



Vegetation Management Plan for Blue Gum High Forest Habitat

**A guide to the rehabilitation and
reconstruction of a native
vegetation community at**

***35 Water Street
Wahroonga***

Prepared for
**Murlan Consulting Pty Ltd &
Waterbrook at Wahroonga Pty Ltd**

13 November 2009

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Executive Summary

UBM Ecological Consultants Pty Ltd has been retained by Murlan Consulting Pty Ltd on behalf of their clients **Waterbrook at Wahroonga Pty Ltd** to prepare a Vegetation Management Plan for an area of Blue Gum High Forest located within the former John Williams Respite Care Centre at Wahroonga, in Ku-ring-gai Local Government Area.

The Wahroonga Property –originally known as **Rippon Grange** - is located at 35 Water Street, zoned Special Uses 5(a) Hospital. The Property is some 2.13 hectares in size, and comprises Lot 1 DP 375262 with frontages to Water Street and Young Street.

The Proponents *Waterbrook* have lodged an **Environmental Impact Assessment** with the NSW Department of Planning for approval to develop a **Private Hospital** on Lot 1 DP 375262, which forms part of the former Respite Care Centre. The Proposal will provide hospital facilities for a variety of patients who require professional health services.

The Proposal includes the adaptive re-use of heritage-significant buildings, refurbishment of Rippon Grange, and the restoration of significant landscape elements within the heritage-listed Property. It will also preserve and rehabilitate existing areas of Blue Gum High Forest, while reconstructing significant additional areas of this critically endangered vegetation community elsewhere on the Property.

Some 6,350 sq metres (0.64 ha) of the Subject Property is occupied by a simplified form of **Blue Gum High Forest** (Smith & Smith 2006), covering about 30% of the site. As the vegetation is mainly comprised of mature canopy trees over exotic garden beds, lawns and weed thickets the remnant community is hereafter described as **Blue Gum High Forest Habitat** to distinguish it from a structurally intact and floristically diverse stand of this community – as described in the Final Determination for Blue Gum High Forest in the Sydney Basin Bioregion.

Under the Proposal, 6,234 sq metres or 98.2% of the total area of BGHF Habitat mapped by Smith & Smith (2006) will be retained and rehabilitated. Further, as compensatory offsets, some 2,099 sq metres (0.21 hectares) of BGHF Habitat will be reconstructed via an indigenous planting program in order to extend and enhance existing stands of the community (Taylor Brammer November 2009). Based on these figures, a total of 8,333 sq metres (0.833 ha) of BGHF will be retained or recreated, providing a net gain in BGHF Habitat of ~31%.

A **Species Impact Statement** has been prepared in support of the proposed Hospital development (Cumberland Ecology February 2009), while the Vegetation Management Plan (this report) has been prepared in accordance with the recommendation of the SIS to provide a management plan for the remnant BGHF Ecological Community.

The **Vegetation Management Plan** provides for the rehabilitation of existing areas of BGHF Habitat via a long-term bush regeneration program, while a simplified form of BGHF Habitat will be reconstructed via an indigenous planting program in those areas where currently only native canopy trees occur. The primary aim of the VMP is to identify appropriate management strategies and



actions for the rehabilitation and future management of the BGHF Habitat occurring within the Subject Property.

The VMP also provides guidelines for the reconstruction of additional areas of BGHF Habitat, principally in those areas retaining only canopy trees characteristic of the BGHF Ecological Community (e.g. Sydney Blue Gums, Blackbutt and others), as listed in the Final Determination of the Scientific Committee for Blue Gum High Forest in the Sydney Basin Bioregion.

Further, as the Proposal incorporates buildings and landscape elements of heritage value, the VMP has been designed to accommodate the retention of a number of early garden plantings, principally those trees listed as 'significant' – as identified in the *Arboricultural Impact Assessment Report* (Tree Wise Men February 2009).

While the VMP recommends the retention of a number of non-invasive culturally significant plantings within areas of BGHF Habitat, this Plan does not attempt to address the refurbishment of Rippon Grange's heritage gardens.

