



Hawkesbury City Council

attachment to item 217

Attachment 1
Woodbury Reserve Draft
Plan of Management, including
Landscape Master Plan

date of meeting: 21 October 2008
location: council chambers
time: 5:00 p.m.

Woodbury Reserve

GLOSSODIA



Draft Plan of Management

26 February 2008

prepared by

LandArc Pty Limited

Landscape, Environmental and Heritage Consultants

CONTROLLED DOCUMENT

Draft Issue B: 26 February 2008

This Plan of Management for
Woodbury Reserve, Glossodia
was prepared by



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1.0 INTRODUCTION

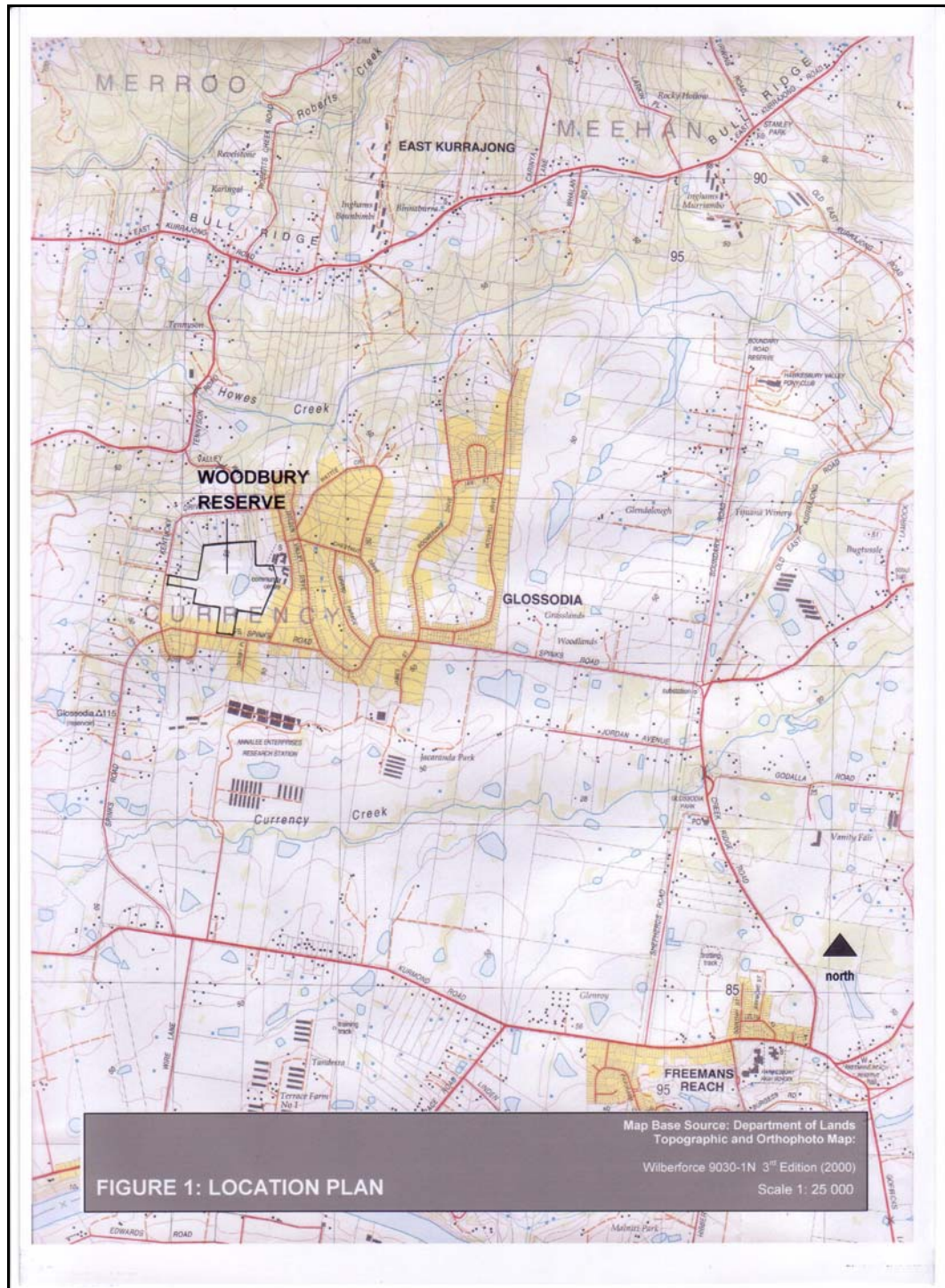
1.1 LOCATION AND CONTEXT

A plan of management provides the framework for managing public land. This plan of management applies to the community land described as Woodbury Reserve, Glossodia, known locally as “the 40-acres”. The reserve is located within the Howes Creek sub-catchment (Hawkesbury River Catchment) approximately twelve kilometres north of Windsor Bridge in a semi-rural/residential area between Golden Valley Drive, Spinks Road and Kentucky Road, Glossodia (refer to *Figure 1: Location Plan*).

Woodbury Reserve, covering a total area of 19.18 hectares (Ha), is largely bordered by one hectare (ie. 2.5 acre) semi-rural lots under private ownership. Glossodia Public School, the shopping village and community centre on Golden Valley Drive adjoin the reserve’s north-eastern boundary. Vehicular access into the reserve is via Spinks Road. Public pedestrian access is provided at three locations – Golden Valley Drive (shopping village car park near the Community Centre and Golden Valley Children’s Learning Centre), Kentucky Drive and Spinks Road.

Woodbury Reserve provides a strong community focus offering a range of opportunities for active, organised sports and passive, nature-based recreation. Community and recreational facilities include a multi-purpose sportsground catering for club soccer, cricket and PSSA sports, the Golden Valley Children’s Learning Centre (near the school and shopping village) and Glossodia Bush Fire Brigade (building located in a fenced area on Spinks Road). Other facilities include car parking areas, children’s playground, ground lighting, public amenities/ change-rooms, clubroom and canteen (upgraded in 2007). These facilities generally cater for a local and broader district user catchment. All of these facilities are on community land.

The reserve retains a relatively large area of natural bushland (approximately 65% of total area), an open grassed paddock, intermittent creek, wetlands, constructed dam and steep lower gully. The community uses these natural areas for passive recreation including jogging, relaxation, walking the dog, bushwalking, horse-riding, mountain bike riding, PSSA and school cross-country races (refer to *Figure 2: Study Area*).

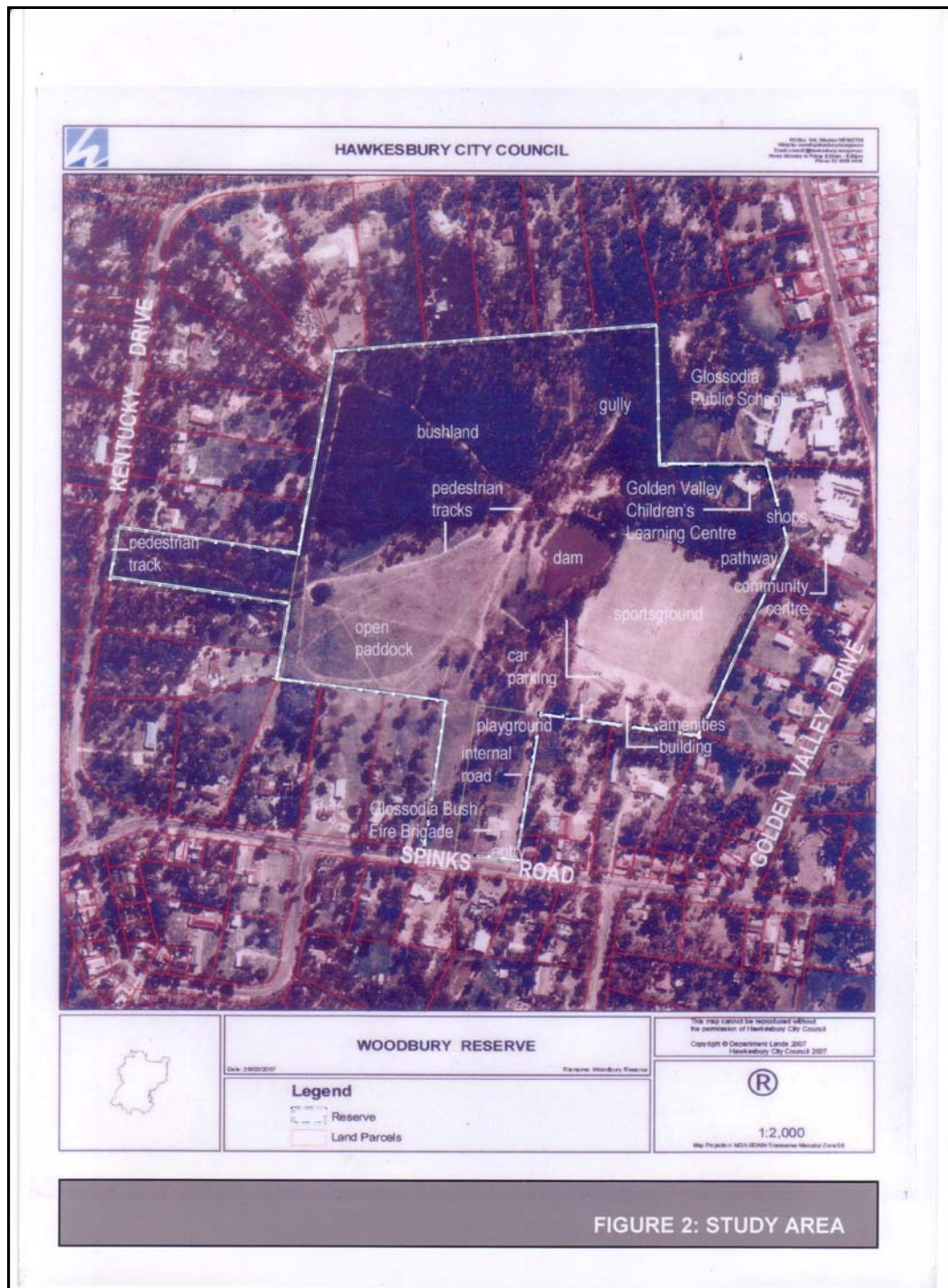


1.2 BACKGROUND

Woodbury Reserve is highly valued by the local community. In recent years the reserve has drawn considerable community interest and concern over existing and unauthorised uses, visitor behaviour and issues of alienation affecting the reserve. The need for youth facilities, enhanced passive recreational opportunities and protection of environmental quality have also been raised as important issues.

In addition to existing community and recreational infrastructure, other facilities and improvements have been proposed by the community for development within the reserve (refer to *3.0 Community Consultation*). These proposals need to be considered in view of community demand and the ability of both Hawkesbury City Council and the community to resource and manage these facilities and improvements.

A further issue raised by the community involved a proposal for development of a church within the reserve. Various options were outlined however this reserve, as community land, is subject to the requirements of the *Local Government Act 1993*. There are no provisions for addressing this development submission on community land. Accordingly, this issue will be addressed by Council separately and not included in this plan of management.



1.3 AIMS AND OBJECTIVES

A community land plan of management provides the framework for managing community land in accordance with the *Local Government Act 1993* and other relevant legislation and policies. This plan of management has been prepared for Hawkesbury City Council under the direction of Council's Parks & Recreation section. It aims to be performance oriented in order to contribute towards Council achieving its strategic goals, vision and strategic outcomes as identified in the *Hawkesbury City Council Management Plan 2006-2007*.

Woodbury Reserve's natural, recreational, cultural and social values are affected by a range of issues. While preparation of the plan of management has ensured thorough consultation with the local community and key stakeholders it is important to recognise that the approach has been values-based rather than simply issues-driven. Accordingly, this plan of management focuses on the longer term objectives of sustainable management.

This plan of management aims to support the broad principle that all elements of the environment must stand in balance, contribute to an ecologically sustainable city and region and add to the quality of life within the Hawkesbury City LGA. Council's strategic planning process has identified a number of significant and/ or priority areas which required the preparation of more detailed and specific management strategies. Woodbury Reserve is one of these significant areas and this plan of management supersedes the generic plan of management which included this reserve. The following steps have guided the preparation of this plan of management:-

Section 2.0 Land Description and Planning

- review existing zoning provisions under Hawkesbury City Council's Local Environmental Plan (LEP 1989 as amended);
- identify current uses and condition of the land, and any buildings or other improvements;
- establish community land categories in accordance with the *Local Government (General) Regulation 1999* and identify the core objectives for each of these categories; and
- address future permitted uses and development (including intensity and scale), existing and future leases/ licences.

Section 3.0 Community Consultation

- identify and assess community and stakeholder issues affecting the community land; and
- determine community goals, values, needs and expectations for the future use and management of the reserve.

Section 4.0 Basis for Management

- define the community land's role within the local area and broader district context;
- identify and assess key values associated with the community land including facilities and improvements and their condition;
- assess the impact of existing uses and management regimes or future development on identified key values; and
- establish the framework for sustainable management strategies.

Section 5.0 Management Strategies

- specify the purposes for which the land, buildings or improvements, will be permitted to be used;
- specify the purposes for which any further development of the land will be permitted, whether under lease or licence or otherwise;
- describe the scale and intensity of such permitted use or development;
- develop appropriate performance targets (management objectives), the means of achieving these targets (management actions) and the means of assessing Council's performance with respect to the plan's objectives;
- assign directions and priorities (spanning the next 5-years); and
- develop a master plan for implementation of the strategic plan.

1.4 LIST OF ABBREVIATIONS USED IN THIS STUDY

CPEECs	Cumberland Plain Endangered Ecological Communities
DNR	NSW Department of Natural Resources
DofL	NSW Department of Lands
DofP	NSW Department of Planning
DECC	NSW Department of Environment & Climate Change
EPBC Act	Environment Protection & Biodiversity Conservation Act 1999
HRCC	Hawkesbury River County Council
HRFC	Hawkesbury Rural Fire Service
LEP	Hawkesbury City Local Environmental Plan 1989
LGA	Local Government Area (Hawkesbury City Council)
NPWS	NSW National Parks & Wildlife Service
NSWRFS	New South Wales Rural Fire Services
SREP	Sydney Regional Environmental Plan
TSC Act	Threatened Species Conservation Act 1995

2.0 LAND DESCRIPTION AND PLANNING

2.1 LAND TENURE

Woodbury Reserve, Glossodia, is classified as community land and owned in fee simple by Hawkesbury City Council. The reserve is located within the Parish of Currency, County of Cook, City of Hawkesbury and is comprised of three community land parcels as follows (refer to *Figure 3: Land Tenure*):-

- Lot 457 in DP 214756 – major reserve portion including child learning centre, sports field, children's play area, car parking area, bushland, open paddock and dam (17.16 Ha);
- Lot 464 in DP 214756 narrow bushland corridor adjoining Kentucky Drive (1.01 Ha); and
- Lot 514 in DP 214756 including Glossodia Bush Fire Brigade building and curtilage (1.01 Ha).

2.2 LAND DESCRIPTION

Table 1: Land Description – Existing Facilities & Improvements is divided into four separate columns with the following information provided for each land parcel:-

- Lot/ DP number (column 1);
- proposed community land category (column 2);
- description of land parcel, facilities and improvements (column 3);
- condition of facilities and improvements (column 4).

Lot/ DP number

Lot and DP number provide land tenure information for the land parcel according to Hawkesbury City Council's property records.

Community land category

The proposed community land category is shown in this column.

Land description, facilities and improvements

This column provides a brief description of the land parcel, including facilities and improvements, landscape embellishment and the presence of remnant native vegetation and/ or exotic weeds. An indication of land management regimes (eg. mowing and general maintenance) is also provided.

Condition

This column refers to the general condition of facilities and improvements in accordance with the requirements of the *Local Government Act 1993*. The assessment of condition follows directly from the description of facilities and improvements (ie. same line) and provides a broad indicator of overall condition of these described items as follows:-

- good** described items are in relatively good condition and repair under the current works and maintenance program.
- fair** described items are in only fair condition and in need of repair/ improvements or an increased level of maintenance.
- poor** described items are in relatively poor condition requiring repair in some instances, improvements or an increased level of maintenance with some items requiring urgent attention.

