangerous trees through instability or recent loss of adjacent trees.
    C. Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form.
    D. Damaged trees that are clearly not safe to retain.
    E. Trees which may live for more than five years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.
    F. Trees which are damaging or may cause damage to existing structures within the next five years.
    G. Trees that will become dangerous after removal of other trees for the reasons given in A to F.
    H. Trees is categories A to G that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.

5. Small, young or regularly pruned – trees that can be readily moved or replaced.
    A. Small trees less than five metres in height.
    B. Young trees less than 15 years old but over 5m in height.
    C. Formal hedges and trees intended for regular pruning to artificially control growth.

R Land Exchange Proposal Plans


KEY
Proposed main shared asphalt path
Proposed secondary gravel path
Proposed and existing mown grass
Proposed native grass embankment planting
Proposed riparian wetland planting
Existing open water / proposed wetland
Proposed steel grated ramp or boardwalk
Existing asphalt courts
Existing playing field
Proposed surface water drainage swale
Proposed revegetation area
Existing stormwater pit
Proposed solar light
Proposed picnic setting (seating, bins, shelter and BBQ)
Proposed park bench seating
Existing trees to be retained and protected (indicative diameter and location)
Proposed trees (indicative diameter and location)
Proposed staged works area
Department of Education and Training boundary
Monash Parade
As the Cheltenham Road access is not possible Council will need to realign and may also need to upgrade the loading capacity for this entrance.
Royce Avenue
Residential properties
Residential properties
Residential properties
Residential properties
Residential properties
No compulsory acquisitions of Royce Avenue properties
Proposed future carpark
Area A
Area A is not suitable as a major entrance to the Park. This area is steep and bounded by a retaining wall and private properties. However, it is recommended that Council negotiate an easement or land exchange (area B for area A) so a secondary pedestrian access from the proposed car park on Cheltenham Road will be possible.
Area B
Area B is owned by Council. Council is prepared to sell or negotiate an easement over this parcel land (area B for Area A) to maintain the continued use as part of the playing field. It is recommended that the outcome of the land negotiations should be cost neutral to Council.
Playing facilities owned by NSW Education and Communities and Burwood Girls High School.
Area C is owned by The Department. This land is of little use to the Park. The area contains the dilapidated heritage brick buttress wall. It is recommended that Council not to take on the ownership of this area.
Area D is owned by The Department. It is recommended that Council negotiate access over this area for the construction of the Park only.
Area D
Area C
Cheltenham Road
School grounds
As the major access from Cheltenham Road is not possible the main shared and secondary paths will need realignment to provide a more direct link to Monash Parade.
General Notes:
This marked up Working Draft Sketch Master Plan accompanies a report to Council on the access and the shared use of the playing field facilities.
The final Master Plan and Plan of Management for Wangal Park will require some layout amendments to accommodate any changes of land usage, ownership and access to the Park.
It is recommended that any negotiations over land exchange and the maintenance, operations on the playing facilities is cost neutral to Council.
The 3rd pond (shown) has been approved for construction by the Department of Environment and Climate Change .
As the Cheltenham Road access is not possible the major play and picnic areas may need to be relocated closer to Monash Parade for ease of access.
Section A A' through wetland Scale 1: 250
LEGEND
Reference to a future soccer field in the Plan of Management will be deleted.
Relocated to a more central location.
Continue negotiations with the Department and Burwood Girls High School.
The revegetation area will be extended to include the 3rd wetland.
No compulsory acquisitions of Royce Avenue properties.
Notes
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Revision
The notations, in red, on this plan will accompany the report to Council on the access and land exchange issues as proposed by The Department of Education and Communities.
Issue
Date rev.
Hydraulics
Structural Engineer
Survey
Client
Plan Scale Bar
0m 10 20
Burwood Council
heritage • progress • pride
Project
Cheltenham Road Ex Tip Site Development
Project no.
Scale
1:500 @A1
Drawing
Wangal Park Working Draft Sketch Master Plan Land Issues
North
Date 07.07.11
Design & Draft
Checked
B.MCD
Drawing No
LA 101
Issue
B
Sheet
01

General Manager's design request

This plan has been prepared following technical discussions with the General Manager on 24/9/12. The GM requested that Urban Services consider the following:

1. The proposed relocation of the SES so the SES site can be turned into the car park for Wangal Park;
2. Provide a pedestrian and vehicular (emergency and operations only) access into Wangal Park from Cheltenham Road and via the SES site;
3. Negotiate a land swap with the school over the Council's triangular section of land (A), on the playing fields, for the school's parcel of land north and east of the SES building (B);
4. Negotiate access/easement for services to the proposed park amenities block in Wangal Park including; stormwater surcharged from Cheltenham Road; sewage; power; gas etc over school land but without pedestrian or vehicular access (C); and
5. Proceed with the wetland design as if it will be surcharged with stormwater received by the Cheltenham Road catchment pit via the school's land as per point 4 above.

