



Office of
Environment
& Heritage



Growth Centres Biodiversity Offset Program Annual Report 2011–12

Securing protection of some of the best remaining bushland in western Sydney and the surrounding region for current and future generations

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Main cover photo: The Cumberland Plain Woodland on the Mater Dei biobank site was permanently protected through the program in 2012. Photo: OEH.

Other photos are of common species found on Cumberland Plain Woodland that have been recorded on or near the Mater Dei site. From left to right: box mistletoe *Amyema miquelli*, tawny frogmouth *Podargus strigoides*, forest red gum *Eucalyptus tereticornis*, *Bursaria spinosa*. All photos: OEH.

Published by:
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OEH 2012/0573
ISSN 1837–5650
October 2012
Printed on environmentally sustainable paper

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Foreword

In 2011, the Growth Centres Biodiversity Offset Program (the program) entered a new phase of implementation with the Australian Government approving development in the Growth Centres. For the first time in NSW, state and Commonwealth biodiversity approvals were harmonised into a strategic outcome to avoid the doubling up of processes. The expected environmental impacts of development were assessed under NSW and Commonwealth legislation, however, offsets for the same impact will be secured only once rather than twice.

The new Mater Dei biobank site on the bank of the Nepean River at Cobbitty exemplifies this integrated approach. The biobank site was established with funding from the program in 2012. It protects significant bushland in NSW and an additional 14 hectares of Cumberland Plain Woodland which will contribute to meeting the Australian Government's offset targets.

Adopted now under both state and Commonwealth statutes, the program is proving to be an effective way of conserving bushland as the population grows in western Sydney. The program ensures that where vegetation clearing cannot be avoided to provide for Sydney's future housing needs, there is also an increase in the area protected through national parks and as privately-owned conservation land. Such protection has resulted in 326 hectares of native vegetation being permanently conserved in the program's first four years.

The program is an innovative solution in an area of major land use change and population growth. I invite you to find out more about it through this annual report and by visiting www.environment.nsw.gov.au/biocertification/growthcentres.htm.

Sally Barnes
Chief Executive
Office of Environment and Heritage

1 About the program

The Growth Centres Biodiversity Offset Program (the program) aims to permanently protect some of the best remaining bushland in western Sydney and surrounding regions. Bushland is protected through the program by acquiring land for new reserves from willing landowners and funding the establishment of perpetual conservation agreements on private land.

In the four years that the program has been operating, it has protected 326 hectares of native vegetation. This land contains:

- 249 hectares of threatened ecological communities
- 75 hectares of state-listed critically endangered Cumberland Plain Woodland
- seven threatened plant populations
- habitat for six recorded threatened fauna species.

The outcomes achieved through the program demonstrate how the trend of loss of small fragments of vegetation within the Growth Centres can be turned around and can contribute to a substantial conservation gain.



As part of this program, OEH staff meet with willing landowners in Western Sydney to discuss opportunities for protecting bushland on their property. Photo: OEH

1.1 Background

The program was established in 2008 as part of a package of conservation measures delivered by the NSW Government to offset the impacts on biodiversity that are occurring as Sydney's Growth Centres are developed.

An estimated 180,000 housing lots will be released in the Growth Centres of Western Sydney over the next 30–40 years. *State Environmental Planning Policy (Sydney Region Growth Centres)*, referred to as the Growth Centres SEPP, was gazetted in 2006 to provide a planning framework for this development.

In 2007, the Growth Centres SEPP became the first land use plan in NSW to be granted biodiversity certification. The Minister for the Environment may certify a plan under the *Threatened Species Conservation Act 1995* (TSC Act) if he or she is satisfied that there will be an overall improvement in, or maintenance of, biodiversity values. The certification of the Growth Centres SEPP was re-conferred in 2008 through Part 7 of Schedule 7 of the TSC Act.

The purpose of certification is to assess biodiversity values and resolve conservation issues early in the planning process. Certification provides for a more streamlined and cost effective land release process than the process required for site-by-site assessment.

Certification also enables the NSW Government to be more strategic in meeting its goals for biodiversity conservation. It is a move away from the 'death by a thousand cuts' scenario for biodiversity in which site-focused decisions are made in isolation and late in the development process. By pooling the offset resources, the largest and best remaining bushland on and around the Cumberland Plain can be targeted for conservation.

The Growth Centres SEPP was certified on the basis that:

- 2,000 hectares of high quality vegetation would be protected in the Growth Centres
- a \$530-million conservation fund (in 2005–06 dollar values and subject to indexing) would be established by the NSW Government over a 30–40 year period. This funding is derived partly from a special infrastructure contribution applying to development in the Growth Centres and partly from general government revenue.

Of the \$530 million in conservation funding:

- **\$132.5 million (25%) will be spent in the Growth Centres** to purchase areas of land identified in the Growth Centres SEPP. This land is being acquired by the NSW Department of Planning and Infrastructure.
- **\$397.5 million (75%) will be spent outside the Growth Centres**, targeting the largest and best vegetation remnants for reservation or conservation agreements. These funds provide the revenue for **the program**.

In 2012, the Australian Government approved the program as a strategic assessment program under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The approval harmonises state and Commonwealth environmental approvals for the Growth Centres and enables the Australian Government to oversee the program.

The program assists both the NSW and Australian governments in:

- achieving better outcomes for biodiversity
- streamlining planning decisions.