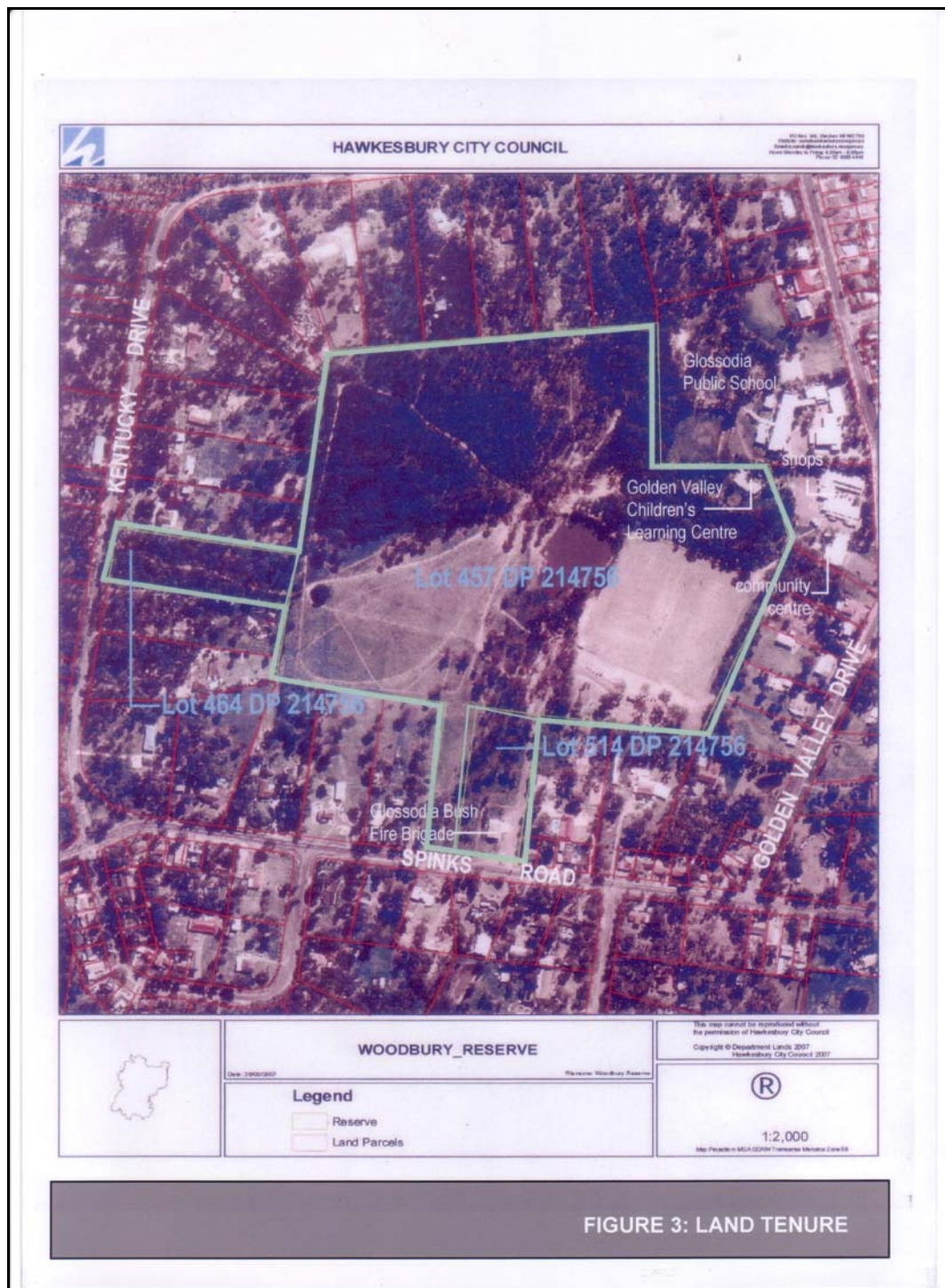
The condition assessment refers primarily to built facilities and improvements. Refer to *4.0 Basis for Management* for a detailed description of environmental condition and status of natural areas (ie. bushland and wetlands) and *5.0 Management Strategies* for proposed capital works, maintenance and management with respect to all items.

**TABLE 1:
LAND DESCRIPTION - EXISTING FACILITIES AND
IMPROVEMENTS**

Land Description	Community Land Category	Existing Facilities/ Improvements	Condition
Lot 457 DP 214756	Sportsground	playing fields:	
		senior, junior & mini soccer fields	good
		turf cricket pitch [central]	good
		4 X floodlighting/ metal poles [twin fixtures]	good
		2 X cricket nets/ synthetic pitches/ metal fencing	fair
		goal posts & other fixtures	good
		maintenance/ storage shed [metal roof lock-up/ steel container on conc. slab]	fair
		concrete pad [discuss/ shot-put]	good
		chain-wire perimeter fencing	good
		open drainage swale [eastern boundary]	fair
	General community use	change-rooms/ facilities:	
		stepped conc. viewing area/ metal roofing	good
		5 X metal frame/ timber bench seats [undercover]	good
		brick change-rooms/ toilets, clubroom, store-room and canteen w. metal security doors/ panels [upgraded/ renovation 2007]	good
		timber bollards/ wire rope	good
		conc. steps/ low retaining wall	good

Table 1 [continued]

Land Description	Community Land Category	Existing Facilities/ Improvements	Condition
	General community use [cont'd]	children's playground: 1 X junior platform/ shelter, slide & tunnels 1 X climbing frame/ spiral slide & platforms 4 X swings [junior & senior sets/ strap seats] 4 X synthetic soft fall areas 1 X bench seat vehicular access road & parking area: bitumen access road [off Spinks Road] traffic calming devices [speed bumps] unsealed gravel parking [90° angle and parallel] Golden Valley Children's Learning Centre*: brick building child-proof fenced area/ gates soft fall areas/ play equipment & shade structures lawn area/ cultivated trees concrete footpaths	good good good fair fair fair fair poor good good good good
	Natural area: watercourse	unmade overflow car parking area/ multiple tracking steel posts/ wire-coil fencing & 2 X steel boom gates** service vehicle track [unmade service road] BMX multiple tracking/ jumps & erosion damage constructed earth dam/ lagoon, drainage channels [open/ piped], eroded steep banks metal shed/ irrigation pump [adj. to dam] culverts/ piped drainage channels native wetland vegetation/ exotic weeds native bushland/ regrowth	poor good poor poor poor fair good varies varies
	Natural area: bushland	service vehicle track [unmade service road] BMX multiple tracking/ jumps & erosion damage unmade walking tracks native bushland/ regrowth cleared open grassed paddock/ exotic weeds	poor poor poor varies n/a
Lot 464 DP 214756	Natural area: bushland	service vehicle track [unmade service road] steel posts/ wire-coil fencing & conc. blocks native bushland/ regrowth no other facilities or improvements	poor fair varies
Lot 514 DP 214756	General community use	Glossodia Bush Fire Brigade*: brick building/ metal roof & conc. pad/ driveway chain-wire fence/ 3 X strand barbed wire & gates open grassed area/ exotic planting [in compound]	good good good
	Natural area: watercourse	native wetland vegetation/ exotic weeds native bushland/ regrowth	varies varies
Notes:			
* No access provided for facilities/ condition inspection of Golden Valley Children's Learning Centre & Glossodia Bush Fire Brigade compound.			
** steel posts/ wire-coil fencing to restrict unauthorised access [eg. 4WD motor vehicles/ motor bikes & BMX bikes] have been repeatedly vandalised.			



2.3 COMMUNITY LAND MANAGEMENT

Community land must be managed in accordance with the *Local Government Act 1993* and other relevant legislation and policies. The ways in which community land can be used and managed are strictly governed in accordance with an adopted plan of management and any law permitting the use of the land for a specified purpose or otherwise regulating its use. The nature and use of community land may not change without an adopted plan of management. Community land must not be sold, exchanged or otherwise disposed of except in the instance of enabling the land to be added to Crown reserve or a protected area under the *National Parks and Wildlife Act 1974*. The use and management of community land must also be consistent with its designated categories and core objectives.

2.4 COMMUNITY LAND CATEGORISATION

In accordance with the *Local Government Act 1993* all community land must be categorised as either a natural area, a sportsground, a park, an area of cultural significance or for general community use, or a combination of these categories. A further requirement is that land categorised as a “natural area” must be given a sub-category of either bushland, wetland, escarpment, watercourse, foreshore or a category prescribed by the regulations. The *Local Government (General) Regulation 2005* provides guidelines for categorisation.

This plan of management categorises the community land (ie. Woodbury Reserve) into the following (see *Figure 4: Community Land Categorisation*):-

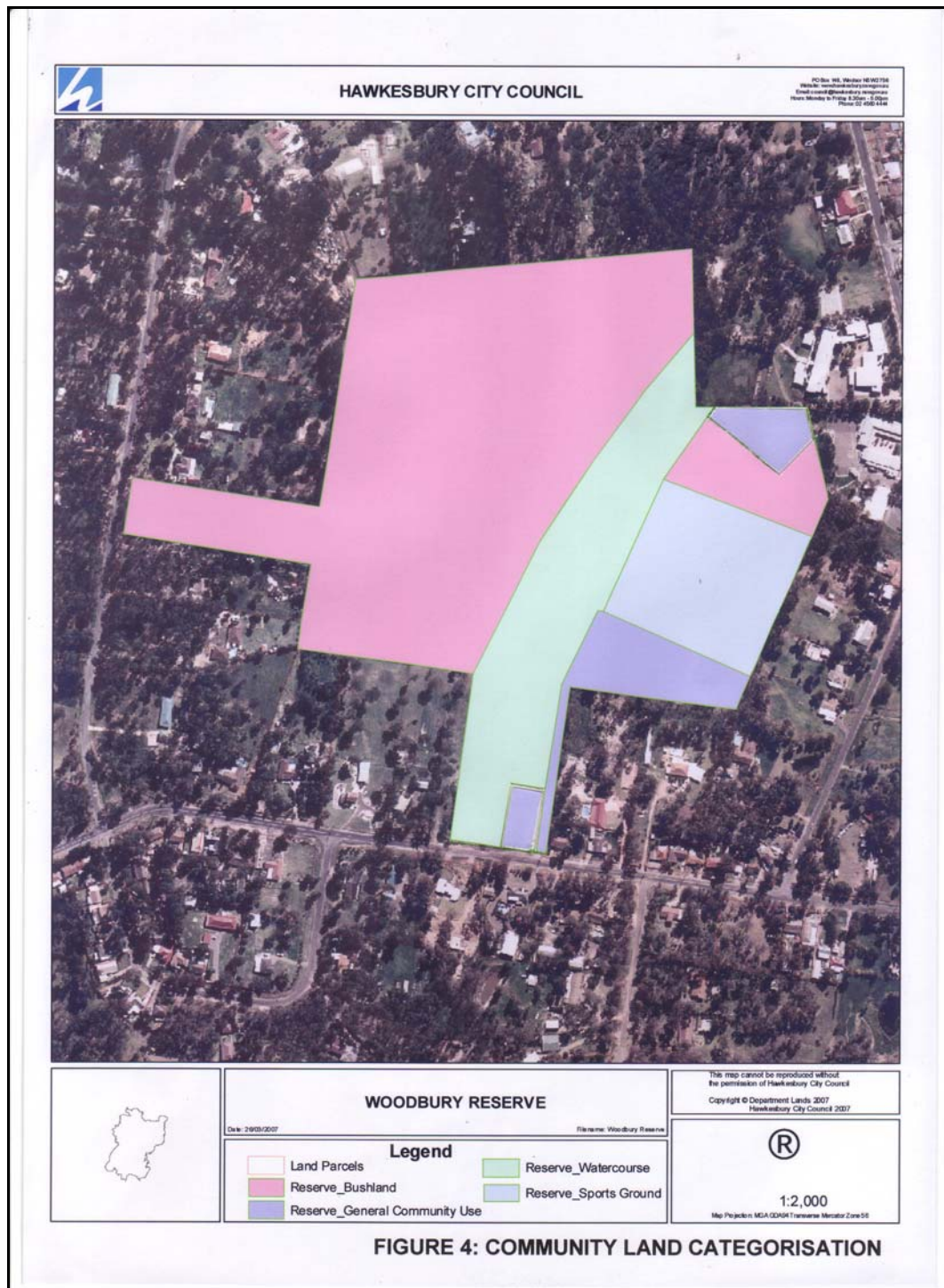
- Natural area – bushland;
- Natural area – watercourse;
- Sportsground; and
- General community use.

The community land categorisation identified in this plan of management is in accordance with the guidelines of the *Local Government (General) Regulation 2005* and supersedes categories identified in the *Draft Hawkesbury Generic Plans of Management 2003* and previous draft mapping of categories.

Natural Area

“Land should be categorised as a natural area under s.36(4) of the Act if the land, whether or not in an undisturbed state, possesses a significant geological feature, geomorphological feature, landform, representative system or other natural feature or attribute that would be sufficient to further categorise the land as bushland, wetland, escarpment, watercourse or foreshore under section 36(5) of the Act”.

Section 102, Local Government (General) Regulation 2005



Natural Area – bushland

“(1) Land that is categorised as a natural area should be further categorised as bushland under s.36(5) of the Act if the land contains primarily native vegetation and that vegetation:

- (a) is the natural vegetation or a remainder of the natural vegetation of the land, or
- (b) although not the natural vegetation of the land, is still representative of the structure or floristics, of the natural vegetation in the locality.

(2) Such land includes:

- (a) bushland that is mostly undisturbed with a good mix of tree ages, and natural regeneration, where the understorey is comprised of native grasses and herbs or native shrubs, and which contains a range of habitats for native fauna (such as logs, shrubs, tree hollows and leaf litter), or
- (b) moderately disturbed bushland with some regeneration of trees and shrubs, where there may be a regrowth area with trees of even age, where native shrubs and grasses are present in the understorey even though there may be some weed invasion, or
- (c) highly disturbed bushland where the native understorey has been removed, where there may be significant weed invasion and where dead and dying trees are present, where there is no natural regeneration of trees or shrubs, but where the land is still capable of being rehabilitated”.

Section 107, Local Government (General) Regulation 2005

Cumberland Plain Woodland and Shale Sandstone Transition Forest, both scheduled as endangered ecological communities (TSC Act 1995), occur throughout most of the reserve. These communities are categorised as natural area – bushland. This category includes regrowth areas (such as the open paddock) and has very high conservation values. The presence of these two endangered ecological communities signals the need for an appropriate conservation and management strategy (refer to 2.6 *Other Relevant Legislation And Policies: Threatened Species Legislation*).

Natural Area – watercourse

“Land that is categorised as a natural area should be further categorised as a watercourse under s.36(5) of the Act if the land includes:

- (a) any stream of water, whether perennial or intermittent, flowing in a natural channel, or in a natural channel that has been artificially improved, or in an artificial channel that has changed the course of the stream of water, and any other stream of water into or from which the stream of water flows, and
- (b) associated riparian land or vegetation, including land that is protected land for the purposes of the *Rivers and Foreshores Improvement Act 1948* or State protected land identified in an order under section 7 of the *Native Vegetation Conservation Act 1997*”.

Section 110, Local Government (General) Regulation 2005

The portion of community land within the defined riparian zone along the intermittent creek-line (including the upper wetlands, dam and lower gully area) is categorised as natural area – watercourse. This category includes Cumberland Plain Woodland and Shale Sandstone Transition Forest, which are endangered ecological communities (TSC Act 1995). It has very high conservation values and potential for regeneration and restoration.

Sportsground

Land should be categorised as sportsground under s.36(4) of the Act if the land is used or proposed to be used primarily for active recreation involving organised sports or the playing of outdoor games.