The proposed rehabilitation and restoration of BGHF Habitat in the Subject Property at Wahroonga will be undertaken over a period of at least 10 years, and will require both firm commitment and a significant level of funding over this period. However, it is anticipated that the BGHF habitat will be managed in perpetuity, according to the principles and guidelines set out in this VMP.

The remnant BGHF Habitat on the Property at this time comprises predominantly native canopy trees over an introduced understorey which has been comprehensively invaded by weeds, which means that virtually all of the understorey (i.e. small trees, shrub and the ground cover strata) will be to be either regenerated, or reconstructed via an indigenous planting program.

While the proposed rehabilitation and reconstruction of BGHF Habitat is an ambitious task, it is considered that with firm long-term commitment from the landowners Waterbrook and with careful planning and management in accordance with the recommendations of this VMP, the ecological objectives of this Plan will be realised.



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Certification

I, Judith Rawling Managing Director of UBM Ecological Consultants Pty Ltd hereby state that the **Vegetation Management Plan for the Rehabilitation and Reconstruction of Blue Gum High Forest Habitat at 35 Water Street Wahroonga** has been prepared in consideration of the NSW Department of Water & Energy's *Urban Bushland Management Guidelines* and their publication entitled '*How to Prepare a Vegetation Management Plan Version 7*'.

Reference has also been made to Ku-ring-gai Council's *Biodiversity Strategy*, to the draft *Best Practice Guidelines for the Management of threatened Blue Gum High Forest in St Ives* (DECCW 2007), and to *Recovering Bushland on the Cumberland Plain* (DEC 2005).

The UBM Ecological Consultants project team charged with preparing the Vegetation Management Plan were:

- Judith Rawling (BA,DipEd,DipEnvStud,MEnvSt)
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- Gabriel Wardenburg (BEnvMgt)

Special thanks are due to Ben MacGibbon (Murlan Consulting); David Earp (Tanner Architects); Peter Castor and Alexis Anderson (Tree Wise Men); Matthew Taylor (Taylor Brammer; and David Robinson and Joanne Ironside (Cumberland Ecology). Thanks are also due to David Thomas (Consultant Botanist) for specialist advice on planting densities and species selection.

Judith Rawling

Managing Director UBM Ecological Consultants, Principal UBM Projects

Member AIB, MESA, MEIANZ, Vice-president ECA (NSW), Member Noxious Weeds Advisory Committee to the Minister Department of Primary Industries

13 November 2009



1 INTRODUCTION

1.1 BACKGROUND INFORMATION

UBM Ecological Consultants Pty Ltd¹ ('UBM') has been retained by Murlan Consulting Pty Ltd on behalf of their clients *Waterbrook @ Wahroonga Pty Ltd* (hereafter '**Waterbrook**') to prepare a Vegetation Management Plan for an area of Blue Gum High Forest located within the former John Williams Respite Care Centre at Wahroonga, in Ku-ring-gai Local Government Area.

The Wahroonga Property –originally known as **Rippon Grange** - is located at 35 Water Street, zoned Special Uses 5(a) Hospital. The Property is 2.13 hectares in size, and comprises Lot 1 DP 726091 with frontages to Water Street and Young Street.

The Proponents *Waterbrook* have lodged an Environmental Assessment Report to the NSW Department of Planning for approval to develop a **Private Hospital** on Lot 1 DP 375262, which previously operated as part of the former John Williams Respite Care Centre. The **Proposal** will provide hospital facilities for a variety of patients who require professional health services.

The Proposal includes the adaptive re-use of heritage-significant buildings, refurbishment of Rippon Grange, and the restoration of significant landscape elements within the heritage-listed Property. It will also preserve and rehabilitate existing areas of the Blue Gum High Forest Ecological Community, while reconstructing significant additional areas of Blue Gum High Forest Habitat elsewhere on the Property.

A Species Impact Statement ('SIS') has been prepared in support of the proposed Hospital development (Cumberland Ecology March 2009), while the Vegetation Management Plan (this report) has been prepared in accordance with the recommendation of the SIS to provide a management plan for the remnant BGHF Ecological Community.

The subject of this Vegetation Management Plan is the area proposed for development as a Hospital on Lot 1 DP 375262, which is hereafter described as the '**Subject Property**'.