1.2 Program funding

The biodiversity certification of the Growth Centres SEPP requires funding for the program to be allocated annually at the same rate at which development is expected to occur in the Growth Centres. Funding projections are therefore calculated annually. These will vary from year to year, as they are based on the predicted lot yields in the Growth Centres and an index which accounts for changing land values. There is also a correction applied for any difference in predicted and actual lot yields in previous years. The amount of the projected funding allocation for the next ten years is shown in Table 1.

The total funding for the program when measured in 2011–12 dollar values is \$337,876,000 (see Table 1). This is less than \$397.5 million because the land index determined by the Department of Planning and Infrastructure has fallen in the Growth Centres since 2005–06. The use of the land index is to ensure the same purchasing power of funds for the life of the program. If the land index increases again, the value of the program's funding will increase. In either instance, the total program's funding will remain equivalent to \$397.5 million when measured in 2005–06 dollar values. This funding will be completed in the year that the last lots are expected to be released in the Growth Centres.

Table 1: Projected funding for the next ten years of the program*

Funding received			
Financial year	Funds received (2005–06 \$ values)	Indexed funds received ** (\$ values at receipt)	Cumulative proportion of total funding (%)
2008–09	917,647	780,000	0.23
2009–10	1,409,606	1,198,000	0.59
2010–11	2,269,735	1,930,000	1.16
2011–12	1,852,340	1,575,000	1.62
Subtotal: funds received	6,449,328	5,483,000	1.62
Future funding			
Financial year	Future funding (2005–06 \$ values)	Indexed future funding (2011–12 \$ values)	Cumulative proportion of total funding (%)
2012–13	4,021,886	3,527,000	2.63
2013–14	5,525,944	4,845,000	4.02
2014–15	6,880,164	6,033,000	5.76
2015–16	8,617,928	7,557,000	7.92
2016–17	9,988,507	8,759,000	10.44
2017–18	11,442,703	10,035,000	13.31
2018–19	12,706,035	11,143,000	16.51
2019–20	15,032,749	13,183,000	20.29
2020–21	16,505,122	14,473,000	24.45
2021–22	18,213,802	15,972,000	29.03
2022–23 – End of program	282,115,832	236,866,000	100.00
Subtotal: future funding	391,050,672	332,393,000	98.38
Total program funding	397,500,000	337,876,000	100

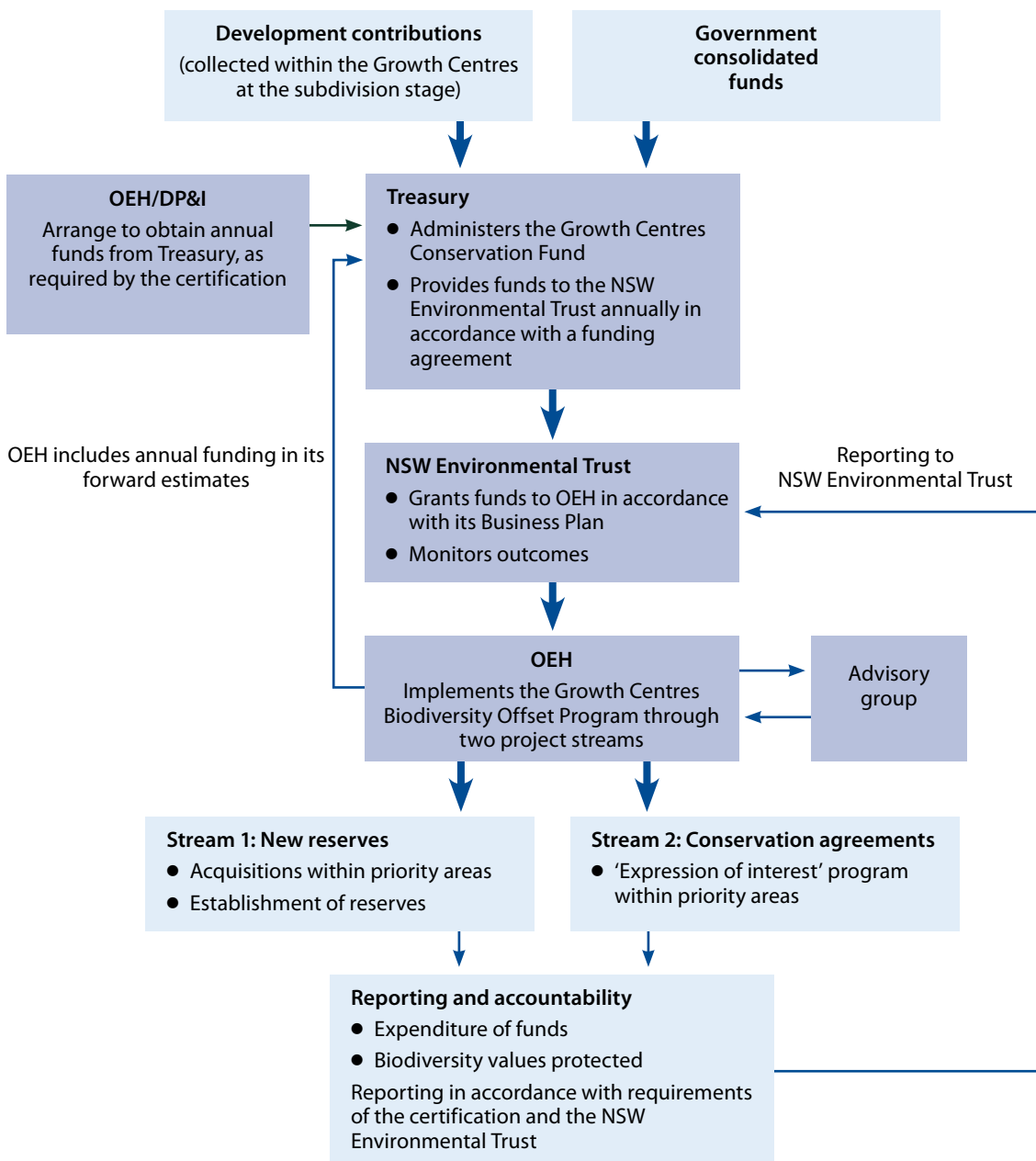
* Updated based on information received from the Department of Planning and Infrastructure in December 2011.