Section 103, Local Government (General) Regulation 2005

The existing playing field is categorised as sportsground in accordance with existing sporting uses.

General Community Use

Land should be categorised as general community use under s.36(4) of the Act if the land:

- (a) may be made available for use for any purpose for which community land may be used, whether by the public at large or by specific sections of the public, and
- (b) is not required to be categorised as a natural area under section 36A, 36B or 36C of the Act and does not satisfy the guidelines for categorisation as a natural area, a sportsground, a park or an area of cultural significance.

Section 106, Local Government (General) Regulation 2005

The Golden Valley Child Learning Centre, Glossodia Bush Fire Brigade (building and compound), access road, car parking area, public amenities/change-rooms and playground are categorised as general community use.

2.5 LEASES, LICENCES OR OTHER ESTATE

There are no current leases or licences over this community land. A lease, licence or other estate may be granted, in accordance with an express authorisation by this plan of management, providing the lease, licence or other estate is for a purpose prescribed in s.46 of the *Local Government Act 1993*. The purpose must be consistent with core objectives for the category of community land (refer to *5.0 Management Strategies - Table 4: Schedule of Core Objectives*). For express authorisation of future permitted leases, licences or other estate refer to *Table 5: Action Plan -items A6-A8*.

Council must not grant a lease, licence or other estate for a period (including any period for which the lease could be renewed by the exercise of an option) exceeding 21 years. A lease, licence or other estate may be granted only by

tender in accordance with s.46A of the *Local Government Act 1993* and cannot exceed a term of 5 years (including any period for which the lease could be renewed by the exercise of an option), unless it satisfies the requirements as scheduled in s.47, or is otherwise granted to a non-profit organisation (refer to *Leases, licences and other estate in respect of community land – s.46, 46A, 47 and 47A Local Government Act 1993*). Furthermore, leases, licences or other estate must not be granted in respect of land categorised as a natural area, unless it is for a purpose prescribed in s.47B of the *Local Government Act 1993*.

Existing community facilities

Golden Valley Child Learning Centre, located in the north-eastern corner of the reserve, has been operating for eighteen years. The centre is licensed for a maximum of 40 children. It is a community based, non-profit operation offering a pre-school program and long day care between 7.00am-6.00pm. The programs are guided by a parent management committee. Council provides some maintenance services. No current lease or licence exists.

The Glossodia Bush Fire Brigade uses the building/ compound near Spinks Road. The brigade conducts regular hazard reduction and training exercises in the reserve. No current lease or licence exists.

Existing covenants and easements

Lot 457 – Covenant J307525 – easements for drainage affecting the land shown as sites of proposed drainage easement 10 feet wide and 20 feet wide in DP 214756;

Lot 464 – Covenant J484095; and

Lot 514 – Land Notation:

1. Easement for drainage see DP214756 for more information;
2. Covenant J307525 – easement for drainage affecting the piece of land shown as site of proposed drainage easement 20 feet wide in DP214756.

2.6 OTHER RELEVANT LEGISLATION AND POLICIES

In addition to the requirements of the *Local Government Act 1993* this plan of management has been prepared in accordance with the provisions contained in other relevant legislation and policy guidelines, including but not limited to the following:-

- ☐ Native Title Act (Commonwealth) 1993
- ☐ Catchment Management Authorities Act 2003
- ☐ Environment Protection and Biodiversity Conservation Act 1999
- ☐ Threatened Species Conservation Act 1995
- ☐ Fisheries Management Act 1994
- ☐ National Parks and Wildlife Act 1974

- ❑ NSW Heritage Act 1977
- ❑ Noxious Weeds Act 1993
- ❑ Rural Fires Act 1997
- ❑ Environmental Planning and Assessment Act 1979
- ❑ Disability Discrimination Act 1992
- ❑ SEPP 19: Bushland in Urban Areas
- ❑ NSW Flood Policy 1984

- ❑ Hawkesbury City Council Management Plan 2006-2007
- ❑ Hawkesbury Local Environmental Plan 1989
- ❑ Section 94 Contributions Plan Review 2001
- ❑ Hawkesbury City Council Charter
- ❑ Hawkesbury Cultural Plan 2006-2011

Native Title Act (Commonwealth) 1993

This plan of management acknowledges the significance of the Hawkesbury River Valley as a traditional resource area for the Darug Aboriginal people. The consultative process has emphasised an open, transparent approach. Accordingly, this plan of management encourages broader involvement with traditional Aboriginal custodians in the future management of the reserve.

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* forms the basis of statutory planning in New South Wales, including the preparation of Local Environmental Plans (LEPs) which regulate land use and development. Hawkesbury City Council, as the consent authority under the *Local Environmental Plan 1989 (LEP 1989)* and the *Environmental Planning and Assessment Act 1979* controls development and the use of land on parks and reserves in the Hawkesbury City Council local government area.

Woodbury Reserve is currently zoned under the *Hawkesbury City Council Local Environmental Plan (LEP 1989)* as follows:-

- eastern portion of reserve (part Lot 457) is zoned 6(a) *Open Space – Existing Recreation*;
- western portion of reserve (including part Lot 457 & Lots 464 and 517) are zoned 2. *Residential – Housing*.

It is desirable that zoning is consistent with this plan of management. Current anomalies (ie. residential zoning) need to be addressed (refer to 5.0 *Management Strategies – Table 5: Action Plan, item A10*).

Threatened species legislation

The reserve's Cumberland Plain Woodland and Shale Sandstone Transition Forest (including regrowth) are both scheduled as endangered ecological communities (Part 3 of Schedule 1) under the *Threatened Species Conservation (TSC) Act 1995*. For further details refer to 4.0 *Basis for Management*. The TSC Act provides the legislative mechanisms for dealing

with listed items. When endangered species, populations or ecological communities are scheduled under the TSC Act, the following legal responses are triggered:-

- (a) land can be declared as “critical habitat”; or
- (b) a “recovery plan” must be prepared; and where key threatening processes have been identified under Schedule 3
- (c) a “threat abatement plan” must be prepared.

To provide consistency with threatened species legislation this plan of management aims to address the following:-

- the plan must state whether the land has been declared as “critical habitat” or affected by a “recovery plan(s)” or “threat abatement plan”;
- must have consistency in the management objectives of the land and the *Threatened Species Conservation Act* or the *Fisheries Management Act*;
- the draft plan must be forwarded to the Director General of National Parks and Wildlife or the Director of NSW Fisheries and must incorporate any requirements made by either person;
- no change in the use of the land is permitted until a plan of management has been adopted that meets the above requirements;
- no lease or licence can be granted until a plan of management is in place – (leases and/or licences that are in place before the land was affected by threatened species laws can continue to operate);
- no native plant species of an endangered ecological community may be “picked” without the prior granting of a Section 91 Licence under the TSC Act 1995.

No part of this community land has been declared as “critical habitat” nor is it currently affected by a “recovery plan” or “threat abatement plan”. The National Parks and Wildlife Service (NPWS) is currently developing a Draft Recovery Plan for all of the Cumberland Plain Endangered Ecological Communities (CPEECs).

3.0 COMMUNITY CONSULTATION

3.1 INTRODUCTION

Community consultation has played an important part in the plan of management process. Hawkesbury City Council has promoted an open, transparent approach to community consultation, providing opportunities for stakeholders and members of the community to contribute comments and submissions or to discuss specific issues.

A community workshop was held during preparation of the draft plan of management (refer to 3.2 *Community Workshop*). Further consultation continued through to release of the draft plan of management (ie. public exhibition), at which time the community was able to make final comments and submissions. This process highlights the importance of community involvement and ownership in the adopted plan of management.

In accordance with the *Local Government Act 1993* the draft plan of management must be placed on public exhibition for a period of at least 28 days (ie. four weeks). A further two weeks are provided for completion of written submissions. During the public exhibition period the draft plan of management will be available for viewing at the Hawkesbury City Council Administrative Offices, Hawkesbury Central Library (in the Deerubbin Centre), Windsor and on Council's web-site <http://www.hawkesbury.nsw.gov.au/>

All public submissions and any comments submitted by other government agencies will be reviewed by Hawkesbury City Council. The draft plan of management, as amended following public submissions and review, will be submitted to Council for adoption.

3.2 COMMUNITY WORKSHOP

A community workshop was held at the Glossodia Community Centre, 162 Golden Valley Drive, Glossodia at 7:30pm on Monday 26th March 2007. The workshop was advertised by Hawkesbury City Council in the local press and notices in Council's Administrative Offices and Hawkesbury Central Library.

Apart from Councillors, council staff and individual participants, the key stakeholder groups contacted for the workshop included the following (in alphabetical order):-

- Darug Custodian Aboriginal Corporation
- Darug Tribal Aboriginal Corporation
- Department of Environment & Climate Change – Richmond Office
- Glossodia Bush Fire Brigade
- Glossodia Cricket Club
- Glossodia Public School
- Glossodia Soccer Club
- Golden Valley Children's Learning Centre
- Guide Dogs Centre (Glossodia)
- Hawkesbury Sports Council
- Residents adjoining reserve

A total of 36 people attended the workshop (not including Council staff). The workshop proceeded with a brief description of the plan of management process and a short power-point presentation by Noel Ruting, a Director of LandArc Pty Limited (see *Appendix I: Community Consultation – presentation material and submissions*).

A Community Issues Questionnaire (pro-forma – refer to *Appendix I*) was distributed to all stakeholders at the workshop and thirty-three (33) written responses were received. The issues are summarised in the following section (3.3 *Community Issues*). A petition (55 signatories) from members of the Glossodia Community Anglican Church and a detailed description of the church proposal were also received.

Submission by Glossodia Community Anglican Church

The Glossodia Community Anglican Church proposal was discussed at the public workshop held by Council on 26th March 2007. The proposal requested approval from Council for leasing of approximately two hectares (2 Ha) of community land to build a church and car parking area near the Glossodia Bush Fire Brigade site (off Spinks Road). Alternatively, three other building sites within the reserve were identified. The proposal aimed to establish a positive presence in the reserve, targeting illegal and anti-social behaviour and providing opportunities for youth and other members of the local community. The reserve however is community land and is subject to the requirements of the *Local Government Act 1993*. As previously outlined, this issue will be addressed by Council as a separate matter and is not included in any further discussion or assessment in this plan of management.

3.3 COMMUNITY ISSUES

Background

The reserve has been the subject of ongoing community consultation since the 1990s, particularly over issues relating to unauthorised activities such as

motorbike riding. The bushland has been seriously degraded by ongoing indiscriminate clearing, multiple tracking, erosion, fires, rubbish dumping and acts of vandalism. In 1998, Council responded by removing motor bike/ BMX bike tracks and jumps in the reserve. A petition (189 signatories from children and parents) was submitted to Council protesting against Council's action. A public meeting was held by Council in November 1999 to discuss the issues and to progress the preparation of a plan of management for the reserve. In the same year \$20,000 was allocated for construction of a post and wire-coil fence and reinstatement of the BMX track.

In recent years, the same issues have continued to affect the reserve and split the community over an appropriate course of action – illegal 4WD vehicle and motor bike activity, vandalism of public property and natural assets, rubbish dumping, anti-social behaviour continue to impact on public safety, broader community use and enjoyment of the reserve. These differences of opinion on how the reserve should be managed were highlighted at the public workshop and special community meeting (March 2007). The workshop discussion focussed on these and a number of other key issues including public safety, visitor management, pedestrian access and circulation, greater community involvement, recreational and sporting facilities and environmental issues. The special meeting held after Clean Up Australia Day also discussed many of these issues. The community was encouraged at this meeting to form a volunteer group to assist in general maintenance, rubbish removal, ground care, etc. in the reserve.

Furthermore, a number of issues have been discussed with stakeholders who could not attend the workshop. These issues have been noted and reviewed as part of the consultation process. Representatives from Hawkesbury Sports Council, Golden Valley Child Learning Centre and Council's staff (including administration, land management, parks and recreation, community and planning services) have been consulted during preparation of the plan of management.

Community workshop – key issues

A summary of key community and stakeholder issues has been compiled (for further detailed analysis and review see the relevant sections as indicated):-

1. Natural and cultural environment (see *4.0 Basis for Management – 4.3 Natural and cultural setting & 4.4 Environment and biodiversity*):

- ❖ significance of bushland habitat including all regrowth (ie. endangered ecological communities)/ flora and fauna;
- ❖ protect the sense of open space, bushland scenic qualities, water body (dam), associated biodiversity and opportunities for bird-watching;

- ❖ protect bushland qualities, peace and tranquillity from unauthorised activities and anti-social behaviour;
- ❖ overall condition was considered to be poor and unsafe;
- ❖ lack of overall maintenance, build-up of unsightly rubbish and potential for health and safety issues;
- ❖ lack of assistance from Council following volunteer clean-ups;
- ❖ erosion damage/ loss of natural vegetation and siltation of dam/ creek channel caused by illegal motor bike/ BMX riding;
- ❖ need for improved weed management, bush regeneration and restoration strategies (including establishing priority areas, local planting stock, erosion control measures, protective devices, visitor education and management, etc);
- ❖ need for monitoring septic overflows into reserve/ onto walking tracks from adjoining properties;
- ❖ need for improved signage (eg. identification/ regulatory) and opportunities for interpretive and advisory signage to make visitors more aware of environmental protection; and
- ❖ climate change and potential impacts on reserve management (increased periods of drought/ increased risk of bush fire hazard, reduced flows in creek, lower dam levels, water quality issues, impacts on biodiversity).

2. Public access, recreation and public safety issues (see 4.0 Basis for Management – 4.5 Recreational facilities, access and social values):

- ❖ many local residents state motor bikes as the key issue, describe noise of motor bikes as “constant, all-daylight hours and unbearable on week-ends”;
- ❖ safety concerns over illegal activities (eg. motor bikes/ BMX bikes on tracks through bushland)/ intimidation and disregard by motor bike riders towards other park users;
- ❖ alienation of other user groups wishing to use reserve/ not considered to be “family-friendly”;
- ❖ lack of community ownership/ control and need for greater community involvement in maintaining reserve;
- ❖ need for improved regulatory control/ policing of unauthorised activities in reserve (eg. motor bikes/ ongoing noise pollution, alcohol consumption, rubbish dumping and vandalism);
- ❖ need for creating broader opportunities for all user groups – BMX bikes, push-bike riders, walkers/ joggers, horse-riding, family gatherings/ picnics, dog exercising/ walking, etc.);
- ❖ need for improvements to broad accessibility and circulation within reserve by a variety of user groups – children/ youth to elderly, people with disabilities, family groups, etc.
- ❖ need for improved integration of sports fields and bushland reserve, linking facilities and recreational opportunities;

- ❖ need for better maintenance of pathways, tracks, open grassed areas and rubbish collection/ lack of rubbish bins;
- ❖ need to improve passive recreational infrastructure (including shared (multi-use) pathways, picnic shelters/ shade structures, picnic tables/ seating, gas BBQ facilities, children's play areas, signage and landscaping);
- ❖ need for improved security lighting along pathways, public amenities/ change-rooms, playground and car parking area;
- ❖ positive impact of recent additions to public amenities and canteen building (ie. club room, change-rooms, verandah and small storage room);
- ❖ need to improve maintenance of change-rooms, toilets and playground/ issues of vandalism (locking/ restricting use) and broken glass (need for no-glass policy);
- ❖ growing demand for sports fields by key user groups (soccer, cricket, school/ PSSA)/ limited supply;
- ❖ poor sub-surface drainage of sports fields (clay sub-grade/ seepage) reduces time for play/ opportunities for user groups;
- ❖ maintain separation of marked playing fields and cricket pitch;
- ❖ improve management of vehicles using unmade car parking area off access road (west of formed parking area);
- ❖ location of children's play area next to access road/ car parking area (opposite side to playing fields and public amenities);
- ❖ specific need for new facilities to cater for youth (unstructured) either on-site or alternate sites/ lack of recreational opportunities and negative attitudes towards youth;
- ❖ dog issues (faeces not being picked up by owners, off-leash use of the reserve and disturbance to wildlife).