Design and Construction Ramifications

SERVICES

Council needs

* a 3m wide easement (labelled C) for services from Cheltenham Rd to the amenities/cafe building, as detailed in 4 above, **or**

* the triangular portion (labelled A) will be required for services to reach Royce Avenue.

PROPOSED LAND SWAP (Area A for both Area B & C)

Triangular parcel of land owned by council labelled A (502m²) **for** the parcel of land, labelled B, east of current SES and bounded by residential properties and BGHS playing field (576m²), as per point 3 above, and the parcel of land labelled C as a service easement.

Consultation with the residents neighbouring the SES site accessway, and the SES itself, must be carried out prior to land swap negotiations with DET. A formal agreement with DET must be secured prior to final community consultation and finalising the Masterplan.

ACCESS - PEDESTRIANS

The area labelled B proposed for Wangal Park accessway land swap varies between 10m and 11.8m in width. This area is constrained by the requirement for retaining walls and existing tree considerations to allow for a pedestrian access path of 2.5-3m width. The exact width is to be confirmed with further site investigations.

ACCESS - VEHICLES

This access proposal requires approximately 680m of service road in a loop configuration, with 2 bridges, allowing emergency and service vehicles access to the Park. The main vehicle entry is now proposed via Monash Parade, as it is considered that the SES site accessway (B) land gradient, width, and close proximity to residences makes it unsuitable as a main vehicle access.

PARKING

Carpark proposed on SES site will fit 28 cars, including 2 disabled spaces.