** Funding is calculated in 2005–06 dollar values and then indexed each year for changes in land values. Following statutory amendments in 2011, the 'land index' is now determined by changes in the Sydney Consumer Price Index (CPI) in the previous year. The CPI increased by 3.17% and this indexing has been applied to the December 2011 funding projections.

How the program funds are administered

The NSW Environmental Trust provides an annual grant to the NSW Office of Environment and Heritage (OEH) to implement the program (see Figure 1). The Trust is an independent statutory body established under NSW law to support and supervise the expenditure of grants. Chaired by the Minister for the Environment, members include the Chief Executive of OEH and representatives from the Local Government and Shires Associations, the Nature Conservation Council and NSW Treasury.

Figure 1: Administration of funds and program structure



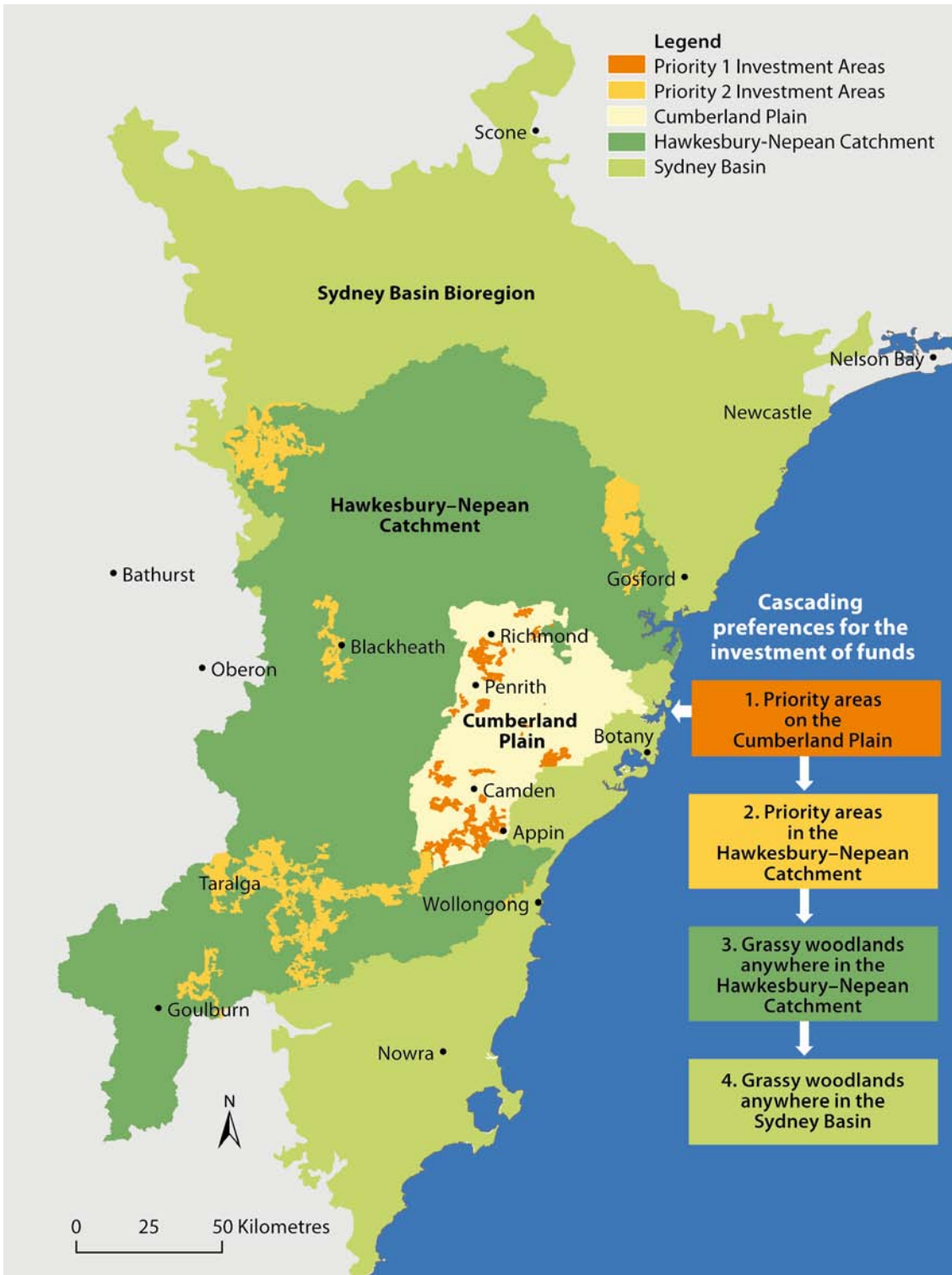
OEH = Office of Environment and Heritage

DP&I = Department of Planning and Infrastructure

1.3 Where the program operates

The focus areas for the program are specified in the Growth Centres SEPP’s biodiversity certification. These areas are shown in Map 1 as a series of preferences. The Growth Centres Strategic Assessment under the Commonwealth EPBC Act confirmed that the conservation fund will secure offsets in the Cumberland Plain as a first priority.