PHOTO 1: Dumped rubbish and fire in the BMX area north of the dam (10.01.08).



PHOTO 2: Constructed jumps, bike tracks and loss of natural vegetation in bushland north-west of dam (13.03.07).



PHOTO 3: Steep eroding tracks and extensive multiple tracking in bushland north of dam (13.03.07)



PHOTO 4: Vandalised steel boom gates and wire-coil fencing installed to restrict unauthorised vehicles (13.03.07).

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4.0 BASIS FOR MANAGEMENT

4.1 OBJECTIVES

This section of the plan of management has the following objectives:-

- ❑ *to identify and assess key values associated with the community land;*
- ❑ *to define the community land's role within the local area and broader district context;*
- ❑ *to assess the impact of existing uses and management regimes or future development on identified key values;*
- ❑ *to establish the framework for sustainable management strategies consistent with community land objectives; and*
- ❑ *to provide a vision for the future of this community land.*

4.2 DETERMINING KEY VALUES AND SIGNIFICANCE

“Values” can be simply described as the things which make a place important. Management objectives must be based on a sound understanding of the resource base and associated values. The following key values have been developed through community consultation (refer to previous section) and further investigation, analysis and assessment. Key values are divided into three categories which form the basis for further discussion in this section as follows:-

1. Natural and cultural setting
2. Environment and biodiversity
3. Recreational facilities, access and social values

Table 2: Values and Level of Significance assigns a significance ranking to values based on either a local/ district, regional or state level. The sports field and related facilities are significant in terms of active organised sports and social opportunities for the community. Existing facilities service the local and district catchment levels and are assigned a significance ranking accordingly. Similarly, community facilities such as the Golden Valley Child Learning Centre and Glossodia Bush Fire Brigade have local and district significance. The reserve's bushland offers important passive recreational opportunities at the local level. Notably, this bushland (including regrowth areas) is comprised of two endangered ecological communities (TSC Act 1995) and provides vital

habitat for a range of native species. In terms of scheduling under the TSC Act 1995, the reserve's biodiversity values are of regional and state significance.

TABLE 2: VALUES AND LEVEL OF SIGNIFICANCE			
Key Values	Level of Significance		
	Local	Regional	State
Natural and cultural setting			
open space & scenic quality	local		
natural bushland & cultural landscape setting	local		
Environmental and biodiversity values			
endangered ecological communities/ threatened species			state
educational/ scientific values		regional	
Recreational facilities, access and social values			
public access, circulation & linkages	local		
organised sports program, playing fields & facilities	local		
opportunities for low-key passive/ cultural & nature-based recreation	local		

4.3 NATURAL AND CULTURAL SETTING

Prior to sub-division and residential development, most of this area was cleared rural farmland with remnant patches of bushland. Exotic pasture grasses and weeds are a dominant component of the regrowth communities and open south-western paddock. Much of the reserve's land would have been marginal for agricultural production. A constructed earth dam creates a central landscape feature of high visual and aesthetic significance in the reserve. Native wetland plants are colonising the margins. The reserve's soils vary from shale derived clay loams (upper slopes and creek-line) to shale/ sandstone derived soils with higher sandstone influence in the steep north-eastern gully. The reserve has two intermittent creeks, flowing north along the central axis and eastern boundary. These two creeks converge in the lower gully north of the dam and have been re-aligned and modified with piping to some sections.

Partially cleared and modified bushland extends along the central creek corridor from Spinks Road to the dam and links to the major contiguous area of bushland along the northern half of the site. Although the reserve is largely surrounded by residential development, this contiguous bushland creates a sense of wild open space. It forms the dominant visual and aesthetic character of the reserve. Much of this bushland has been affected by the

impact of recent bushfires, weed invasion, multiple tracking, rubbish dumping and erosion. These impacts are ongoing and concentrated in some areas, particularly near the dam. In response to the current fire regime, a dense native understorey has developed along the north-western slopes. Much of the canopy has been cleared and modified to some degree. Refer to section 4.4 *Environment and biodiversity – Endangered ecological communities*.

Notably, the upper western ridgeline (ie. corridor connecting to Kentucky Drive) retains a relatively intact canopy of Ironbarks/ Rough-barked trees including Narrow-leaved Ironbark (*Eucalyptus crebra*) and Rough-barked Apple (*Angophora floribunda*). This area has a distinctive visual quality. The south-western paddock is currently under a periodic slashing/ maintenance program restricting natural regeneration. This open area and bushland are under-utilised assets with no existing recreational infrastructure.

The eastern and south-eastern corner of the site has been graded and levelled to establish the playing fields. This is primarily a cultural landscape. Sporting facilities and amenities, a children's playground and car parking areas are located along the upper southern slopes overlooking the playing fields. Vehicular access is provided off Spinks Road. There has been minimal landscaping or further embellishment for passive recreation in these areas.

Indigenous Cultural & Archaeological Heritage

The Department of Environment and Climate Change (DE&CC) has no record of archaeological relics or deposits in this reserve however an Aboriginal Open Camp Site is registered within only 1.5 kilometres. Woodbury Reserve has a long history of disturbance and modification and it is unlikely that any physically intact evidence remains. Nevertheless, this plan of management encourages continuing consultation with the traditional Aboriginal custodians in the protection, management and interpretation of this reserve.



PHOTO 5: View over dam looking south-west towards open paddock and bushland along the ridgeline (13.03.07).



PHOTO 6: View looking east near south-western paddock.
Cumberland Plain Woodland (13.03.07)



PHOTO 7: Entry road off Spinks Road looking north – sportsground
(right background) and dam (left background) (13.03.07).



PHOTO 8: View of sportsground and cricket nets (foreground) –
junior soccer training (13.03.07).

4.4 ENVIRONMENT AND BIODIVERSITY

Climate change

The Hawkesbury River Valley has a warm temperate climate (ie. with a summer and winter season). Rain may occur at any time throughout the year. Median annual rainfall is 1000 millimetres. The catchment has recorded significant changing rainfall patterns, oscillating between periods of high and low rainfall. Climate change is tending to exacerbate these weather extremes, further affecting flood and drought regimes. Human release of greenhouse gases into the atmosphere has caused, and will continue to cause, global warming for many decades (*IPCC Assessment Report, 2007*). For New South Wales each decade since 1950 has recorded a 0.15°C increase in annual mean maximum temperature and a 14.3mm decrease in annual rainfall (*Water Information System for the Environment, DE&CC, 2007*).

In accordance with the latest CSIRO modelling our climate will continue to change over coming decades producing a range of impacts including the following:-

- increased risk of drought
- increased soil erosion and dry land salinity
- more hot days
- greater bushfire risk.

Geology and soil landscapes

The geology is described as Mittagong Formation which is characterised by alternating bands of shale and fine to medium grained quartz sandstones. Rock outcrops are minimal in this landscape. The soil landscape is classified as Woodlands (wl) in accordance with “*Soil Landscapes of the Penrith 1:100 000 Sheet*” (Bannerman and Hazelton, 1990). The soils tend to be deep (150-300cm) ranging from leached sands (drainage lines) to brown sandy loam, clay loam and yellowish brown clay (slopes and benches). Topsoils are typically stony with a hard setting surface. Soil limitations include the following:-

- Fertility: low to very low nutrient status.
- Erodibility: generally low erodibility.
- Erosion Hazard: low to moderate erosion hazard.
- Landscape Limitations: localised rock outcrops and steep slopes.
- Urban Capability: generally low to moderate, subject to geo-technical engineering input.

Endangered ecological communities

Woodbury Reserve retains a high level of biodiversity, dynamic ecological processes, ongoing natural evolution and the ability for its ecosystems to be self-perpetuating. These are vital criteria defining the reserve's natural heritage values. The reserve's native vegetation has regional and state

significance under the *TSC Act 1995*. Two endangered ecological communities are present, albeit disturbed, fragmented and modified by past clearing, agricultural uses and urban development. These endangered ecological communities include:-

- Shale Sandstone Transition Forest (SSTF); and
- Cumberland Plain Woodland (CPW).

A Review of Environmental Factors for a Prescribed Hazard Reduction Burn (*Conacher Travers Pty Ltd 2002*) identified the transitional nature of the vegetation. The description of these communities is consistent with the *Interpretation Guidelines for the Native Vegetation Maps of the Cumberland Plain, Western Sydney (NPWS, 2000)*. Together these endangered ecological communities form a subtle mosaic within the reserve reflecting the transitional nature of the underlying soils. Notably, they share many common floristic and structural characteristics and the boundaries between the two communities are somewhat blurred. Shale Sandstone Transition Forest (SSTF) forms the dominant community covering most of the northern portion of the reserve, including the upper and mid-slopes (lower sandstone influence) and north-eastern gully area (higher sandstone influence). Cumberland Plain Woodland (CPW) occurs along the upper western slopes and ridges (near Kentucky Drive) and upper drainage swale (between Spinks Road and central dam area). Some remnant trees of this community have been retained along the south-eastern ridge.

Floristic composition

The reserve's dominant native canopy species include Forest Red Gum (*Eucalyptus tereticornis*), Rough-barked Apple (*Angophora floribunda*) and Narrow-leaved Ironbark (*Eucalyptus crebra*). Other component species include Broad-leaved Ironbark (*Eucalyptus fibrosa*) and Grey Gum (*Eucalyptus punctata*) [mid-northern and southern slopes], Cabbage Gum (*Eucalyptus amplifolia*) [upper creek-line and slopes] and Thin-leaved Stringybark (*Eucalyptus eugenioides*) [north-eastern gully].

The native small tree and shrub stratum is dominated by dense regrowth of Sydney Green Wattle (*Acacia parramattensis*), Blackthorn (*Bursaria spinosa*), Tick Bush (*Kunzea ambigua*), Sally Wattle (*A. floribunda*) and Ball Everlasting (*Ozothamnus diosmifolium*). Narrow-leaved Apple (*Angophora bakeri*) is a sub-canopy component of the mid-slope. Typical native ground stratum species include *Themeda australis*, *Imperata cylindrica*, *Microlaena stipoides*, *Dichelachne micrantha*, *Lomandra longifolia*, *Entolasia marginata* and *E. stricta*, *Daviesia ulicifolia*, *Einadia trigonos* and *E. hastata*, *Aristida*, *Dianella* and *Wahlenbergia* spp. Climbers include *Clematis* and *Desmodium* spp.

Structural characteristics

The upper western slope and ridge (near Kentucky Drive) retains a diverse floristic and structural composition up to 20 metres in height (upper, mid and lower stratum are present). The canopy trees range up to 50-60 years+ (av. 30-40 years). The Cumberland Plain Woodland along the upper creek-line forms a riparian corridor and visual buffer separating the sportsground (east) and open paddock (west). The vegetation condition gradually increases along a south to north gradient from fragmented remnants through to contiguous native canopy and diverse understorey in the northern portion of the reserve. Some remnant old growth Narrow-leaved Ironbarks (*Eucalyptus crebra*) are still present in the south-east corner near the amenities building.

The upper north-western slope has a relatively simplified floristic composition and structure. It is dominated by *Acacia parramattensis* regrowth with only a few immature canopy trees such as *Eucalyptus tereticornis* present. The age structure is up to 10-14 years old (following 1994 bushfire). This regrowth community grades to more complex woodland/ forest along the boundary to the open paddock and lower slope.

The central drainage swale, wetland and open water of the dam contain a number of shallow water and semi-aquatic species. These species include Broad-leaved Cumbungi (*Typha orientalis*), Tall Sedge (*Carex appressa*), Spike-rush (*Eleocharis* sp.), Common Rush (*Juncus usitatus*), Slender Knotweed (*Persicaria decipiens*), Water Pepper (*P. hydropiper*) and Pale Knotweed (*P. lapathifolia*). For further details refer to *Appendix II – Schedule of Existing Native Plant Species*.

Bushfire management

The reserve's bushland has been modified through wildfire in 1993/94 summer season (RFS, 2002) and recurrent bushfire hazard reduction exercises (possibly 1997 and 2005). The Glossodia Bush Fire Brigade use the reserve for training activities. A Review of Environmental Factors for a Prescribed Hazard Reduction Burn (*Conacher Travers Pty Ltd 2002*) identified the need for hazard reduction within the reserve's bushland. The proposal included mechanical hand clearing of the northern and western boundaries of the reserve adjoining private properties. It appears that dense native regrowth was also targeted during these operations. A Council report at this time highlighted the need for better protection of regenerating native plants. This fire regime has created dense regrowth of native shrub species, particularly along the north western slope.



PHOTO 9: Cumberland Plain Woodland along western ridge near Kentucky Drive (13.03.07)



PHOTO 10: Fire-trail along northern boundary adjacent to private properties (Shale Sandstone Transition Forest) (13.03.07)



PHOTO 11: View over dam showing wetland margins – Pale Knotweed (*Persicaria lapathifolia*) [foreground] (13.03.07)

Conservation significance

The conservation significance of the reserve's native vegetation can be summarised as follows:-

- Cumberland Plain Woodland and Shale Sandstone Transition Forest are both scheduled as endangered ecological communities under the *Threatened Species Conservation Act 1995* (TSC Act);
- these communities are part of the broader Cumberland Plain Endangered Ecological Communities (CPEECs) – the subject of a future Recovery Plan to be prepared by DE&CC;
- reserve retains vital habitat and acts as a storehouse of genetic diversity with important ecological, scientific, educational and natural heritage values;
- potential habitat for threatened fauna species such as the Squirrel Glider, Yellow-bellied Glider, Grey-headed Flying Fox, Eastern Free-tail Bat, Swift Parrot, Superb Parrot, Turquoise Parrot, Major Mitchell's Cockatoo, Barking Owl, Powerful Owl, Black-chinned Honeyeater, Regent Honeyeater, Square-tailed Kite, Bush Stone Curlew, Speckled Warbler, Eastern False Pipistrelle and Cumberland Plain Land Snail.
- opportunities to develop enhanced habitat values and bio-linkages.

Fauna habitat

The reserve's bushland provides habitat opportunities for a range of native fauna particularly species with mobility (eg. birds and bats), reptiles and smaller invertebrates. There is currently no detailed assessment of the reserve's biodiversity. Many common bird species were observed during the study including Galah, King Parrot, Eastern Rosella, Australian Magpie, Australian Magpie-lark, Crested Pigeon, Masked Lapwing, Noisy Miner and Pied Currawong. Common reptiles such as Long-necked Tortoise (*Chelodina longicollis*), Eastern Water Skink (*Eulamprus quoyii*), Blue-tongued Lizard (*Tiliqua scincoides*), Copper-tailed Skink (*Ctenotus taeniolatus*), Red-bellied Black Snake (*Pseudechis porphyriacus*) and Eastern Brown Snake (*Pseudonaja textilis*) are likely to occur in the reserve. Common invertebrates may include the Striped Marsh Frog (*Eimnodynastes peronii*), Common Eastern Froglet (*Crinia signifera*) and Peron's Tree Frog. A detailed faunal assessment would be a useful tool for determining conservation significance and appropriate management strategies.

Feral animal populations including European foxes, cats and rabbits are likely to occur in the reserve. These feral animals have a significant impact on the recruitment of native faunal populations, particularly ground-dwelling species. Control and monitoring programs have been very successful in re-establishing native populations.

Exotic weeds

In terms of native vegetation management, a weed is defined as any non-indigenous plant, including native species which may have been introduced from other genetic sources or geographical regions. Community consultation identified weed management as an important issue affecting the reserve. Woodbury Reserve has no current integrated weed management program.