The Development Proposal is detailed in Section 1.4 of this Report.

The regional positioning of the Subject Property is shown on Figure 1.1.

¹ Formerly trading as Urban Bushland Management Consultants Pty Ltd ('UBMC')

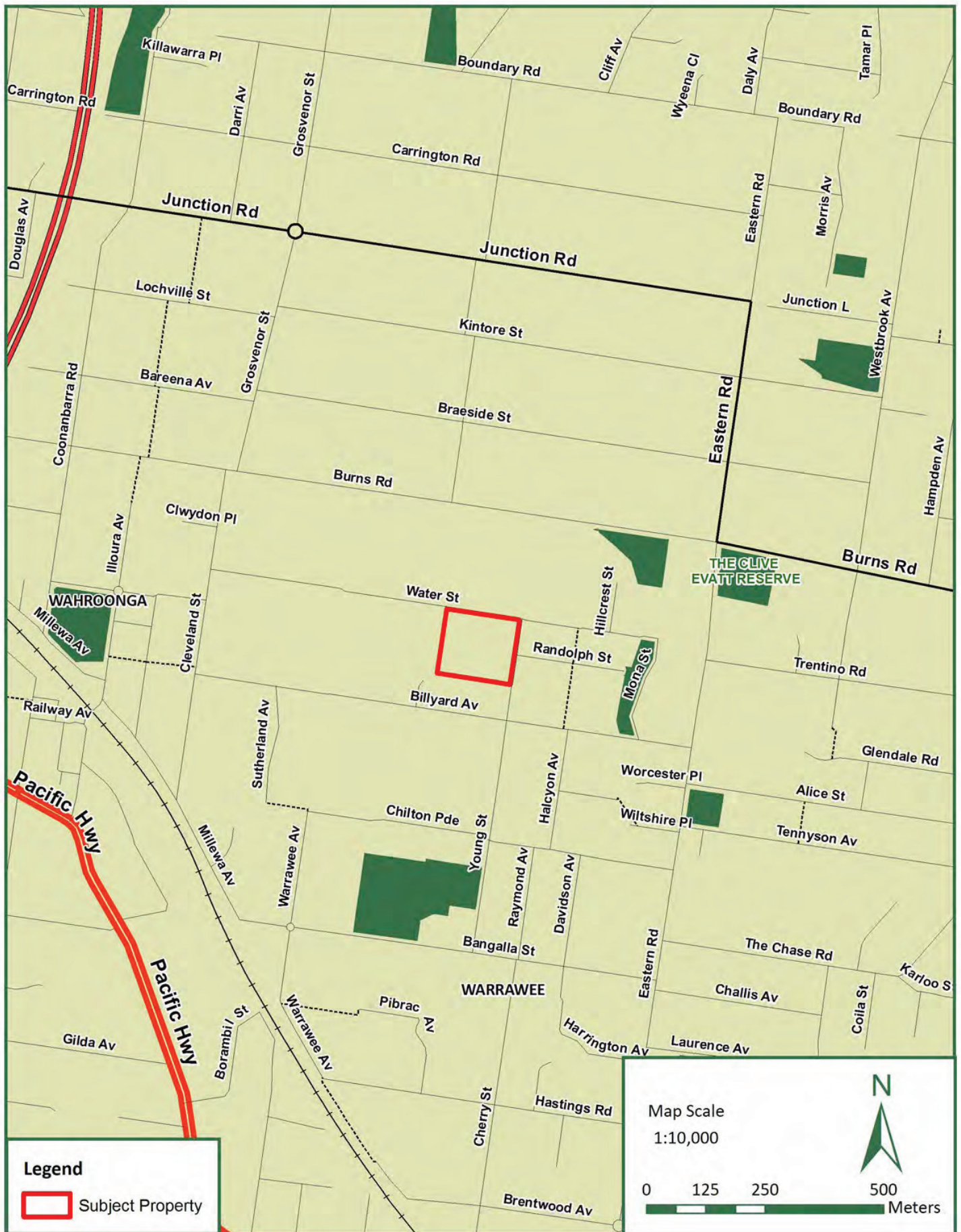


Figure 1.1: Regional Positioning of the Subject Property





1.2 SITE HISTORY

The Subject Property Rippon Grange was developed in the late 19th Century, soon after the railway line was extended to Sydney's Upper North Shore (c. 1890). The main building on the Property is **Rippon Grange**, which was constructed as a two (2) storey residential dwelling in 1898 in an architectural style known as the 'Arts and Craft Movement'. For many years Rippon Grange was used as a private residence; and its extensive grounds were developed as a series of formal gardens; incorporating recreational and service areas, and an arboretum containing many rare and unusual specimen trees imported from other parts of the world.

Rippon Grange, with a number of significant outbuildings and its heritage gardens, has been classified by the National Trust of Australia (NSW), and it is also listed as an 'Indicative Place' on the Australian Heritage Commission's Register of the National Estate.

In the early 1950s, the Property was donated to the State Government for use as a Hospital, and it continued to serve this function - latterly as the **John Williams Respite Care Centre** - until 2002 when it was declared 'surplus to needs'. During this period, some parts of the gardens were generally neglected, with invasive garden plants and other weeds establishing in the remnant stand of Blue Gum High Forest which had been retained along the boundaries of Water and Young Streets.

In 2005, the State Property Unit of the NSW Department of Commerce commissioned a preliminary investigation of ecological issues and an opportunities and constraints study (UBMC February 2005), which identified the presence of ~2,600 sq metres (0.26 ha) of highly simplified Blue Gum High Forest on part of the Property.

On June 30 2005, the Subject Property was acquired by the Proponents *Waterbrook* with the intention of redeveloping the Property under *State Environmental Planning Policy (Senior Living) 2004*. Subsequent more detailed ecological surveys carried out on behalf of *Waterbrook* (UBMC February 2006) confirmed the findings of the earlier ecological investigations.