Map 1: Areas of program operation



Priority investment areas

Biodiversity certification requires that, as a first preference, program funds should be invested in the priority areas on the Cumberland Plain that have been identified in the 2006 Hawkesbury–Nepean Catchment Action Plan.

If no suitable, cost effective lands are available in the areas of first preference, priority areas in the broader Hawkesbury–Nepean catchment can be considered. If this option is not available, funding can be spent on conserving grassy woodlands anywhere in the Hawkesbury–Nepean catchment and then the Sydney Basin, respectively.

The NSW Government intends to spend all funds on the Cumberland Plain, except for in exceptional circumstances that have been agreed to by the NSW and Australian governments. To date, all offsets have been located in the first preference investment areas on the Cumberland Plain.

In the priority investment areas, the selection of land suitable for protection is guided by criteria in the certification. Preference will be given to protecting the largest remnants of intact vegetation with the greatest potential for long-term retention of biodiversity values. Factors such as the conservation values present, the size and landscape context of the land and the cost effectiveness of the investment are considered.

1.4 How the program works

Through the program, areas of conservation value are protected by voluntarily acquiring land for reservation or establishing perpetual conservation agreements with willing landowners.

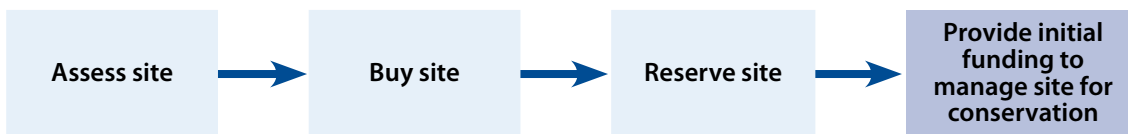


Through the program, large remnants of vegetation like the Cumberland Plain Woodland on the Mater Dei biobank site are protected. Funding for the biobank site will ensure that threats such as invasive weeds can be managed to maintain and restore the bushland. Photo: OEH

Reserve acquisition

Reserve acquisition is the highest priority for the program when a property has suitable conservation values, is of a sufficient size or adjoins an existing reserve and can be managed cost effectively by the National Parks and Wildlife Service (NPWS). If such a property is available for purchase, OEH will assess the priority of the purchase and, if warranted and agreed to by the NPWS, will proceed with the acquisition. Land will only be purchased from willing sellers.

Funding will be provided over the first five years following the acquisition of new reserves to manage threats to biodiversity values. Funding over a longer period may be warranted if establishment actions are not completed in the first five years. Such actions may include management planning, fencing, managing weeds, removing rubbish and track maintenance.



Reserve acquisition and establishment

Buying properties to create new reserves or expanding existing reserves

Conservation agreements

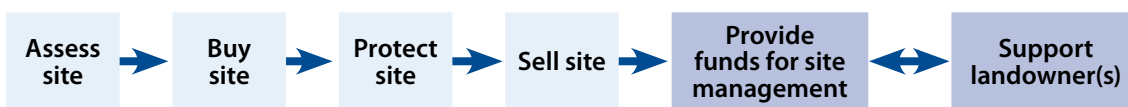
Conservation agreements are a priority for properties that have suitable conservation values but are too small to be managed as public reserves, or for properties where the landowner is not interested in selling. The preferred conservation agreement for use in the program is a biobanking agreement, that is, an agreement made with landowners under the NSW Government's Biodiversity Banking and Offsets Scheme (BioBanking Scheme). Biobanking agreements provide permanent security for the land and funding for ongoing management and monitoring. Other types of perpetual conservation agreements could also be used by the program in exceptional circumstances.

The advantages of biobanking agreements compared with reserve acquisitions is that they can have a lower cost per hectare and all future management costs are secured up front. On the other hand, biobank sites remain in private ownership and public access is usually not available.



Conservation agreements with willing landowners

In some cases OEH will enter into a partnership with other government authorities to establish biobanking agreements on high conservation value properties that are for sale but are not suitable for reservation. In these cases, OEH will fund the appropriate government authority to purchase the land. A biobanking agreement will be established on the property, which will then be sold at a later date to a new owner who will manage the land for conservation.



Conservation agreements through a partnership

Buying, establishing conservation agreements on, and selling high conservation value properties

1.5 Program commitments

The program is committed to implementing outcomes for three statutory instruments:

1. the biodiversity certification of the Growth Centres SEPP
2. the Edmondson Park Conservation Agreement
3. the Growth Centres Strategic Assessment approval .

Biodiversity certification of the Growth Centres SEPP

The program is committed to allocating funds each year to purchase reserves or establish conservation agreements in the locations, and in accordance with the criteria, specified by the certification. These locations and criteria are described in previous sections.

Edmondson Park Conservation Agreement

The Edmondson Park Conservation Agreement was signed by the Australian and NSW governments in 2009, pursuant to the Commonwealth's EPBC Act. The agreement provides Commonwealth approval for development of the Edmondson Park precinct in the South West Growth Centre subject to a number of conditions. These conditions include protecting 72 hectares of the Commonwealth-listed ecological community 'Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest' (known as Commonwealth-listed Cumberland Plain Woodland) by August 2012 as a biodiversity offset. To date, almost 63 hectares of this target have been secured. The remaining nine hectares are expected to be secured by August 2012. If for any unforeseen reason the remaining area cannot be secured, discussions will be held with the Australian Government to extend the delivery timeframe.