Weeds tend to be fast-growing colonising species with highly aggressive reproductive strategies. The level of weed invasion has a close correlation with past clearing of native vegetation and soil disturbance (ie. highly disturbed/ modified areas tend to have high levels of weeds). The south-western paddock, drainage lines/ dam, cleared boundaries and ancillary areas are heavily impacted by weeds. Exotic pasture grasses such as Paspalum (*Paspalum dilatatum*), African Love Grass (*Eragrostis* spp.), Rhodes Grass (*Chloris gayana*), Barnyard Grass (*Echinochloa crus-galli*) and Kikuyu Grass (*Pennisetum clandestinum*) dominate the open grassed areas. Exotic shrubs and vines such as Broad-leaved and Small-leaved Privet (*Ligustrum* spp.), Lantana (*Lantana camara*), Moth Vine (*Araujia hortorum*), Bridal Creeper (*Myrsiphyllum asparagoides*) and Trad (*Tradescantia albiflora*) are common understorey components along drainage lines, particularly the north-eastern gully area. Although providing some protection and stability to banks and gullies introduced weed species have an overall negative impact on natural biodiversity values, native regeneration/ recruitment, scenic character and visual amenity. Refer to *Appendix III – Schedule of Exotic Weed Species*.

Some of the scheduled weeds are declared as noxious under the *Noxious Weeds Act 1993* (Hawkesbury River County Council control area). Refer to *Table 3: Noxious Weed Species – Woodbury Reserve* for required action).

TABLE 3:
Noxious Weed Species – Woodbury Reserve

Weed	Class	Legal Requirements
Blackberry (<i>Rubus fruticosus</i>)	4	control growth & spread
Green Cestrum (<i>Cestrum parqui</i>)	3	continuously suppressed
Fleabane (<i>Conyza bonariensis</i>)	3	continuously suppressed
Lantana (<i>Lantana</i> spp.)	5	notifiable weed
Privet (Broad-leaf) (<i>Ligustrum lucidum</i>)	4	control growth & spread
Privet (Small-leaf) (<i>Ligustrum sinense</i>)	4	control growth & spread

Weed management/ bush regeneration strategy

The proposed weed management/ bush regeneration strategy aims to:-

- continue to support local community (volunteer) involvement;
- seek further funding assistance/ grants; and
- supplement program with contract bush regenerators.

A local volunteer BushCare group has been established since October 2007. There has been strong community interest in the program to assist in the rehabilitation of the reserve's bushland. The BushCare program is coordinated through Council staff. Volunteers are provided with direction and technical advice including training, tools, signage for work sites, rubbish removal, newsletters and use of a community nursery to propagate local native plants. The program is an integral part of managing Hawkesbury City's bushland. Local volunteer involvement in managing the reserve should help to establish a greater sense of community ownership and to gain a better understanding of the reserve's bushland and biodiversity values. Broader community use of the reserve will also improve the level of monitoring of anti-social behaviour, unauthorised and illegal uses.

NSW government youth training initiatives and natural heritage grant funding provide further opportunities. Additional funding should be allocated for contract bush regenerators to develop the program and provide further expertise in weed management and rehabilitation strategies.

The strategy should be structured in accordance with specific site conditions, level of disturbance and weed invasion, relative resilience and integrity of the reserve's ecological communities. It is envisaged that the program will focus on targeted weed species (including noxious species) using a combination of bush regeneration and restoration strategies. This work should be integrated with improvements to passive recreational infrastructure (ie. pathway linkages/ signage and facilities) and the bushfire management strategy. As the program develops, areas such as the south-western paddock, major creek corridor and heavily impacted zones around the dam would be progressively rehabilitated. The paddock area, particularly along its edges, retains the potential for significant natural recruitment to occur subject to modification of current maintenance practices (ie. mowing/ slashing). For areas requiring restoration and enhancement it is important that genetic integrity is maintained with the use of only locally-sourced indigenous species.

4.5 RECREATIONAL FACILITIES, ACCESS AND SOCIAL VALUES

Overview

Woodbury Reserve is a valuable community asset and finite resource. There are important opportunities as well as significant constraints on land capability and future uses. Inappropriate types of development and uses pose potential threats to existing values. *Sustainability*, a key principle of Hawkesbury City Council's Management Plan, can only be achieved through a balanced and

sensitive approach to resource management. Accordingly, future development and management of this community land must ensure careful integration of economic, social and environmental factors.

Existing recreational facilities

Recreational facilities are currently focussed within the sportsground area in the south-eastern corner of the reserve. The growing demand for playing fields and associated sports facilities were highlighted in the community workshop. Glossodia Soccer Club (currently 220 players), Glossodia Cricket Club (192 players) and local schools (including PSSA) form the largest user groups of these facilities. The Sports Council maintains the sportsground and has been actively involved in the recent upgrading of the public amenities building including a new club room, change-rooms and small storage room. Other infrastructure includes sportsground lighting, cricket nets, maintenance shed, spectator seating/ shelter, sealed internal access road, car parking areas and a children's playground. For a detailed description of facilities, improvements and their condition, see *Table 1: Land Description – Existing Facilities & Improvements*.

Recreational constraints

The reserve's passive recreational opportunities are poorly integrated – the sports fields and associated facilities operate completely independently of the reserve's natural bushland setting. In this way, the focus on access to sporting facilities in the south-eastern corner of the reserve tends to limit visitor options for further enjoyment or interaction. Pedestrian access to other parts of the reserve and circulation are poorly defined. Furthermore, passive recreational opportunities are diminished by continuing anti-social behaviour, vandalism and other illegal activities. Safety issues (eg. motor bike riding along bushland tracks) remain a major concern. The quality of the natural bushland setting continues to be degraded by these activities. Much of the reserve remains alienated from broader community use and enjoyment.

Expanding recreational opportunities

It is therefore important to expand the role of the community land in an integrated way – providing places for active and passive recreation with greater possibilities for social interaction and enjoyment within a quality setting. Development options may also provide possible synergies between existing and proposed infrastructure allowing greater diversification of recreational opportunities and broader community use. Moreover, the community needs to be assured that the reserve can be developed in a way which promotes broader community values. As previously discussed, volunteer involvement could establish a broader community network engaged in making the necessary changes.



PHOTO 12: View of sportsground near shops (Golden Valley Drive) showing poor all-weather access and linkages (13.03.07).



PHOTO 13: Recently renovated and extended amenities building (change-rooms/ toilets, club room, storage and canteen) (10.01.08).



PHOTO 14: Popular walking tracks in bushland need upgrading (looking west near open paddock) (13.03.07)

Youth recreation opportunities

It is important to recognise the recreational needs of older children and youth who may not be involved in organised sports. Negative attitudes towards youth and their needs for recreational spaces tend to foster negative youth behaviour. The problems are exacerbated in places which are allowed to become marginalised or isolated from other community activities. These issues were discussed at the public workshop (March 2007). There is a need by these user groups to find places to meet and to practice and improve skill levels in a range of activities. A non-organised multi-use sports area such as a skate/ BMX facility, hard-stand for ball games, basketball and/ or netball hoops (including a half-sized court) are options which could be considered in the context of existing recreational facilities (eg. within the south-eastern corner of the reserve).

Motor bikes and BMX riders

Current unauthorised uses and activities, particularly on weekends, need to be regulated and policed. Motor bike and BMX riders continue to degrade and vandalise the reserve's natural bushland through multiple tracking and construction of jumps and hazards. These activities place riders and other members of the public at serious risk. Further consultation with BMX riders/ user groups should be conducted to address these issues and to discuss current/ projected demand, alternate locations/ venues, types of facilities required for varying skill levels, freestyle and/ or competition tracks, public liability issues and so on. BMX lobby groups have been successful in establishing facilities in many local government areas (eg. Wollondilly Youth Services Network formed a BMX lobby group to work in partnership with Wollondilly Council to establish a freestyle track at Tahmoor in 2004). Other BMX track facilities have been built in the Warringah and Wyong local government areas, each with significant club involvement. Community consultation for Woodbury Reserve however failed to identify a club or lobby group willing to get involved in such a project. Current use of bushland by BMX riders cannot continue. These activities need to be relocated to a more suitable and durable location either within the reserve (eg. skate/ BMX facility) or another reserve (eg. North Richmond or McGraths Hill).

Opportunities for family-based passive recreation

Improvements to public access and circulation are key issues. A shared pedestrian/ bikepath (including a western circuit track) linking to existing access points and facilities) would provide significant opportunities for passive recreation. Key linkages should be provided or upgraded to Spinks Road, the community centre/ shopping centre (Golden Valley Drive) and Kentucky Drive.

The installation of passive recreational facilities such as picnic shelters, picnic tables and seating, gas-fuelled BBQs and a shared pedestrian/ bikepath would attract broader community use and enjoyment of the reserve. The proposed picnic facilities should be located at the northern end of the

unsealed overflow car parking area between the sports fields and the dam. This central location offers outstanding scenic opportunities with views over the dam to surrounding bushland. The facilities would create a new hub of visitor activity and point for departure along the bushland track system. Additional litter bins should be installed. Passive recreational infrastructure should remain low-key and typical of Hawkesbury City's bushland parks and reserves.

The needs of people with disabilities and parents with young children also need to be addressed. Although visitors will generally drive or walk to the reserve, accessibility may involve the use of strollers, prams, walking frames and/ or wheelchairs. In addition, young siblings of various ages or groups of children with disabilities may seek to use the facilities. There needs to be provision for safe, easy access to existing disabled toilet facilities.

The existing children's play area is located near the internal access road, car parking area and amenities building. This location raises child safety issues. Children need to cross the sealed internal road to use the play equipment. A speed hump and children crossing sign highlight this safety issue. A child-proof fence/ gates should be installed around the perimeter of the children's play area. Relocation and upgrading of facilities is a further option. Shade protection and opportunities for enhanced supervision (eg. picnic shelter/ seating) should also be considered as part of a more integrated approach to recreational uses.



PHOTO 15: Children's playground near internal access road and amenities building (13.03.07).

Companion animal issues

Walking dogs in the reserve is one of the more popular local pastimes. The Guide Dogs Centre (Glossodia) also use the reserve for training purposes.

There is substantial demand for unleashed dog exercise areas throughout the Hawkesbury LGA. The south-western paddock provides an opportunity for such a designated area and should be further investigated. The installation of dog waste bins/ dog faeces bags for selected locations (eg. car parking areas/ entry points to the reserve) should also be considered.

Sustainable management

This section of the plan of management has defined the reserve's key values and established objective limits on the types and amounts of change that are either desirable or acceptable. The following provides a summary of management objectives:-

- ❖ maintain and promote long term sustainability of the reserve as a limited and finite resource;
- ❖ continue to maintain and upgrade the reserve's sporting facilities, playing fields and other related infrastructure;
- ❖ address anti-social and unauthorised behaviour, regulate these activities and promote a safe, family-friendly environment;
- ❖ seek to integrate existing sporting facilities with opportunities for passive recreation (including picnic facilities and shared pedestrian/ bikepath circuit access);
- ❖ review options for provision of unstructured, multi-use recreational facilities for older children/ youth;
- ❖ implement measures to improve visitor management and education in low-impact activities;
- ❖ provide for recreational infrastructure and activities within the most durable sites having regard for public safety and security;
- ❖ provide enhanced protection of sensitive ecological areas (ie. scheduled endangered ecological communities);
- ❖ implement an integrated weed management and restoration strategy including volunteer involvement and education;
- ❖ promote opportunities for interpretation of natural, cultural and Indigenous heritage and environmental issues.

In establishing limits of desirable or acceptable change, this plan of management provides a framework for the reserve's future management.

4.6 VISION STATEMENT

The following statement provides a vision for Woodbury Reserve which forms the basis for the following management strategies:-

"To ensure appropriate protection, management and enhancement of the reserve's natural and cultural setting, environmental and recreational values in accordance with the objectives of community land management for the benefit of the broader community and for future generations".

...

5.0 MANAGEMENT STRATEGIES

5.1 OVERVIEW

This section of the plan of management addresses the following objectives:-

- ❑ *to establish core objectives for each of the community land categories;*
- ❑ *to develop an action plan for implementation of core objectives and management strategies (ie. desired outcomes);*
- ❑ *to develop performance targets to assess and monitor strategies;*
- ❑ *to assign directions and priorities (spanning the next 5-years);*
- ❑ *to address future leases and licences; and*
- ❑ *to develop a masterplan for implementation of the strategic plan.*

5.2 COMMUNITY LAND – CORE OBJECTIVES

In accordance with the *Local Government Act 1993*, each category and sub-category are provided with a set of core objectives. Refer to *Table 4: Schedule of Core Objectives*.

5.3 ACTION PLAN

The following Action Plan (refer to *Table 5: Action Plan – Sheets 1-6*) is divided into four separate sections based on desired outcomes and core objectives for this community land (see column 1). Each section includes the following:-

- *performance targets or management objectives* (column 2);
- *item or reference number* (column 3);
- *means of achievement or management actions* (column 4);
- *means of assessment* of the actions (column 5);
- *priority ranking* for each management action (column 6).

Desired Outcomes (column 1)

The sections are divided into the following headings in accordance with the desired outcomes and core objectives as shown:-

- 1. Community land management – development, land uses, activities, leases, licences and other estate**
To establish an appropriate management framework and guidelines for assessing development, land uses, activities,

leases, licences and other estate in compliance with requirements for community land categorised as natural area – bushland, natural area – watercourse, sportsground and general community use.

2. Environment/ biodiversity

To protect, manage and enhance environmental quality, scenic character and biodiversity values.

3. Recreation, facilities and access

To maintain and enhance opportunities for sporting and community facilities and to improve public access, linkages and opportunities for passive recreation.

Performance targets (column 2)

The *desired outcomes* and *core objectives* (refer to 2.4 Community Land Categorisation and 5.2 Community land – Core objectives) have guided the development of *performance targets* in the Action Plan.

Management actions/ item no. (columns 3 and 4)

The performance targets or management objectives provide the framework for developing specific *management actions* or the *means of achievement*. Each action is assigned an item number based on the relevant section (eg. Sec. 1: A1 to A10, followed by Sec. 2: B1 to B19, etc.).

Performance measures (column 5)

The Action Plan establishes a system of checks and balances to assess actions in relation to performance (ie. *means of assessment*).

Priorities

Priorities for each management action are assigned according to relative importance – very high, high, medium and low. It is envisaged that actions will be addressed on a priority basis, by the Policy and Services Unit responsible, and in accordance with the means of assessment as follows:-

VERY HIGH	= 1 year
HIGH	= 1-2 years
MEDIUM	= 3-4 years
LOW	= up to 5 years

5.4 CAPITAL WORKS PROGRAM

Priorities and cost estimates are further developed in the 5-year capital works program (refer to *Table 6: Capital Works Program*). The Opinion of Probable Landscape Construction Costs is based on the Landscape Masterplan and is indicative only.

5.5 LANDSCAPE MASTERPLAN

The Landscape Masterplan (refer to *Figure 5: Landscape Masterplan*) identifies key management actions to be implemented throughout the 5-year capital works program, subject to available funding.

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TABLE 4
SCHEDULE OF CORE OBJECTIVES

community land management	core objectives
Management strategies must be consistent with community land categories and their respective core objectives as identified in this plan of management.	
Core Objectives: Management of community land categorised as a Natural Area (38E)	
*The core objectives for management of community land categorised as a natural area are:	
a) to conserve biodiversity and maintain ecosystem function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area, and;	
b) to maintain the land, or that feature or habitat, in its natural state and setting, and;	
c) to provide for the restoration and regeneration of the land, and;	
d) to provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion, and;	
e) to assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in a recovery plan or threat abatement plan prepared under the Threatened Species Conservation Act 1995 or the Fisheries Management Act 1994.*	
Core Objectives: Management of community land categorised as a Natural Area: Bushland (38J)	
*The core objectives for management of community land categorised as bushland are:	
a) to ensure the ongoing ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, and flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land, and;	
b) to protect the aesthetic, heritage, recreational, educational and scientific values of the land, and;	
c) to promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbance caused by human intrusion, and;	
d) to restore degraded bushland, and;	
e) to protect existing landforms such as natural drainage lines, watercourses and foreshores, and;	
f) to retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term, and;	
g) to protect bushland as a natural stabiliser of the soil surface*.	
Core Objectives: Management of community land categorised as a Natural Area: Watercourse (38M)	
*The core objectives for management of community land categorised as watercourse are:	
a) to manage watercourses so as to protect the biodiversity and ecological values of the instream environment, particularly in relation to water quality and water flows, and	
b) to manage watercourses so as to protect the riparian environment, particularly in relation to riparian vegetation and habitats and bank stability, and	
c) to restore degraded watercourses, and	
d) to promote community education, and community access to and use of the watercourse, without compromising the other core objectives of the category*.	
Core Objectives: Management of community land categorised as a Sportsground (38F)	
*The core objectives for management of community land categorised as a sportsground are:	
a) to encourage, promote and facilitate recreational pursuits in the community involving organised and informal sporting activities and games, and;	
b) to ensure that such activities are managed having regard to any adverse impact on nearby residences.*	
Core Objectives: Management of community land categorised as General Community Use (38I)	
*The core objectives for management of community land categorised as general community use are to promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:	
a) in relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public, and	
b) in relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than the provision of public utilities and works associated with or ancillary to public utilities).	