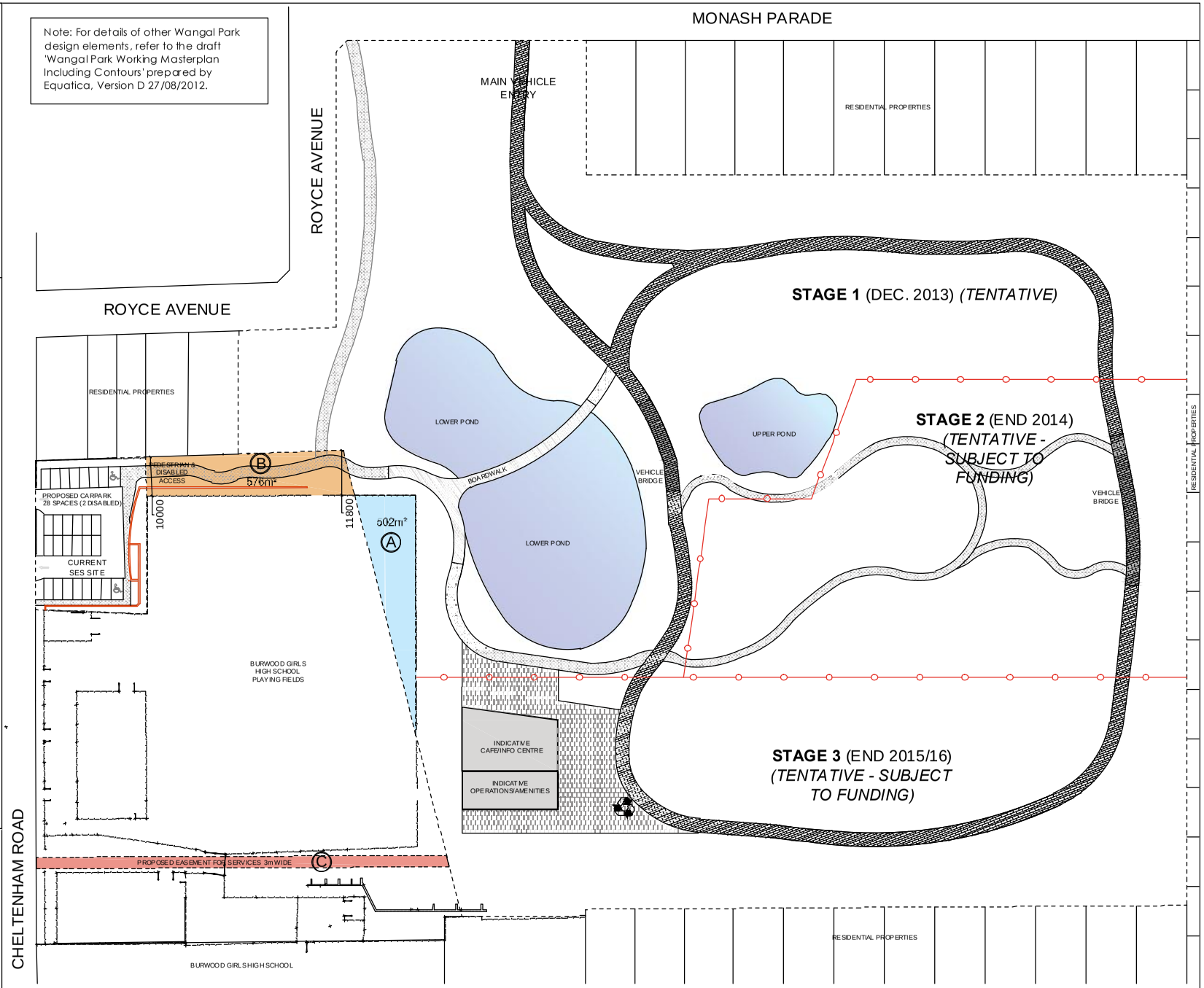
WETLAND DESIGN

Without the easement for services from Cheltenham Rd through the DET land, the wetlands will need to be designed to have a greater fluctuation of water levels between storm events.

LEGEND

- PAVING
- HEAVY VEHICLE ACCESS PATH
- PEDESTRIAN ACCESS ONLY
- BUILDING - APPROX. LOCATION, INDICATIVE LAYOUT
- EPHEMERAL WETLAND
- PROPERTY BOUNDARY
- TEMPORARY FENCING DURING STAGED CONSTRUCTION
- PROPOSED RETAINING WALL
- LOCATION OF WASTE STORAGE/PICK-UP
- (A) COUNCIL-OWNED LAND FOR LAND SWAP
- (B) DET-OWNED LAND FOR LAND SWAP
- (C) PROPOSED EASEMENT FOR SERVICES 3m WIDE (stormwater, sewer, power, water, gas, comm's) on DET-OWNED LAND
- EXISTING FENCE

Note: For details of other Wangal Park design elements, refer to the draft 'Wangal Park Working Masterplan Including Contours' prepared by Equatica, Version D 27/08/2012.



DIAL 1100 BEFORE YOU DIG

UNLESS DETAILED ON THIS DRAWING, ALL WORK SHALL CONFORM TO AUS SPEC

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Revision	Issue	Date rev.
Vehicle access layout	A	23/10/12

Hydraulics | Structural Engineer | Architect | Client

Project: Wangal Park Master Plan Development

Burwood Council
heritage • progress • pride

TRIM no.	Scale	Drawing
12/48510	NTS @A3	Proposed Wangal Park Vehicle and Pedestrian Access diagram for discussion
Date 23/10/12		

Drawn	Checked	Drawing no.	Issue	Sheet
JB	PS/JI	LT006	A	01

North

S Land Exchange Agreement (pending)

T Closure Plan 2013 (pending)

U DECCW Letter 2011

NSW GOVERNMENT | Environment, Climate Change & Water

Our reference: DOC11/28012
Contact: Christy Groves, (02) 9995 5765

General Manager
Burwood Council
PO Box 240
BURWOOD NSW 1805

Attention: Robert Teo

STANDARD POST

Dear Sir,

Cheltenham Road Landfill, Croydon Park - Revised Closure Plan

I refer to your correspondence dated 3 June 2011 and discussions with the Office of Environment and Heritage (OEH) regarding a revised Closure Plan for Cheltenham Road Landfill, Croydon Park (the "Premises").

Please note that although the Environment Protection Authority ("EPA") is now part of the OEH certain statutory functions and powers continue to be exercised in the name of the EPA.

OEH has reviewed Coffey Environments Australia Pty Ltd report dated 30 May 2011. Based on the information provided in the report, it is OEH view that the dams at the Premises are not being impacted by leachate and further investigation into the lining of the dams is not required. Considering this, OEH has no objection to the dams remaining on-site as proposed on "Wangal Park Working Draft Sketch Master Plan" dated 2 March 2010.

However, OEH advises that in accordance with Surrender Notice 1066834, the landfill cap was required to be completed by 31 December 2007 and these works remain uncompleted. Therefore OEH requests Burwood Council submit a revised closure plan that includes a timeframe for completion of capping works as soon as possible. The revised closure plan should include the final designs for the proposed wetland system and final landform.

OEH takes the opportunity to remind Council that at this time, only works permitted under Surrender Notice's 1066834 and 1049695 can be undertaken at the Premises. Once a revised closure plan has been submitted, OEH will vary the Surrender Notice to permit works associated with the revised plan to be undertaken.

If you have any questions regarding this matter, please contact Christy Groves on (02) 9995 5765.

Yours sincerely

17/6/11

Julie Currey
Unit Head Waste Operations
Environment Protection and Regulation
The Office of Environment and Heritage

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V Access Agreement 2013 (pending)