Growth Centres Strategic Assessment approval

In 2012, the Commonwealth Government approved NSW's Sydney Growth Centres Strategic Assessment Program (except for actions on Commonwealth land or by the Commonwealth). The approval enables development to proceed in the Growth Centres in accordance with the EPBC Act while protecting biodiversity values through offsets implemented by the program.

As part of the requirements of the approval, the program will protect:

- 2,400 hectares of Commonwealth-listed Cumberland Plain Woodland or other 'grassy woodland' communities, with preference given to Cumberland Plain Woodland, followed by White Box–Yellow Box–Blakely's Red Gum Grassy Woodland and Derived Native Grassland
- 205 hectares of high quality Commonwealth-listed Cumberland Plain Woodland – 15% of this target will be protected every four years until the 205 hectares is achieved
- 132 hectares of Shale Sandstone Transition Forest
- 4.4 hectares of Turpentine Ironbark Forest
- potential habitat for two threatened plant species, *Acacia pubescens* and *Pimelea spicata*
- potential habitat for three threatened fauna species, the swift parrot, the large-eared pied bat and the grey-headed flying fox.

The program will also ensure that all investments occur on the Cumberland Plain unless there are exceptional circumstances which are approved by the Australian Government.

2 What we have achieved to date

In its first four years of operation (2008–09 to 2011–12), the program has:

- assisted in the purchase of the 180-hectare Wianamatta Nature Reserve at Cranebrook, near Penrith
- funded the fencing of Wianamatta Nature Reserve to prevent illegal damage
- established the state's first biobank site at St Mary's Towers, Douglas Park
- jointly funded the purchase of the historic Beulah property near Appin by the Historic Houses Trust and protected its important bushland through a biobanking agreement
- established the Mater Dei biobank site on the bank of the Nepean River at Cobbitty.

Protecting native vegetation

In the four years that the program has been operating, 326 hectares of native vegetation have been protected (Table 2). Of this vegetation, 249 hectares comprise threatened ecological communities listed under state legislation. In accordance with the program's aims, the protected areas are some of the largest areas of high conservation value bushland left in western Sydney.

Protecting threatened animals and plants

Valuable habitat for six threatened animal species and seven species of threatened plants has now been protected using funds from the program. The populations of three threatened shrubs (*Dillwynia tenuifolia*, *Micromrytus minutiflora* and *Pultenaea parviflora*) are among the largest recorded for those species.

Protecting matters of national environmental significance

To date, 139 hectares of nationally listed ecological communities have been protected through the program (Table 2).

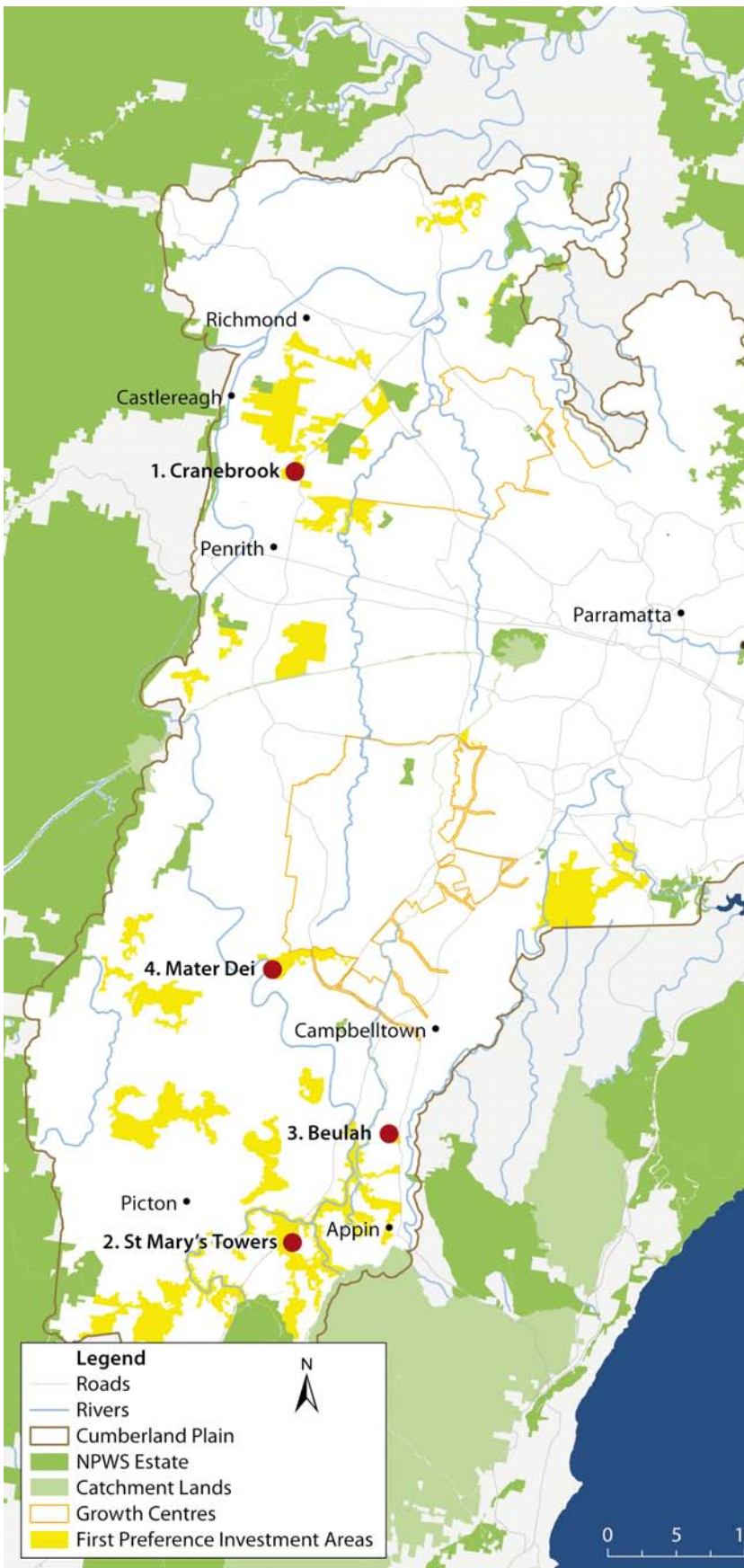
Funds from the program have protected 62.9 hectares of Commonwealth-listed Cumberland Plain Woodland in accordance with the Edmondson Park Conservation Agreement (Table 3). The remaining 9.1 hectares of the 72-hectare target required by the agreement for this community are expected to be protected in the next year.