At that time, *Blue Gum High Forest in the Sydney Basin Bioregion* (hereafter '**BGHF**') was listed under the Schedules of the NSW *Threatened Species Conservation Act 1995* ('**TSC Act**') as an 'endangered ecological community', and as 'threatened' under the Commonwealth *Environment Protection of Biodiversity Conservation Act 1999* ('**EPBC Act**').

Since the acquisition of the Subject Property by *Waterbrook* in mid-2005, the ecological status of the BGHF has been reviewed by the Scientific Committee established under the *TSC Act*; resulting in this ecological community now being declared to be 'critically endangered' (Final Determination 20 April 2007). Of most importance, the criteria for identifying the BGHF Ecological Community were also amended, thus allowing for a larger portion of the Subject Property to be reclassified as BGHF.

As the result of these changes to the legislation, Ku-ring-gai Council and the National Parks & Wildlife Group of the Department of Environment, Climate Change & Water (hereafter '**DECCW**') have required the Proponents to review and reassess the extent of BGHF occurring at 35 Water Street, Wahroonga.



Subsequent investigations by Smith & Smith (December 2006) revised the area of BGHF extant on the Subject Property from the original 2,600 sq metres (0.26 ha) mapped by UBMC (2006) to 6,350 sq metres (0.64 ha). This latter area was established by identifying each of the trees listed in the Final Determination and drawing a line around the extent of each tree canopy. Subsequently all areas retaining large native canopy trees were joined to form an area of BGHF some 3,750 sq metres *greater* than the area mapped in 2006.

Dr Peter Smith was subsequently appointed to the Land & Environment Court as an expert witness. The BGHF area mapped by Smith & Smith (2006) was defined as part of a Hearing in the *NSW Land & Environment Court* in June 2007 (No 11193 of 2006). The larger area of 6,350 sq metres of BGHF has been adopted by Cumberland Ecology, the authors of the Species Impact Statement prepared for this application, and used as a base point for all subsequent reports and investigations, including this Vegetation Management Plan.

Note: areas within the Subject Property supporting remnant vegetation characteristic of the BGHF Ecological Community are hereafter described as **'BGHF Habitat'** in order to distinguish this type of vegetation from a fully functional and BGHF 'ecological community', which is typically floristically diverse and structurally intact (see Final Determination, Appendix 1).