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TABLE 5
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
community land management				
Desired Outcome: To establish an appropriate management framework and guidelines for assessing development, land uses, activities, leases, licences and other estate.				
Core Objectives: Management of community land categorised as natural area bushland (38A), natural area watercourse (38M), sportsground (38F) and general community use (36).				
Guiding legislation: To ensure the reserve's planning and management are in accordance with relevant legislation and policy.	A1	Implement actions identified in this plan of management (refer to A2-C15) in accordance with Local Government Act 1993 and all other relevant legislation and policy.	Adoption of plan of management. Level of implementation over 5-years.	high high
Future development, land uses and activities: To ensure consistency with community land categories and core objectives (LGA, 1993). To protect the reserve's values from inappropriate uses, activities and development. To implement actions which will prevent incremental impacts and address threatening processes. To promote the sportsground's role as a broadly accessible and equitable community asset. To address public safety and security issues. To provide a balanced and appropriate level of recreational infrastructure. To improve visitor education and interpretation.	A2	Development proposals, land uses, activities, leases, licences and management practices must be consistent with the following requirements: - demonstrate consistency with community land core objectives - protect and enhance natural and cultural setting, scenic quality, social and recreational values and promote environmental sustainability; - ensure consistency with existing character, scale and intensity of development; - protect and restore bushland and riparian habitat, bank stability and bio-linkages; - improve water quality of the intermittent creeks and dam; - continue to maintain and upgrade playing fields and associated sporting facilities; - address public safety, security and risk management issues; - minimise traffic hazards and pedestrian conflict in relation to vehicular access, circulation, car parking, service/ operational areas; - promote balanced, sustainable management of recreational infrastructure - contribute to diversity and quality of recreational and community uses; - adequately provide for public access, equity and broad community use; - facilitate programs in community education and interpretation of identified values; - development proposals which may directly or indirectly threaten the natural and cultural setting and/or other identified values are not permissible. Proposed development, activities and uses must be consistent with threatened species legislation - Threatened Species Conservation Act 1995 and Environment Protection and Biodiversity Conservation Act 1999.	Number and % of proposed developments that address and adhere to development guidelines. Measure trends over time.	ongoing
To ensure that development proposals will have a net positive impact in relation to identified values. To restrict threatening processes and ensure protection of any threatened species.	A3		as above	ongoing
To permit the use of the land for sustainable development of appropriate recreational and community facilities.	A4		Number and % of proposed developments that address and adhere to development guidelines.	ongoing
Leases, licences and other estate: To provide express authorisation for appropriate leases, licences or other estate over community land. To ensure consistency with relevant legislation affecting the uses and activities on community land. To permit the granting of leases, licences or other estate which are consistent with community needs and the community land core objectives.	A5	This Plan of Management expressly authorises the development of proposed community and recreational facilities (as shown in Figure 3: Landscape Masterplan) subject to compliance with core objectives for the community land category and development guidelines (see items A2-A4). This Plan of Management expressly authorises the granting of leases, licences or other estate over the community land for the purposes of providing goods, services and facilities, and the carrying out of activities, appropriate to current and future needs within the local community and of the wider public in relation to any of the following: - public recreation, social and educational activities; - the physical, cultural, social and intellectual welfare or development of persons; and - only if the purpose for which it is granted is consistent with the core objectives of its categorisation.	Proposed staged development/ capital works items completed subject to available funding and priorities.	ongoing
	A6		Leases/ licences granted in accordance with Local Government Act 1993 and this Plan of Management. Assess against Council policies, principles and permitted uses consistent with community land categories and core objectives.	ongoing

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TABLE 5 [cont'd]
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
community land management				
Desired Outcome: To establish an appropriate management framework and guidelines for assessing development, land uses, activities, leases, licences and other estate. Core Objectives: Management of community land categorised as natural area bushland (36J), natural area watercourse (36M), sportsground (36F) and general community use (36I). Leases and licences [cont'd]: To permit the granting of short-term and casual licences consistent with the relevant legislation.	A7	In accordance with Pt 4, Div.3 Cl.117 of the Local Government (General) Regulation 2005, leases, licences and other estates granted for the following purposes are exempt from the provisions of s.47A of the Local Government Act 1993:- (1) the provision of pipes, conduits or other connections under the surface of the ground for the connection of premises adjoining the community land to a facility of the council or other public utility provider that is situated on the community land; (2) use and occupation of the community land for events such as: - a public performance (ie. a theatrical, musical or other entertainment for the amusement of the public); - the playing of a musical instrument, or singing for a fee or reward; - engaging in a trade or business; - playing of any lawful game or sport; - delivering a public address; - conducting a commercial photographic session; - picnics and private celebrations such as weddings and family gatherings; - filming. The use or occupation of community land for such short term or casual events listed is exempt only if the use or occupation does not involve the erection of any building or structure of a permanent nature. This Plan of Management expressly authorises the granting of a lease or licence over community land categorised as general community use for the following uses and activities subject to compliance with relevant legislation and development guidelines:- - Golden Valley Child Learning Centre; and - Glossodia Bush Fire Brigade. This Plan of Management expressly authorises the granting of easements over the community land for the purpose of providing pipes, conduit or other connections under the surface of the ground. This is limited to easements that connect land adjoining community land to an existing water, sewer, drainage or electrical facility of council or other public utility provider that is situated on community land. The granting of easements on community land must be consistent with community land categories, their core objectives and the development guidelines in this Plan of Management.	Short-term and casual licences granted in accordance with relevant legislation and this Plan of Management. Measure trends over time.	ongoing
Easements: To permit the granting of easements which are consistent with the Local Government Act 1993.	A8		Leases and/or licences granted in accordance with this Plan of Management.	high
Zoning: To ensure consistency in LEP zoning and community land.	A10	Address existing anomalies in zoning [LEP 1989] for this public reserve [refer to discussion in section 2.6 - partial residential zoning]	Easements granted in accordance with relevant legislation and this Plan of Management. Zoning of public reserve amended accordingly.	ongoing medium

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TABLE 5 [cont'd]
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
environment and biodiversity				
Desired Outcome: To protect, manage and enhance environmental quality, scenic character and biodiversity values.				
Core Objectives: Management of community land categorised as natural area bushland (B5), natural area watercourse (B6), sportsground (B6F) and general community use (B6).				
Catchment management and water quality: To promote strategies which improve water quality and wetland/ intermittent creek hydrology.	B1	Continue to implement and review Stormwater Management Strategy on a catchment basis including determination of pollutant sources, risk assessment, measures to control gross pollutants, monitoring and maintenance. Investigator monitor septic overflows into reserve and onto walking tracks from adjoining private properties.	Works implemented in accordance with Strategy. Investigation completed and recommendations implemented. Measure trends over time.	high ongoing
To protect bank stability and to reduce erosion adjacent to the dam/ wetlands and lower gully.	B2	Remove BMX bowl/ multiple tracking adjacent to dam (see item B5). Monitor bank stability, compaction, sedimentation, erosion impacts and rubbish dumping affecting dam and water quality. Monitor and restrict unauthorised activities and impacts.	Works implemented in accordance with Strategy. Monitoring, maintenance and remedial works implemented in accordance with this plan of management. Measure trends over time.	ongoing
To monitor unauthorised activities.	B3	Protect and enhance diversity of natural landforms (ie. intermittent creek channels, natural flows and overland flow paths) and restrict further channelisation (incl. stormwater piping and concrete lining). Restrict further site-hardening within riparian corridor.		ongoing
To restrict further creek channelisation and site hardening.	B4	Investigate environmental status of dam/ wetlands (incl. water quality, aquatic biodiversity, pest species) and develop a program for recovery and enhancement. Maintain current pumping for irrigation of sportsfields, subject to appropriate limits.	Investigation completed and recommendations implemented. Measure trends over time.	medium ongoing
Protecting wetland biodiversity: To investigate the dam's aquatic environment and to develop strategies for recovery.	B5	Existing BMX bowl (north of dam - see items C7 and C14) Remove constructed camber/ profile (ie. raised/ banked edges) for BMX riding. Excavate, re-profile and rip compacted surface/ ground level to min. 200mm depth. Maintain low battered western edge for directing overland flows (between dam and intermittent creek-line). Reinstatement natural contours to eastern bank. Provide gentle grade/ fall from south-west to north-east (gully area). Protect all natural vegetation/ regeneration along edges/ embankments to bowl. Provide restoration planting with tubestock (see item B13). Piece logs across tracks/ barricade multiple tracking. Install interpretive and regulatory signage. Consolidate walking track along northern edge of dam (see item C9). Ensure that all landscaping and additional planting is consistent with weed management/ restoration strategy (see items B8-B13). Additional planting should provide a range of values including shade, enhanced visual quality, habitat value as well as supporting passive and family-based recreational opportunities.	Works implemented in accordance with this Plan. Number and species of trees/ groundcovers planted and survive after 5 years.	high
To provide for community use and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion.	B6	Provide a maintenance regime which affords a high level of passive surveillance and security for visitors and protects important sight-line (ie. near car parking areas, entry/ exit points, amenities building and playground).	Works implemented in accordance with this Plan. Number and species of trees/ groundcovers planted and survive after 5 years.	ongoing
To protect and manage existing natural setting and ensure that additional planting is consistent with restoration strategy.	B7	Ensure that all community land categorised as Natural Area: bushland and wetland is managed in accordance with the prescribed best-practice standards of the following:- - Draft Recovery Plan for the Cumberland Plain Endangered Ecological Communities (CPCECs) - Draft Best Practice Guidelines for Bush Regeneration on the Cumberland Plain (DLWC and the Australian Association of Bush Regenerators, 2003) - Management Principles to Guide the Restoration and Rehabilitation of Indigenous Vegetation (Greening Australia), and - series of Florabank Guidelines for native seed collection, production, handling & storage.	Works implemented in accordance with this Plan. Visitor safety and security issues addressed.	ongoing
To address security and public safety issues.	B8	Weed management and restoration: To ensure the implementation of best-practice standards for the management of natural areas. To assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in a recovery plan or threat abatement plan prepared under the Threatened Species Conservation Act 1995 or Fisheries Management Act 1994.	Compliance in all respects with the national goal of the BushCare National Vegetation Initiative - ie. to halt any further losses and to achieve a positive net gain. Number of incidences/ area affected by non-compliance with threatened species legislation and policy. Measure trends over time.	high ongoing

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TABLE 5 [cont'd]
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
environment and biodiversity				
Desired Outcome: To protect, manage and enhance environmental quality, scenic character and biodiversity values.				
Core Objectives: Management of community and categorised as natural area bushland (35J), natural area watercourse (36M), sportsground (36F) and general community use (36I).				
Weed management and restoration [cont'd]: To address the long term objectives of building ecosystem resilience and durability. To address current bushfire management regime/ dense regrowth [northern slopes]	B9	Implement an integrated and targeted restoration strategy which focuses on the recovery, recruitment, long term durability, expansion and consolidation of fragmented natural habitat, native populations and species. Continue to address key threatening processes. Liaise with Glossodia Bush Fire Brigade to establish an appropriate bush fire management plan ensuring no fuel reduced fuel zones, as required, and better protection/ management of threatened native species. Address current practices which encourage and maintain dense native regrowth/ no canopy along northern slopes. Selectively target and control noxious and environmental weeds in conjunction with appropriately staged restoration and enhancement strategies in the following areas: 1. compacted BMX bowl area multiple tracking in bushland [near dam]; 2. central wetlands/ intermittent creek-line [south of dam]; 3. upper north-eastern gully/ embankment [adjoining sportsfields and the dam]; 4. eastern drainage channel [adjoining sportsfields]; 5. lower north-eastern gully and slopes [west of shops/ school]; and 6. upper northern and western slopes.	Level of funding per annum linked to positive net gains. Area/ % of reserve under restoration [over 5 years]. Measure trends over time. Bush Fire Management Plan implemented in accordance with liaison and recommendations. Public safety/ property issues addressed. CPEECs managed in accordance with best practice guidelines. Level of funding per annum linked to positive net gains. Area/ % of reserve under restoration [over 5 years].	high ongoing very high ongoing very high ongoing
To improve quality, extent and connectivity of native habitat and enhance biodiversity. To address the long term objectives of building ecosystem resilience and durability.	B10			
	B11			
To protect and restore natural areas and to promote long-term sustainability.	B12	Use a minimal disturbance bush regeneration approach where positive net gains are achievable [i.e. relatively high level of resilience]. Ensure dependent and threatened species habitat is protected and enhanced. Establish restoration, enhancement and reinstatement strategies for areas which display a high level of soil disturbance and modification. Use local native, provenance-sourced species in the program [i.e. local genotypes]. Seek grant funding for the weed management and restoration strategy from various State and Federal government sources [e.g. Natural Heritage Fund, Hawkesbury Nepean CMA, HRCC, Metropolitan Greenspace, etc]. Continue to develop and support volunteer BushCare group as a key strategy of the program to assist in weed management/ restoration, rubbish removal, monitoring unauthorised activities and community education in appropriate visitor behaviour. Provide assistance and support in grant applications by volunteer groups. Ensure that volunteers are adequately supported and monitored [e.g. leadership/ education, supply of materials, staging, removal of stockpiled weeds, etc]. Establish a complementary program using skilled contract labour [i.e. qualified and experienced contract bush regenerators] to supplement the restoration strategy. Maintain current restrictions on unauthorised vehicular access within the reserve. Monitor level of vandalism to fencing/ signage and compliance [see items C5 and C6]. Restrict extent of mowing/ slashing of open paddock area [i.e. 20 metres width along northern and eastern edge adjoining bushland]. Encourage natural regeneration/ recruitment in this zone. Monitor changes in species diversity/ structure. Ensure regular mowing/ maintenance of a western circuit track for walking/ exercise [see item C9].	Area under bush regeneration per annum. Measure trends over time. Area under restoration/ enhancement strategy per annum. Measure trends over time. Level of funding per annum. Measure trends over time. Numbers of volunteers/ groups actively involved in the environmental program. Measure trends over time. Number of applications per annum. Measure success rate. Annual quarterly progress reports. Level of funding for contract bush regeneration per annum. Annual quarterly progress reports. Number of complaints per annum. Measure trends over time. Area under restoration/ enhancement strategy per annum. % native species/ weed species over 5 years. Maintenance in accordance with service standards.	very high ongoing high ongoing very high ongoing high ongoing high ongoing high ongoing high ongoing high ongoing
To secure genetic integrity as a key component of the restoration and enhancement strategy.	B13			
To promote partnerships with state government agencies, industry and local land holders to secure sustainable environmental outcomes. To involve local volunteers in weed management and stewardship in restoring the reserve's natural and scenic values. To provide appropriate assistance and support for community volunteers.	B14			
To ensure a high level of expertise in implementing the strategy. To manage recreational impacts and protect natural areas from trampling and erosion. To establish strategies for consolidation of natural areas, regeneration/ recruitment. To manage opportunities for public access.	B15			
	B16			
	B17			
	B18			
	B19			