Since 2011, 29 hectares of Commonwealth-listed Cumberland Plain Woodland have been protected in accordance with the Growth Centres Strategic Assessment approval. This approval requires 30 hectares of Cumberland Plain Woodland to be protected by 2015 as a first milestone. The extent of Cumberland Plain Woodland at the Beulah and Mater Dei biobank sites means that this target has practically been achieved already.

The program has also protected 45 hectares of potential habitat for the swift parrot and 85 hectares for the grey-headed flying fox in accordance with the offset requirements for the strategic assessment approval (Table 3).

More details of the conservation outcomes achieved in 2011–12 are provided in section 2.1.

Map 2: Vegetation and habitat protected by the program to date



1. Cranebrook

181-hectares of land containing several threatened plant communities now reserved as Wianamatta Nature Reserve near Penrith.



2. St Mary's Towers

80 hectares of significant bushland protected through the state's first biobanking agreement at Douglas Park.



3. Beulah

60-hectare biobank site of threatened vegetation protected on a historic property near Appin.



4. Mater Dei

25-hectare biobank site on the bank of the Nepean River at Cobbitty.

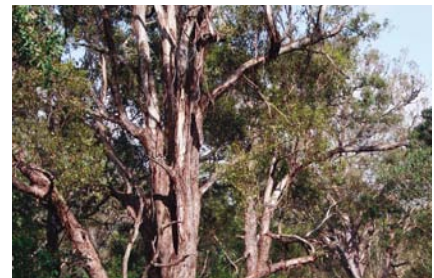


Table 2: Conservation outcomes for the program to date

Location		1. Cranebrook	2. St Mary's Towers	3. Beulah	4. Mater Dei	
Date protected		2009	2010	2011	2012	
Protection mechanism		Reservation	Biobanking agreement	Biobanking agreement	Biobanking agreement	
Size of protected area: (hectares)		181.3	80.1	59.5	25.7	Total (ha): 346.6
Vegetation types	Status TSC Act*	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Cumberland Plain Woodland	CE		35.7	19.4	20.1	75.2
Shale Sandstone Transition Forest	E		32.8	40.1		72.9
Cooks River Castlereagh Ironbark Forest	E	41.2				41.2
Shale Gravel Transition Forest	E	3.5				3.5
Castlereagh Swamp Woodland	E	50.5				50.5
Sydney Coastal River-flat Forest	E				5.6	5.6
Castlereagh Scribbly Gum Woodland	–	66.1				66.1
Sydney Hinterland Transition Woodland	–		3.0			3
Hinterland Sandstone Gully Forest	–		8.6			8.6
Cleared land	–	20				N/A
Total vegetation protected						326.6
Commonwealth-listed communities	Status EPBC Act*	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Commonwealth-listed Cumberland Plain Woodland	CE	3.5	33.8	15.0	14.1	66.4
Shale Sandstone Transition Forest	E		32.8	40.1		72.9
Total Commonwealth-listed communities protected						139.3
Known habitat for threatened species	Status TSC Act*	Known habitat	Known habitat	Known habitat	Known habitat	No. of sites protected
Flora						
Nodding geebung (<i>Persoonia nutans</i>)	E	Y				1
Bynoe's wattle (<i>Acacia bynoeana</i>)	V	Y				1
<i>Allocasuarina glareicola</i>	E	Y				1
<i>Dillwynia tenuifolia</i>	V	Y				1
<i>Grevillea juniperina</i> subsp. <i>juniperina</i>	V	Y				1
<i>Micromyrtus minutiflora</i>	V	Y				1
Sydney bush pea (<i>Pultenaea parviflora</i>)	V	Y				1
Fauna						
Cumberland Plain land snail	E	Y	Y	Y	Y	4
Eastern freetail-bat	V	Y				1
Grey-headed flying-fox	V		Y			1
Koala	V			Y		1
Large-eared pied bat	V		Y			1
Little lorikeet	V		Y			1
Potential habitat for targeted Commonwealth-listed threatened fauna species	Status EPBC Act*	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Swift parrot	E	161.3	35.7	19.4	25.7	242.1
Large-eared pied bat	V	0	80.1	0	0	80.1
Grey-headed flying fox	V	161.3	80.1	59.5	25.7	326.6

Notes: TSC Act = *Threatened Species Conservation Act 1995*; EPBC Act = *Environment Protection and Biodiversity Conservation Act 1999*; CE = critically endangered; E = endangered; V = vulnerable