1.3 CHRONOLOGY OF DEVELOPMENT PROPOSALS

On June 30 2005, the Subject Property was acquired by the Proponents *Waterbrook* with the intention of redeveloping the Property under *State Environmental Planning Policy (Senior Living) 2004*.

In August 2006 a Development Application ('the DA') was submitted to Ku-ring-gai Council (hereafter '**Council**') for a 78-unit self care retirement resort development. This application was rejected by Council and it was subsequently rejected by the NSW Land & Environment Court (May 2007). The Court's decision was appealed and was dismissed in October 2007.

In December 2007 a revised Development Application was submitted for a 61 unit version of the self care retirement resort, which was again rejected by Council in June 2008. This application included a Species Impact Statement prepared by Cumberland Ecology (December 2007), a Vegetation Management Plan prepared by UBM Ecological Consultants (October 2007), and other specialist reports.

March 2009 – An Environmental Assessment Report has been lodged with the NSW Department of Planning for a Hospital (under Section 3A of the *Environmental Planning & Assessment Act* – '**EP&A Act**'). This Report will include a new Species Impact Statement, a revised Vegetation Management Plan (this Report), and other specialist reports.



1.4 CURRENT DEVELOPMENT PROPOSAL

1.4.1 Description

The Proponents *Waterbrook* an Environmental Assessment Report to the NSW Department of Planning for the development of land located on Lot 1 DP 375262, 35 Water Street Wahroonga for the purposes of a Hospital. The proposed Hospital is deemed to be a 'major project' for the purposes of *State Environmental Planning Policy (Major Projects) 2005* and Part 3A of the *EP&A Act*.

The Proposal comprises a Hospital, consisting of 137 rooms which will accommodate patients who require professional health services.

The Proposal involves the demolition of non-heritage-significant existing buildings, removal of various non-heritage-significant landscape elements, adaptive re-use (for hospital and related purposes) of the heritage-significant buildings, restoration of heritage-significant landscapes, preparatory excavation and bulk earthworks, and the protection and restoration of almost all of the BGHF Ecological Community on the site.

The proposed Hospital will comprise two (2) new interconnecting buildings to be built across the south-western and south-eastern parts of the Property, and in central area south of Rippon Grange.

The West Hospital Wing will be located in the south-western portion of the Subject Property, where a schoolhouse currently exist, and will extend southwards. The Main Hospital Wing will be located south of Rippon Grange and north of the Stables, running in an east-west direction. It will be positioned in part on the site of the original garage and pool house.