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TABLE 5 [cont'd]
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
recreation, facilities and access				
Desired Outcome: To maintain and enhance opportunities for sporting and community facilities and to improve public access, linkages and opportunities for passive recreation. Core Objectives: Management of community land categorised as natural area bushland (36J), natural area watercourse (36M), sportsground (36F) and general community use (36I).				
Sports fields and sporting facilities: To provide and maintain sporting facilities and other recreational and community facilities. To promote the sportsground as a broadly accessible community asset. To enhance natural/cultural setting and provide improved amenity value to sporting facilities. To ensure consistency with restoration strategy.	C1	Continue to maintain and upgrade standard of multi-use sports fields - playing surface, sub-soil drainage, floodlighting, turf wicket and other facilities incl. public amenities storage sheds, perimeter fencing, goal posts and other fixtures. Ensure that all facilities and equipment are maintained in accordance with relevant building and safety standards. Following completion of upgrade to amenities building/ change-rooms, re-turf embankment to minimise erosion. Establish informal copse of local native trees (eg. <i>Eucalyptus crebra</i>) along top of embankment and car parking area to provide additional shade and amenity [see Items B6-B7 and B13]. Maintain mown lawn areas around facilities and play area. Provide regulatory signage map to identify 'no glass area' within the sportsground area and adjoining facilities, including car parking areas and children's play area. Restrict sale of glass bottles at canteen. Maintain lockable toilets/ vandal-proof shutters on amenities building. Continue to provide regular cleaning, general maintenance and repairs. Remove graffiti from walls. Provide additional undercover spectator seating near canteen and more litter bins. Maintain existing sealed blumen access road [off Spinks Road] lockable steel security boom-gate on access road, unmarked gravel parking area [adj. to amenities building] and upgrade overflow parking area [adj. to den]. Install bollards/fencing to restrict multiple tracking within overflow parking area. Grade unsealed access road and maintain pedestrian access to sportsground. Continue to restrict vehicular access to sportsground except during sporting fixtures and training. Maintain existing vehicular steel post/wire-coil fencing to restrict access to open paddock and bushland areas. Maintain existing regulatory signage: 'No unauthorised vehicles [including motorbikes]' in this reserve. Council and emergency vehicles excepted. Minimum penalty \$110.00. Seek to improve level of policing and regulation of unauthorised activities, including motorbikes within bushland areas/ open paddock, particularly on weekends. Liaise with BIKX user group to assess current projected demand. Establish needs and options for alternate locations/ types of facilities either within the reserve [new skate/ BMX facility near sportsground - see Item C14] or another suitable reserve.	Facilities maintained in accordance with regular monitoring procedures, building and safety standards. Maintenance in accordance with service standards.	high ongoing
	C2		Upgrade completed including appropriate landscaping. Works implemented subject to appropriate funding.	high
	C3		Recommendations implemented in accordance with this Plan. Measure trends over time.	high ongoing
	C4		Maintenance in accordance with service standards. Works implemented subject to appropriate funding.	high ongoing
Vehicular access and parking: To maintain existing vehicular restrictions and to address public security and vandalism. To restrict vehicular access into sportsground and other parts of the reserve.	C5		Maintenance in accordance with service standards. Works implemented subject to appropriate funding.	high ongoing
	C6		Unauthorised activities monitored and regulated. Regular security compliance inspections implemented. Measure trends over time.	high ongoing
	C7		Liaison and relevant investigation completed. Recommendations implemented subject to appropriate funding.	very high
Pedestrian access and linkages: To improve pedestrian access to the reserve and to provide all-weather linkages/ circulation.	C8	Construct shared 2.2 metres wide pedestrian bikeway [concrete] with directional signage, tarring and landscaping in the following locations [see Figure 5: Landscape Masterplan]: - connection between sports fields/ amenities building and existing narrow pathway linking to shoop community centre. Upgrade existing pathway to 2.2 metres width.	Proposed staged development/ capital works items completed subject to appropriate funding.	medium

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TABLE 5 [cont'd]
ACTION PLAN

Performance Target (Management objectives)	Item	Means of Achievement (Management Actions)	Means of Assessment (of the actions)	Priority
recreation, facilities and access				
Desired Outcome: To maintain and enhance opportunities for sporting and community facilities and to improve public access, linkages and passive recreation.				
Core Objectives: Management of community land categorised as natural area bushland (36J), natural area watercourse (36M), sportsground (36F) and general community use (36).				
Pedestrian access and linkages [cont'd]: To improve pedestrian access to the reserve and to provide all-weather linkages/circulation. To promote opportunities for a broader range of user groups (eg. pedestrians, joggers, cyclists, horse-riding, walking dogs, people with disabilities, aged, children, strollers, etc).	C8 [cont'd] C9	<ul style="list-style-type: none"> - connection between existing narrow pathway (to shops) and northern side of dam along northern boundary of sports fields (fence-line). - Rationalise existing tracks in bushland. Upgrade main track circuit in compacted decomposed granite finish 1.8 metres wide and install directional signage as follows:- - connection/ upgrade existing track between northern dam (linking to proposed pathway - see item C8) and Kentucky Drive entrance (western boundary). - connection/ upgrade of western circuit track around perimeter of open paddock linking overflow parking area/ proposed picnic area, sportsground and bushland areas. - connection/ upgrade of north-eastern gully track between dam and shopping centre car park. Upgrade pathway connection to Golden Valley Children's Learning Centre. - maintain fire trails/ bush fire management zones adjacent to property boundaries. - Continue regular maintenance inspections, monitoring and prompt repair of existing playground, play equipment and synthetic safety fall areas in accordance with relevant playground standards. - Review child safety issues in relation to sealed access road/ car parking area and facilities. 	Proposed staged development/ capital works items completed subject to appropriate funding. as above	medium medium
Existing children's play area To maintain play area to a high standard. To address all public safety and risk management issues. To enhance opportunities for passive informal and family-based recreation.	C10	<ul style="list-style-type: none"> - Consider option for relocation of play area OR install child proof fencing gates around perimeter. Install shade structure over play area and 1 X shelter with picnic table/ seating to enhance opportunities for supervision. Review options for upgrading existing play equipment/ experience considering targeted age groups(s). - Construct picnic BBQ area at northern end of overflow car parking area between sportsfields and dam (see Figure 5: Landscape Masterplan): - provide 2 X shelters with picnic tables/ seating, 2 X picnic tables/ seating (no shelters) & gas-fuelled BBQs (2 X hot-plates). Locate facilities to take advantage of views over dam to western ridge. Connect picnic facilities to circuit track and dam. - review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	Regular inspections and maintenance in accordance with relevant safety standards. Investigation completed and recommendations implemented subject to appropriate funding.	high ongoing very high
Passive open space/ proposed facilities: To enhance opportunities for passive informal and family-based recreation. To establish passive recreational facilities within the most durable areas.	C11	<ul style="list-style-type: none"> - Review child safety issues in relation to sealed access road/ car parking area and facilities. - Consider option for relocation of play area OR install child proof fencing gates around perimeter. Install shade structure over play area and 1 X shelter with picnic table/ seating to enhance opportunities for supervision. Review options for upgrading existing play equipment/ experience considering targeted age groups(s). - Construct picnic BBQ area at northern end of overflow car parking area between sportsfields and dam (see Figure 5: Landscape Masterplan): - provide 2 X shelters with picnic tables/ seating, 2 X picnic tables/ seating (no shelters) & gas-fuelled BBQs (2 X hot-plates). Locate facilities to take advantage of views over dam to western ridge. Connect picnic facilities to circuit track and dam. - review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	Proposed staged development/ capital works items completed subject to appropriate funding.	medium
To ensure appropriate safeguards to protect environmental quality and habitat values.	C12	<ul style="list-style-type: none"> - Review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	Improvements in accordance with development guidelines subject to appropriate funding.	medium
Youth facilities: To provide opportunities for older children/ youth in proximity to other recreational facilities and within the most durable areas.	C13	<ul style="list-style-type: none"> - Review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	Investigation completed and recommendations implemented subject to appropriate funding.	medium
Security lighting: To improve park security and reduce level of vandalism and anti-social behaviour.	C14	<ul style="list-style-type: none"> - Review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	as above	low
Companion animals: To review options for a designated unleashed dog exercise area in compliance with relevant Act.	C15	<ul style="list-style-type: none"> - Review options for short timber boardwalk access to wetlands/ dam and installation of interpretive signage. 	Review completed and recommendations implemented subject to appropriate funding.	high

6 of 6

TABLE 6:
CAPITAL WORKS PROGRAM

ITEM	ACTION	CAPITAL COST (\$)	IMPLEMENTATION				
			2009	2010	2011	2012	2013
A1-A10	Community land management						
A1	see following items for details	see below					
A2-A4	no capital works component	not costed					
A5	see following items for details	see below					
A6-A10	no capital works component	not costed					
B1-B19	Environment and biodiversity						
B1/ B3	continue current catchment management program/ protect natural diversity	not costed					
B2	remove BMX bowl/ monitor unauthorised activities [see items B5-B6]	see below					
B4	develop program for aquatic/ wetland recovery and enhancement	see below					
B5-B6	reinstatement of natural ground profiles/ restoration of BMX bowl [near dam]	\$30,000.00					
B7	develop & implement appropriate maintenance regime	not costed					
B8-B17	implement weed management and restoration strategy [6 priority areas]	\$60,000.00					
B18	maintain restrictions on unauthorised activities/ monitor vandalism	not costed					
B19	restrict extent of mowing/ slashing open paddock/ restoration strategy	see above					
C1-C16	Recreation, facilities and access						
C1	general maintenance/ improvements to sportsfields & facilities	not costed					
C2	returfing embankment/ tree planting	\$10,000.00					
C3	regulatory signage/ implement glass policy	not costed					
C4	provide additional undercover spectator seating/ litter bins	\$6,000.00					
C5	upgrade overflow car parking area/ access road; install bollards/ fencing	\$30,000.00					
C6	improve regulatory control and policing of unauthorised activities	not costed					
C7	liaise with BMX riders group/ review options for relocation [see item C14]	not costed					
C8	construct shared pedestrian/ bikepath linkages [2.2m width concrete]	\$40,000.00					
C9	rationalise walking tracks/ CDG finish [1.8m width] & signage/ maintain fire-trails	\$45,000.00					
C10-C11	install playground safety fencing/ gates, shade structure, picnic shelter/ seating	\$30,000.00					
C12-C13	construct new picnic area [incl.picnic shelters, tables/ seating & gas BBQ]	\$50,000.00					
C14	review options/ youth facilities [incl. skate/ BMX & hardstand area]	\$40,000.00					
C15	install additional security lighting	\$30,000.00					
C16	review options for establishing an unleashed dog exercise area	not costed					
TOTALS		\$371,000.00					

Note: Opinion of probable landscape constructions costs is based on Fig 5: Landscape Masterplan. All figures shown are indicative only.

SUMMARY OF ANNUAL BUDGETS	CAPITAL COST (\$)
2009	\$67,000.00
2010	\$70,000.00
2011	\$95,000.00
2012	\$77,000.00
2013	\$62,000.00
TOTALS	\$371,000.00

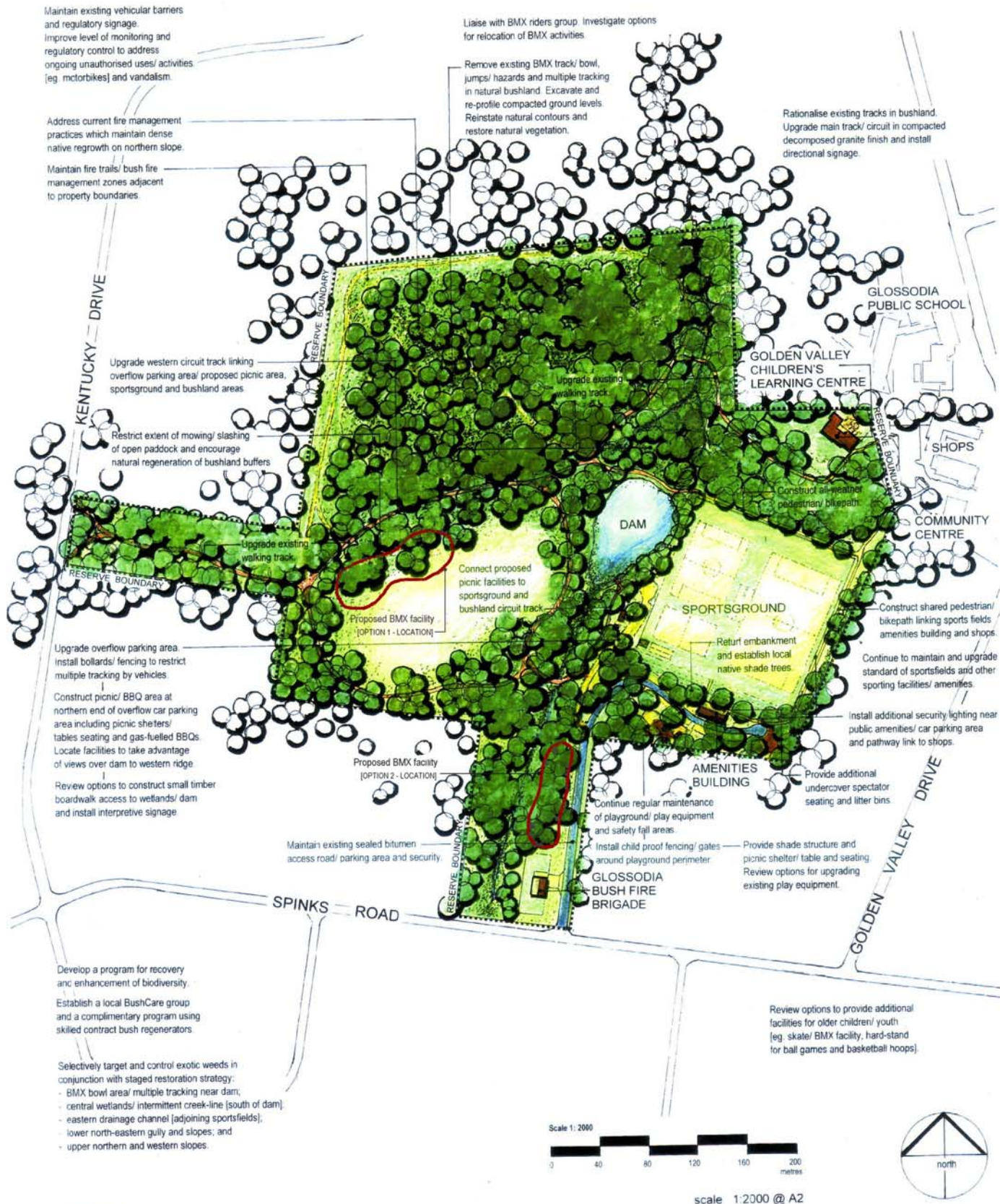


FIGURE 5

LANDSCAPE MASTERPLAN

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APPENDICES

- I: Community Consultation – presentation material and submissions
- II: Schedule of Existing Native Plant Species
- III: Schedule of Existing Weed Species

Woodbury Reserve

- GLOSSODIA -



Community Workshop

Draft Plan of Management

Date: Monday 26th March 2007

Time: 7.30pm – 8.30pm

Venue: Glossodia Community Centre
162 Golden Valley Drive, Glossodia

Why do we need a plan of management?

A community land plan of management provides the framework for managing community land. Consultation is an important part of this process. Woodbury Reserve is community land owned by Hawkesbury City Council. This reserve is located between Golden Valley Drive, Spinks Road and Kentucky Road, Glossodia and covers an area of approximately 19.4 hectares (Ha). The fenced land around the Glossodia Bush Fire Brigade building in Spinks Road is on operational land and is not included in this plan of management.