Table 3: Progress towards the program's conservation targets

Biodiversity feature	Target	Target due date	Progress to date
Biodiversity certification of the Growth Centres			
• <i>Cynanchum elegans</i> ¹	> 0 populations	End of program ²	0
Edmondson Park Conservation Agreement³			
• Commonwealth-listed Cumberland Plain Woodland ⁴	72 ha	August 2012	62.9 ha
Growth Centres Strategic Assessment approval^{5 6}			
• Commonwealth-listed Cumberland Plain Woodland or other 'grassy woodlands'	2,400 ha	End of program	29.1 ha
• 'High maintenance viability' Cumberland Plain Woodland, or other areas of Cumberland Plain Woodland with regeneration capacity protected	205 ha	End of program	29.1 ha
• 'High maintenance viability' Cumberland Plain Woodland, or other areas of Cumberland Plain Woodland with regeneration capacity	30.75 ha ⁷	December 2015	29.1 ha
• Shale Sandstone Transition Forest	132 ha	End of program	40.1 ha
• Turpentine Ironbark Forest	4.4 ha	End of program	0
• <i>Acacia pubescens</i>	> 0 populations	End of program	0
• <i>Pimelea spicata</i>	> 0 populations	End of program	0
• Swift parrot (potential habitat)	> 0 ha habitat	End of program	45.1 ha
• Large-eared pied bat (potential habitat)	> 0 ha habitat	End of program	0 ha
• Grey-headed flying fox (potential habitat)	> 0 ha habitat	End of program	85.2 ha

1. Refer to measure 34 of the Growth Centres Certification.
2. 'End of program' refers to the completion of the program over a 30–40 year period.
3. Only investments from 2010 onwards count towards the Edmondson Park target. The Cranebrook reserve is therefore excluded from this target.
4. Refer to Clause 3.3 of Schedule 4 of the Edmondson Park Conservation Agreement.
5. Only investments from 2011 onwards count towards the strategic assessment target. The Cranebrook reserve and St Mary's Towers biobank site are therefore excluded from this target.
6. Refer to actions 6–39 of the *Sydney Growth Centres Strategic Assessment Program Report*, November 2010 – see www.environment.gov.au/epbc/notices/assessments/western-sydney.html
7. Action 6a of the program report requires 15% (or 30.75 hectares) of the 205-hectare target for high management viability Cumberland Plain Woodland to be achieved within four years of the program's endorsement.



The Mater Dei biobank site contains areas of scientific value. A 20 x 20 metre plot in the vegetation in this photo identified 40 native species, mainly forbs and ground cover. This is representative of the floristic diversity of remnant areas of Cumberland Plain Woodland. The Mater Dei site has the opportunity to become a case study for best practice woodland management. Photo: OEH

2.1 Conservation outcomes for 2011–12

In May 2012, the program funded its third biobanking agreement to protect 25 hectares of bushland on the Mater Dei property at Cobbitty. The property contains some of the best Cumberland Plain Woodland remaining in private ownership. There are limited opportunities to conserve and manage vegetation remnants on the Cumberland Plain of a similar size and condition to those on this property.

Conservation outcomes achieved through the program in 2011–12 include:

- to protect the threatened bushland on the Mater Dei site (see the case study for more information), establishing a biobanking agreement that permanently protects:
 - 20 hectares of critically endangered Cumberland Plain Woodland – of this vegetation, 14 hectares meets the criteria for Commonwealth-listed Cumberland Plain Woodland
 - 5 hectares of the endangered Sydney Coastal River-flat Forest
 - known habitat for the Cumberland Plain land snail (endangered species), speckled warbler (vulnerable species) and powerful owl (vulnerable species)
 - potential habitat for another 10 threatened animal species, including the grey-headed flying-fox, the diamond firetail, the large-footed myotis and the hooded robin
- purchasing and retiring 395 biodiversity credits that were generated from the establishment of the Beulah biobank site.



The Cumberland Plain Woodland on the Mater Dei site provides habitat for several threatened species. Top, from left to right: grey-headed flying fox *Pteropus poliocephalus* (photo: M. Schulz), powerful owl *Ninox strenua* (photo: N. Williams), diamond firetail *Stagonopleura guttata* (photo: OEH), Cumberland Plain land snail *Meridolum corneovirens* (photo: OEH). Bottom: Cumberland Plain Woodland at Mater Dei (photo: OEH).

Case study: Restoring the woodlands of Mater Dei

The Mater Dei property at Cobbitty has been owned by the Sisters of the Good Samaritan since 1910 and is recognised for its heritage and environmental values. The property's historic Wivenhoe house is located within a landscape of Cumberland Plain Woodland.

In 2011, the Sisters and OEH agreed to collaborate to establish a biobank site on a portion of the property. The site was created in May 2012 and now permanently protects 25 hectares of Cumberland Plain vegetation with funding provided for its management.

In its current state, the woodland is being invaded by weeds and is threatened by further degradation unless it is properly managed. While some areas are still in good condition, infestations of African olive threaten to degrade the overall environmental values of the land and detract from the use and enjoyment of the property.

Over the next few years, the impenetrable African olive thickets on the site will be progressively treated.

Many of the Sisters can recall walking down from the house through the open woodland pastures in the 1960s to swim in the Nepean River. The biobanking agreement will ensure that future generations will again be able to enjoy walking through a unique Australian landscape from the historic house to the banks of the river.



The Mater Dei biobanking site.

Funding the Mater Dei biobank site

The BioBanking Scheme addresses the decline of biodiversity by giving land with high conservation values an economic value by creating biodiversity credits for the land. These credits can then be sold on the open market.