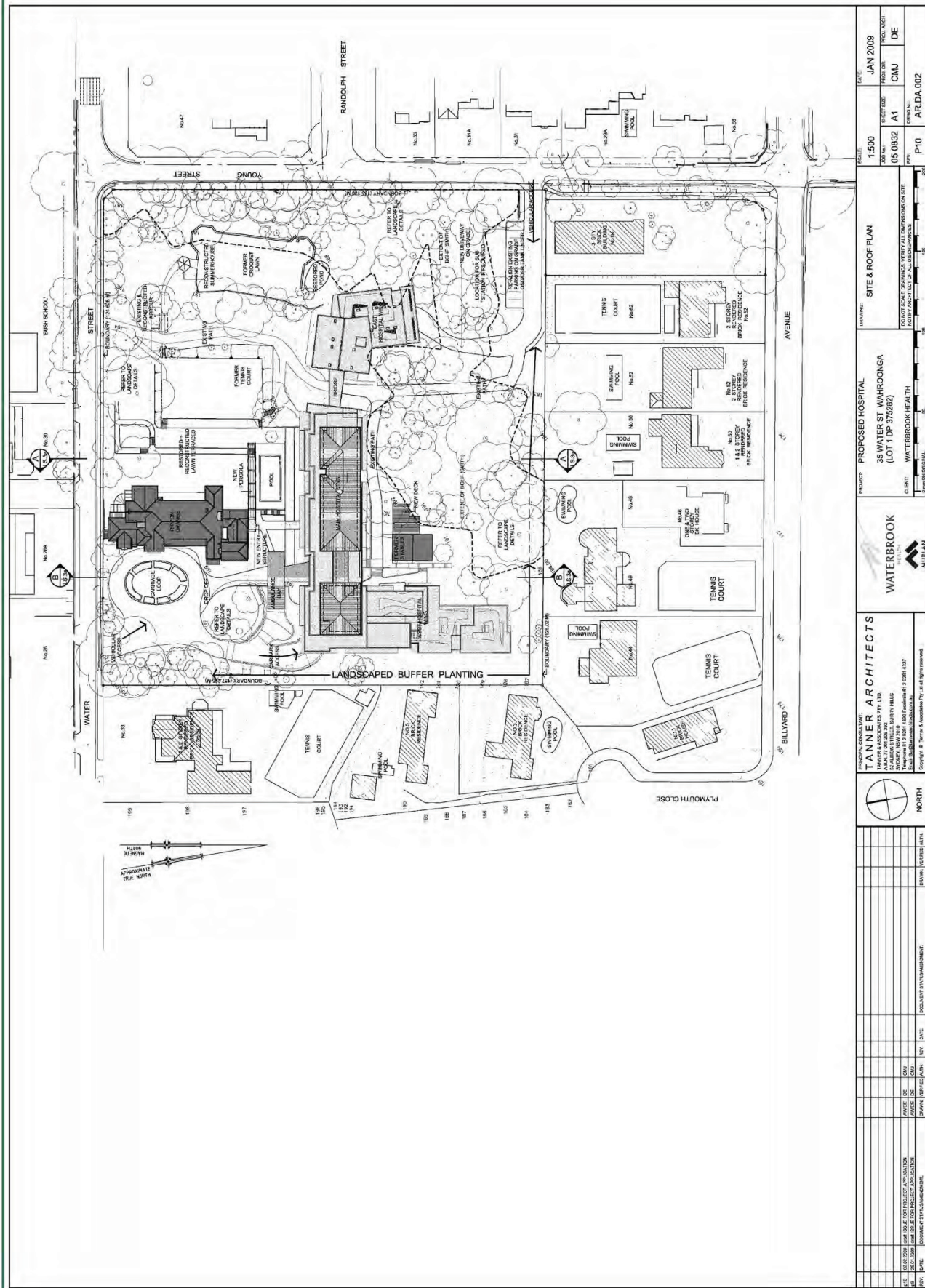
The East Hospital Wing will be located in the south-eastern portion of the Property, adjacent to a stand of BGHF trees located along the boundary of Young Street. At 116 sq metres, the construction of the East Wing and driveway will require the removal of a small area of BGHF Habitat (~1.8%).

Each of these new buildings will be located so as to ensure minimal impact on the Blue Gum High Forest and historic Rippon Grange and its curtilage. As part of the Proposal, Rippon Grange will be renovated to its former grand state, and important heritage landscapes will be restored.

This Proposal has been developed in accordance with:

- *Environmental Planning & Assessment Act 1979*, Part 3A (amended 1 August 2005) and its accompanying Regulations and Guidelines;
- *State Environmental Planning Policy (Major Projects) 2005*; and
- *Sydney Regional Environmental Plan #20 – Hawkesbury Nepean River ('SREP-20')*.

The Subject Property Lot 1 DP 375262 is 21,320 sq metres (~2.13 ha) in size. Of this area, it is proposed to utilise approximately 2,887 sq metres (0.288 hectares) or 13.5% of the total area of Lot 1 for new works within the proposed Hospital development. The proposed Development Footprint is shown in Figure 1.2.





1.5 MANAGEMENT OF ECOLOGICAL & NATURAL HERITAGE VALUES

An area of 6,350 sq metres (0.635 hectares) of BGHF Habitat has been mapped by Smith & Smith (2006) within the Subject Property. This area was calculated by Smith & Smith by drawing a line around the outside edge of the BGHF tree canopy; joining the canopy lines and then incorporating all land inside those canopy lines.