Woodbury Reserve is largely bordered by two and a half acre (1 Ha) semi-rural lots. The community centre, shopping village and school, and adjoin the reserve's north-eastern boundary. The reserve has a strong community focus offering a range of opportunities for passive and active recreation. Facilities include the Golden Valley Children's Learning Centre, sportsground and children's playground. Soccer and cricket are the main organised sports on the sportsground. The reserve also contains a large area of natural bushland, an open paddock, wetlands and a central dam. Popular activities in this area include walking the dog, exercising, horse-riding, BMX and mountain bike riding.

The reserve's natural, recreational, cultural and social values are affected by a range of issues. It is important that the draft plan of management establishes how these values should be protected, managed and enhanced. The plan of management will be prepared in accordance with the *Local Government Act 1993* and other relevant Federal and State legislation.

What is the purpose of a community workshop?

The main purpose of the community workshop is to discuss the way the community uses and values the reserve and to identify important issues affecting these values and opportunities for future management. The workshop aims to provide a transparent and equitable forum for all user groups, stakeholders and individuals.

To support any comments you wish to make please fill out the ***Community Issues Questionnaire***. Please leave completed issues questionnaires at the desk when you leave or if you need more time these can be mailed to:

Landarc Pty Limited, PO Box 304 Avalon NSW 2107.
Please return questionnaires within fourteen days.

If there are any specific issues you need to discuss following the community workshop, please contact the Director of LandArc, Noel Ruting during office hours on 9973 1330.

Community issues raised at the workshop will be addressed in the draft plan of management. Further comments on the draft will be invited during the public exhibition period.

What are the expected outcomes for the draft plan of management?

The draft plan of management will establish a framework for managing the reserve in accordance with the *Local Government Act 1993* and other relevant legislation. The following will be addressed:-

- ☐ establish the reserve's role in the Hawkesbury City Council LGA;
- ☐ identify existing uses, improvements and condition of facilities and buildings;
- ☐ categorise the land in accordance with relevant legislation;
- ☐ identify and assess the reserve's values (ie. environmental, recreational, cultural, social, etc);
- ☐ identify and assess key issues affecting the reserve's values;
- ☐ establish future permitted uses, activities and development (including intensity and scale) and future leases and/ or licences in accordance with *Local Government Act 1993*;
- ☐ develop appropriate management strategies and actions based on a balanced, sustainable approach to resource management;
- ☐ assign priorities for a strategic plan (5-years) and estimated capital works expenditure; and
- ☐ prepare a landscape master plan.

When will the draft plan of management be exhibited?

The draft plan of management will go on public exhibition at Council's Administration Centre, Hawkesbury Central Library (in the Deerubbin Centre), Windsor and Council's web-site. It is envisaged that the draft plan of management will be completed by 30 April 2007.

The draft plan of management goes on public display for four weeks and a further two weeks are allowed for final written submissions (ie. a total of 6 weeks for submissions from commencement of public exhibition to closure). The public exhibition dates will be advertised by Council.

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Woodbury Reserve

Community Workshop Draft Plan of Management

7:30 pm - Monday 26 March 2007
Glossodia Community Centre
162 Golden Valley Drive, Glossodia

1. **Welcome & introductions**
2. **Brief overview of plan of management process**
3. **Discussion**
 - Planning & environmental context:
 - Hawkesbury River/ regional open space
 - location/ park boundaries
 - surrounding land uses and zoning
 - Community land (legislative requirements)
 - Community land – reserve's values:
 - natural bushland and cultural setting
 - environmental and biodiversity values
 - recreational, cultural and social values
 - Management issues:
 - protection and management of natural bushland (endangered ecological community)
 - introduced noxious and environmental weeds
 - bushfire management
 - stormwater management and water quality
 - public access, car parking and pedestrian linkages
 - recreational user groups (soccer, cricket, training, relaxation, exercise, PSSA sports/ school cross-country, walking the dog, horse-riding and mountain bikes)
 - recreational impacts (eg. erosion, trampling, BMX and motor bike/ trail bike riding, multiple tracking, jumps, rubbish dumping)
 - public safety/ risk management
 - types of organised sports activities and user group needs
 - supply and demand issues
 - current service provision in sports and recreation facilities (eg. grounds maintenance, lighting, seating, fencing, building upgrades, playground, car parking areas, picnic/ BBQ areas, public amenities)
 - interpretation/ environmental education
 - planning issues and relevant legislation
4. **Conclusion**
 - time-frame for draft plan of management
 - public exhibition and plan adoption
 - exploring issues papers

8:30pm

Community Issues

Draft Plan of Management

Woodbury Reserve, Glossodia

A draft plan of management is being prepared for Woodbury Reserve. Community consultation is a vital part of the plan of management process. Please take a few minutes to fill out the following questionnaire.

1. **May we have some personal details.** *(please circle item)*

a. AGE

<20 20-35 36-50 50-65 >65

b. SEX

Male Female

2. **Please provide your residential postcode.**

3. **How often do you visit the reserve?** *(please tick box)*

☐

Less than once a year

☐

1-3 times a year

☐

4-6 times a year

☐

Frequent visitor *(please circle item below)*

monthly

weekly

most days

4. **Do you have a seasonal preference for visiting the reserve?**
(please circle items as applicable)

summer

winter

all year round

5. **Do you use only part of the reserve and its facilities?**

bushland

sportsground

child learning centre

whole of reserve/ facilities

6. **What do you like most about the reserve?**

please continue over page

7. What do you believe are the three most important issues affecting the reserve?

What actions would you suggest to address these issues?

a) Please describe below the first issue you wish to raise.

b) Please describe below the second issue.

c) Please describe below the third issue.

Thank you.

Please return this survey to the desk before you leave or mail within 14 days to:

LandArc Pty Limited
PO Box 304
Avalon NSW 2107

APPENDIX II:

Schedule of Existing Native Plant Species

The reserve retains two endangered ecological communities and habitats albeit disturbed, fragmented and modified by past clearing, agricultural uses and urban development. These endangered ecological communities include:-

- Shale Sandstone Transition Forest (SSTF); and
- Cumberland Plain Woodland (CPW).

Native plant species are listed in alphabetical order and based on field surveys by Noel Ruting (LandArc Pty Limited) and Michelle Engelhardt (Hawkesbury City Council) during February – March 2007 and January 2008.

KEY TO LOCATION WITHIN RESERVE:

- G = lower gully/ creek-line (north-east)
W = wetland/ water's edge & aquatic (dam)/ upper creek-line
M = mid-northern & southern slopes
P = cleared paddock (south-western slope)
R = south-eastern ridge (upper sportsground) & western ridge (Kentucky Rd)

BOTANICAL NAME	COMMON NAME	LOCATION
<i>Acacia decurrens</i>	Green Wattle	M
<i>Acacia floribunda</i>	Sally Wattle	M/ R
<i>Acacia linifolia</i>	Flax Wattle	M
<i>Acacia parramattensis</i>	Sydney Green Wattle	ALL (dom.)
<i>Adiantum aethiopicum</i>	Maidenhair Fern	G
<i>Agrostis avenacea</i>	Blown Grass	ALL
<i>Alternanthera denticulata</i>	Lesser Joyweed	W
<i>Angophora bakeri</i>	Narrow-leaved Apple	M
<i>Angophora floribunda</i>	Rough-barked Apple	G (dom.)/ M/ R
<i>Aristida ramosa</i>	Wire Grass	M/ P
<i>Aristida vagans</i>	Wire Grass	M/ P
<i>Bothriochloa macra</i>	Red Grass	M/ P
<i>Breynia oblongifolia</i>	Common Breynia	M/ G
<i>Brunoniella australis</i>	Blue Trumpet	M/ P/ R
<i>Bursaria spinosa</i>	Blackthorn	ALL
<i>Carex appressa</i>	Tall Sedge	G
<i>Centella asiatica</i>	Swamp Pennywort	ALL
<i>Cheilanthes sieberi</i>	Poison Rock Fern	ALL
<i>Clematis aristata</i>	Old Man's Beard	G
<i>Clematis glycinoides</i>	Old Man's Beard	G
<i>Commelina cyanea</i>	Scurvy Weed	G/ M/ W
<i>Cymbopogon refractus</i>	Barbed-wire Grass?	ALL
<i>Cyperus brevifolius</i>	Mullumbimby Couch	ALL
<i>Cyperus difformis</i>	Sedge	W
<i>Cyperus polystachyos</i>	Sedge	W

BOTANICAL NAME	COMMON NAME	LOCATION
continued		
<i>Daviesia ulicifolia</i>	Gorse Bitter-pea	M/ G
<i>Desmodium brachypodium</i>	Tick-trefoil	ALL
<i>Desmodium rhytidophyllum</i>	Tick-trefoil	ALL
<i>Desmodium varians</i>	Tick-trefoil	ALL
<i>Dianella</i> sp.	Flax Lily	M/ G/ R
<i>Dichelachne micrantha</i>	Shorthair Plume Grass	M/ P
<i>Dichondra repens</i>	Kidney Weed	ALL
<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass	M/ G
<i>Einadia hastata</i>	Berry Saltbush	ALL
<i>Einadia trigonos</i>		ALL
<i>Eleocharis</i> sp.	Tall Spike-rush	W
<i>Entolasia marginata</i>	Wiry Panic	ALL
<i>Entolasia stricta</i>	Wiry Panic	ALL
<i>Eragrostis brownii</i>	Brown's Love Grass	M/ P
<i>Eragrostis leptostachya</i>	Love Grass	M/ P
<i>Eucalyptus amplifolia</i>	Cabbage Gum	M/ W
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark	R (dom.)/ M
<i>Eucalyptus eugenioides</i>	Thin-leaved Stringybark	G
<i>Eucalyptus fibrosa</i>	Broad-leaved Ironbark	M
<i>Eucalyptus punctata</i>	Grey Gum	M
<i>Eucalyptus tereticornis</i>	Forest Red Gum	M (dom.)/ R/ W/ G
<i>Exocarpus cupressiformis</i>	Cherry Ballart	ALL
<i>Gahnia aspera</i>	Rough Saw-sedge	M/ W
<i>Galium gaudichaudi</i>	Rough Bedstraw	M/ P
<i>Glycine clandestina</i>	Love Creeper	ALL
<i>Glycine microphylla</i>	Love Creeper	ALL
<i>Glycine tabacina</i>	Love Creeper	ALL
<i>Gompholobium glabratum</i>	Golden Glory Pea	M/ G
<i>Gompholobium grandiflorum</i>	Golden Glory Pea	M/ G
<i>Goodenia bellidifolia</i>	Daisy-leaved Goodenia	M/ G
<i>Goodenia hederacea</i>	Violet-leaved Goodenia	M/ G
<i>Hardenbergia violacea</i>	Purple Twining-pea	M/ R/ W/ G
<i>Hypoxis hygrometrica</i>	Golden Star	ALL
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass	M/ R/ G
<i>Juncus continuus</i>	Rush	W
<i>Juncus usitatus</i>	Common Rush	W/ G
<i>Kennedia rubicunda</i>	Dusk Coral-pea	G
<i>Kunzea ambigua</i>	Tick Bush	M
<i>Lomandra confertifolia</i>		
ssp. <i>rubiginosa</i>	Mat-rush	M/ G/ R
<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	Iron Grass	M/ G/ R
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	M/ G/ R
<i>Ludwigia peploides</i>	Water Primrose	W
ssp. <i>montevidensis</i>		
<i>Microlaena stipoides</i>	Weeping Grass	M/ P
<i>Opercularia</i> sp.	Stink Weed	M
<i>Oplismenus aemulus</i>	Basket Grass	G
<i>Oxallis</i> sp.	Wood-sorrel	ALL
<i>Ozothamnus diosmifolium</i>	Ball Everlasting	M/ G/ W/ R
<i>Paspalidium distans</i>		M/ P
<i>Persicaria decipiens</i>	Slender Knotweed	W/ G

BOTANICAL NAME	COMMON NAME	LOCATION
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continued

<i>Persicaria hydropiper</i>	Water Pepper	W
<i>Persicaria lapathifolia</i>	Pale Knotweed	W
<i>Persoonia linearis</i>	Narrow-leaf Geebung	M
<i>Pimelea linifolia</i> ssp. <i>linifolia</i>	Slender Rice-flower	M
<i>Plantago gaudichaudi</i>	Narrow-leaf Plantain	M/ P
<i>Polymeria calycina</i>	Polymeria	ALL
<i>Pratia pedunculata</i>		G
<i>Pratia purpurascens</i>	White Root	ALL
<i>Pseuderanthemum variabile</i>		G
<i>Pteridium esculentum</i>	Common Bracken	G
<i>Sigesbeckia orientalis</i>	Indian-weed	G
<i>Sporobolus virginicus</i> var. <i>minor</i>	Salt-grass	W
<i>Stipa verticillata</i>	Slender Bamboo Grass	G
<i>Solanum prinophyllum</i>	Forest Nightshade	G
<i>Themeda australis</i>	Kangaroo Grass	M/ G
<i>Trema aspera</i>	Native Poison Peach	G
<i>Trycoryne elatior</i>	Yellow Rush Lily	M/ P
<i>Typha orientalis</i>	Broad-leaved Cumbungi	W
<i>Veronica</i> sp.	Speedwell	M
<i>Wahlenbergia communis</i>	Tufted Bluebell	M/ P/ R
<i>Wahlenbergia gracilis</i>	Australian Bluebell	M/ P/ R

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APPENDIX III:

Schedule of Existing Weed Species

KEY:

The following exotic weed species were identified during site investigations. The species are scheduled in alphabetical order. Species declared noxious within the Hawkesbury River County Council area under the *Noxious Weeds Act 1993* are shown with a Weed Class as applicable.

- 1 The plant must be eradicated from the land and must be kept free of the plant.
- 2 The plant must be eradicated from the land and must be kept free of the plant.
- 3 The plant must be fully and continuously suppressed and destroyed.
- 4 The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority.
- 5 The requirements in the *Noxious Weeds Act 1993* for a notifiable weed must be complied with.

BOTANICAL NAME	COMMON NAME	CLASS
<i>Araujia hortorum</i>	Moth Vine	-
<i>Axonopus affinis</i>	Narrow-leaved Carpet Grass	-
<i>Bidens pilosa</i>	Cobbler's Peg	-
<i>Cestrum parqui</i>	Green Cestrum	3
<i>Chloris gayana</i>	Rhodes Grass	-
<i>Conyza bonariensis</i>	Fleabane	-
<i>Cynodon dactylon</i>	Common Couch	-
<i>Cyperus congestus</i>	Sedge	-
<i>Echinochloa crus-galli</i>	Barnyard Grass	-
<i>Eragrostis spp.</i>	African Love Grass	-
<i>Foeniculum vulgare</i>	Fennel	-
<i>Hypochoeris radicata</i>	Catsear	-
<i>Lantana camara</i>	Lantana	-
<i>Ligustrum lucidum</i>	Large-leaved Privet	4
<i>Ligustrum sinense</i>	Small-leaved Privet	4
<i>Myrsiphyllum asparagoides</i>	Bridal Creeper	-
<i>Nymphaea capensis</i>	Cape Waterlily	-
<i>Paspalum dilatatum</i>	Paspalum	-
<i>Paspalum urvillei</i>	Tall Paspalum	-
<i>Pavonia hastata</i>		-
<i>Pennisetum clandestinum</i>	Kikuyu Grass	-
<i>Plantago lanceolata</i>	Lamb's Tongue	-
<i>Poa annua</i>	Winter Grass	-
<i>Ricinus communis</i>	Castor Oil Plant	-
<i>Rubus fruticosus</i>	Blackberry	4
<i>Senna X floribunda</i>	Cassia	-
<i>Sida rhombifolia</i>	Paddy's Lucerne	-
<i>Tagetes minuta</i>	Stinking Roger	-

BOTANICAL NAME	COMMON NAME	CLASS
continued		
<i>Taraxacum officinale</i>	Dandelion	-
<i>Tradescantia albiflora</i>	Trad	-
<i>Trifolium repens</i>	White Clover	-
<i>Verbena officinalis</i>	Verbena	-

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