Under the Proposal, 6,234 sq metres or 98.2% of the total area of BGHF Habitat mapped by Smith & Smith (2006) will be retained and rehabilitated. Further, some 2,099 sq metres (0.21 hectares) of BGHF Habitat will be provided as '**compensatory offsets**'; and these areas will be planted with locally indigenous species in order to extend and enhance existing stands of the community (Taylor Brammer November 2009). This will provide a total area of 8,333 sq metres (0.833 hectares) retained or recreated. Based on these figures the net gain in BGHF Habitat will be 1,983 sq metres or 31.2% more BGHF Habitat than currently exists (see Figure 1.3).

The VMP provides for the rehabilitation of existing areas of BGHF Habitat via a long-term bush regeneration program, while a simplified form of BGHF Habitat will be reconstructed via an indigenous planting program in those areas where currently only native canopy trees occur.

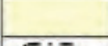
The positive direct impacts of the Proposal as they relate to the ecological and natural heritage values of the Subject Property are:

- Restoration of the heritage gardens within the curtilage of historic Rippon Grange;
- Retention of historic and culturally significant trees and other plantings, including two (2) mature specimens of Magenta Lilly Pilly (*Syzygium paniculatum*) – a threatened species;
- Retention and management of the majority (76%) of existing canopy trees, including retention of 98.2% of existing characteristic BGHF species;
- Supplementary planting of BGHF species adjacent to areas of existing BGHF Habitat is also proposed to rationalise site boundaries and extend existing Habitat. These are described as 'compensatory offsets' and total 2,099 sq metres (0.21 hectares);
- There will be no net loss of BGHF Habitat as the result of the Proposal. The total area of BGHF on the Subject Property will be 8,333 sq metres (0.833 hectares) – a gain of 1,983 sq metres or 31.2%.

A Native Vegetation Balance Sheet has been prepared and is included in the VMP as Figure 1.3 (overleaf). The proposed Development Footprint is shown on Figure 1.2 (Tanner Architects, November 2009).



**35 Water St, Wahroonga
BGHF area impact comparison**

		Proposed Hospital Scheme			
		Sqm	Total Sqm	% of BGHF area retained	% of BGHF area removed
	Extent of Dr Smith 2007 mapped Blue Gum High Forest (BGHF) mapped area				
	Blue Gum High Forest (BGHF) Dr Smith mapped area		6350.0 sqm	100.0%	
	Total area of BGHF affected/ removed comprising of:-				
	A. Building footprint	-42.0 sqm		99.3%	0.7%
	B. On grade driveway	- 74.0 sqm		98.2%	1.8%
		- 116.0 sqm	- 116.0 sqm	98.2%	1.8%
	Sub Total		6234.0 sqm		
	Area of landscape to be revegetated as BGHF		2099.0 sqm		
	Total area of BGHF area following removal and revegetation works		8333.0 sqm	131.0%	-32.8%
	Area of earlyworks planting (completed in 2006)		306.0 sqm		
	Site Boundary				

project:
**PROPOSED PRIVATE HOSPITAL
35 WATER STREET (LOT 1 DP 375262)**

client
WATERBROOK AT WAHROONGA

scale: 1:1000@A4 drawing no: revision:
date: 03.11.2009 **LV01 H**
job no: 05-167S

taylor
brammer
CONSULTANTS

Figure 1.3: Native Vegetation Balance Sheet (Taylor Brammer November 2009)





1.5.1 Impact of the Proposal on Blue Gum High Forest Ecological Community

Within the Subject Property, some 6,350 sq metres (0.64 hectares) is occupied by a simplified form of BGHF Habitat (Smith & Smith 2006). 116 sq metres (0.012 hectares) of this Habitat will be removed to facilitate the construction of the East Wing and driveway, providing a residual area of BGHF Habitat of 6,234 sq metres (0.6234 hectares) (Taylor Brammer 2009). The total area of BGHF Habitat to be removed comprises ~1.8 % of the total area of BGHF Habitat on the Property.

In addition to those areas to be preserved, rehabilitated as BGHF Habitat, seven (7) areas totalling approximately 2,099 sq metres in size and located adjacent to existing stands of BGHF Habitat have been identified as 'compensatory offsets', giving a total area of 8,333 sq metres (~0.833 hectares) of BGHF Habitat on the Property (see Table 1.1 and Native Vegetation Balance Sheet in Figure 1.3).

Table 1.1: Total Area of Building Footprint within the Mapped Area of BGHF Habitat Identified by Smith & Smith (2006)

FOOTPRINT ELEMENT	Area m ²	Cumulative changes (m ²)	Cumulative Changes (%)	Cumulative total
1. BGHF AREA (Smith 2006)	6,350 m ²	-	-	6,350 m ²
A: BUILDING FOOTPRINT*	-42 m ²	-42 m ²	-0.7%	6,308 m ²
D: ON GRADE DRIVEWAY*	-74 m ²	-116 m ²	-1.8%	6,234 m ²
H: ADDITIONAL AREAS OF LANDSCAPE TO BE RE-VEGETATED AS BGHF – (TOTAL)*	2,099 m ²	+1983 m ²	+31.2%	8,333 m ²

* (Taylor Brammer November 2009)

1.5.2 Impact of the Proposal on Blue Gum High Forest Canopy Trees

An *Abricultural Impact Assessment* for the proposed Private Hospital Development has been prepared by Tree Wise Men (March 2009).

Of the 310 trees² in the Subject Property (see Figure 1.4) nine (9) species are naturally occurring. Some are species characteristic and/or diagnostic of the BGHF Ecological Community (e.g. Sydney Blue Gum *Eucalyptus saligna*, Blackbutt *E. pilularis*, Grey Ironbark *E. paniculata* and Rough-barked Apple *Angophora floribunda*); and the remainder are either native trees commonly found in a range of local plant communities (e.g. Sydney Red Gum *Angophora costata*), horticultural introductions, or non-indigenous native plantings (e.g. Silky Oak *Grevillea robusta*, Lemon-scented Gum *Corymbia citriodora*).

While some BGHF trees are considered to be remnant³ others have been planted in the grounds of the former John Williams Respite Care Centre. Large native canopy trees, particularly Sydney Blue Gums, have also been widely used as landscape features in the locality, occurring as street trees, in neighbourhood parks and in private gardens.

² Ku-ring-gai Council's Tree Preservation Order defines a tree as "having a height exceeding five (5) metres, or a canopy spread of 4.0 metres".

³ Remnant being specimens that are not planted, and which occur naturally on the site – i.e. indigenous to the BGHF ecological community



In their *Abricultural Impact Assessment* (March 2009, Revised November 2009) Tree Wise Men identify 126 trees located within the BGHF Habitat areas. Of these, 113 or 89.7% will be retained. Refer to Table 1.2 for details.

Table 1.2: Tree Retention and Removal within BGHF Mapped Areas

	No.	%
Trees retained within BGHF	113	89.7%
Trees removed as weeds* or dead/dangerous**	9	7.1%
Trees removed for driveway, building or other construction***	4	3.2%
Total existing trees within BGHF mapped areas	126	100
Reasons for Removal		
<i>*Weeds: T113, T151, T152, T153, T154, T194. All Jacarandas with @Significance Rating of "4".</i>		
<i>**Dead/dangerous: T105 (Sydney Blue Gum), T323 (Sydney Blue Gum), T371 (Sydney Blue Gum)</i>		
<i>***Trees within Construction: T115 (Willow Bottlebrush), T116 (Bue Gum), T130 (Pittosporum), T203 (Blueberry Ash). All four trees had @Significance Rating of 4.</i>		

*Source: Tree Wise Men (March 2009, Revised November 2009).

1.5.3 Landscape Planting to Reconstruct Blue Gum High Forest Habitat

Supplementary or enrichment plantings proposed by Landscape Architects Taylor Brammer (see Figure 1.4) will primarily utilise characteristic BGHF species, as recommended in this VMP, thereby extending the area of BGHF Habitat within the Property, increasing biodiversity values and enhancing the long-term viability of the critically endangered BGHF Ecological Community.

See Section 5.2.1 and Section 7.3 for a discussion of trees and landscaping issues within the Subject Property. However, for the purposes of this VMP, note that only those issues related to BGHF Habitat within the designated BGHF rehabilitation and reconstruction areas have been addressed.