The establishment of the Mater Dei biobank site created 232 biodiversity credits. All the credits will be purchased with funds from the program for \$2,089,592 (excluding GST). The purchased credits will also be 'retired' so that they cannot be used for any other offsets.

Of the amount paid for the credits, \$1,589,592 will be invested in the Biobank Trust Fund to cover the cost of managing the biobank site in perpetuity. The Sisters of the Good Samaritan will retain \$500,000 as an 'opportunity cost' for not developing the land.

Financial summary	
In perpetuity management costs (deposited in the Biobank Trust Fund)	\$1,589,592
Payment to landowner for 'opportunity costs'	\$500,000
Cost to program *	\$2,089,592
GST	\$208,959
Total cost (including GST)	\$2,298,551

*NB: The purchase of 232 biodiversity credits is occurring in two instalments – 228 credits were purchased in 2011–12 for \$2,053,565 (excluding GST) and the remaining 4 credits will be purchased in 2012–13 for \$36,027 (excluding GST).

Management of the biobank site

The BioBanking Scheme gives landowners who may otherwise have considered subdividing or clearing their land a conservation alternative, offering them ongoing management funds to conserve their bushland in perpetuity.

Under the agreement, the Sisters of the Good Samaritan and any future landowner can continue to use the bushland for passive recreation but will be unable to develop or use the site for livestock grazing.

The landowner is responsible for managing the biodiversity on the site by removing rubbish, installing new fences, controlling weeds and feral animals, and revegetating previously grazed land.

The landowner receives funding each year for commercial contractors to undertake this work.

At Mater Dei, this funding is between \$70,000 and \$130,000 per year in the first five years for primary treatment, decreasing over time to an in-perpetuity payment of between \$40,000 and \$60,000 per year.



Mater Dei contains large grey box trees which are now rarely seen in western Sydney. The trees occur amongst a shrub layer of the invasive African olive. Without management, these trees will eventually die through changed soil conditions and the weed will prevent emerging seedlings. Ongoing funding through the Biobanking Trust Fund will pay to remove the African olive and regenerate the native vegetation.

Conserving threatened bushland

The biobank site increases the protected area of two threatened ecological communities: Cumberland Plain Woodland and Sydney Coastal River-flat Forest.

Less than 1% of the pre-1750 area of each of these communities currently occurs in formal conservation reserves.

Featuring large trees with nesting hollows and located on the bank of the Nepean River, the biobank site is likely to provide habitat for a range of bird and bat species that will benefit from the removal of African olive.

Vegetation summary		
Vegetation community	TSC Act status	Area (hectares)
Cumberland Plain Woodland (MG condition)	CE	19.6
Cumberland Plain Woodland (L condition)	CE	0.5
Sydney Coastal River-flat Forest (MG condition)	E	5.6
Total		25.7

Notes: Condition: MG = moderate–good; L = low
TSC Act = *Threatened Species Conservation Act 1995*; CE=Critically endangered; E = Endangered.

3 Clearing in the Growth Centres

Clearing of vegetation in the 'protected lands'

The biodiversity certification of the Growth Centres SEPP requires a minimum of 2,000 hectares of 'existing native vegetation' identified in Maps 3 and 4 to be retained and protected in the Growth Centres.

The certification anticipated that this vegetation would be retained in areas identified as the 'protected lands' (Growth Centres Commission 2007, *Growth Centres Conservation Plan – Exhibition Draft*). Development controls apply to these areas to control vegetation clearing (see Part 6 of the Growth Centres SEPP). Where clearing is permitted with consent, additional vegetation will be protected or revegetation undertaken to achieve the 2,000-hectare target.

When it was certified in 2007, 1,980.7 hectares of 'existing native vegetation' were protected by the Growth Centres SEPP (see Table 4).

In 2012, 1,973 hectares remain protected. As indicated in Table 4, 7.7 hectares of protected vegetation have been cleared since the time of certification. Of this amount, 2.6 hectares were cleared in the last year.

There is currently a gap of 27 hectares between the amount of vegetation protected in the Growth Centres and the 2,000-hectare target set by the biodiversity certification. Most of this shortfall (i.e. 19.3 hectares) occurred as a result of clearing before the certification was granted in 2007.

As anticipated, this shortfall is being addressed by protecting additional vegetation in the developable lands during planning for Growth Centre precincts. Additional vegetation has already been protected through the planning completed for the North Kellyville, Riverstone West, Alex Avenue, Riverstone and Marsden Park Industrial precincts. For example, about 13 hectares of additional vegetation have been protected through precinct planning in the past year. The full extent of the vegetation protected in the precincts will be taken into account in a planned review of vegetation mapping.

Clearing of vegetation in the 'developable lands'

Vegetation amounting to 1,765.1 hectares existed at the time of certification in the areas that are being developed in the Growth Centres (the 'developable lands'). This vegetation was identified at the time of certification as being less viable for long-term conservation as it occurs in patches of less than 4 hectares in size or is exposed to a high threat of future degradation. The certification envisaged the loss of all of this vegetation during the development of the Growth Centres. Actual clearing however may be less, with some native vegetation being retained through detailed local planning. All losses will be offset by the acquisition and establishment of new reserves in the Growth Centres and through the land protected by this program.

As indicated in Table 4, the cumulative total of 'existing native vegetation' that has been cleared in the 'developable lands' since the time of certification is 64.5 hectares. Of this amount, 17.2 hectares have been cleared in the last year.

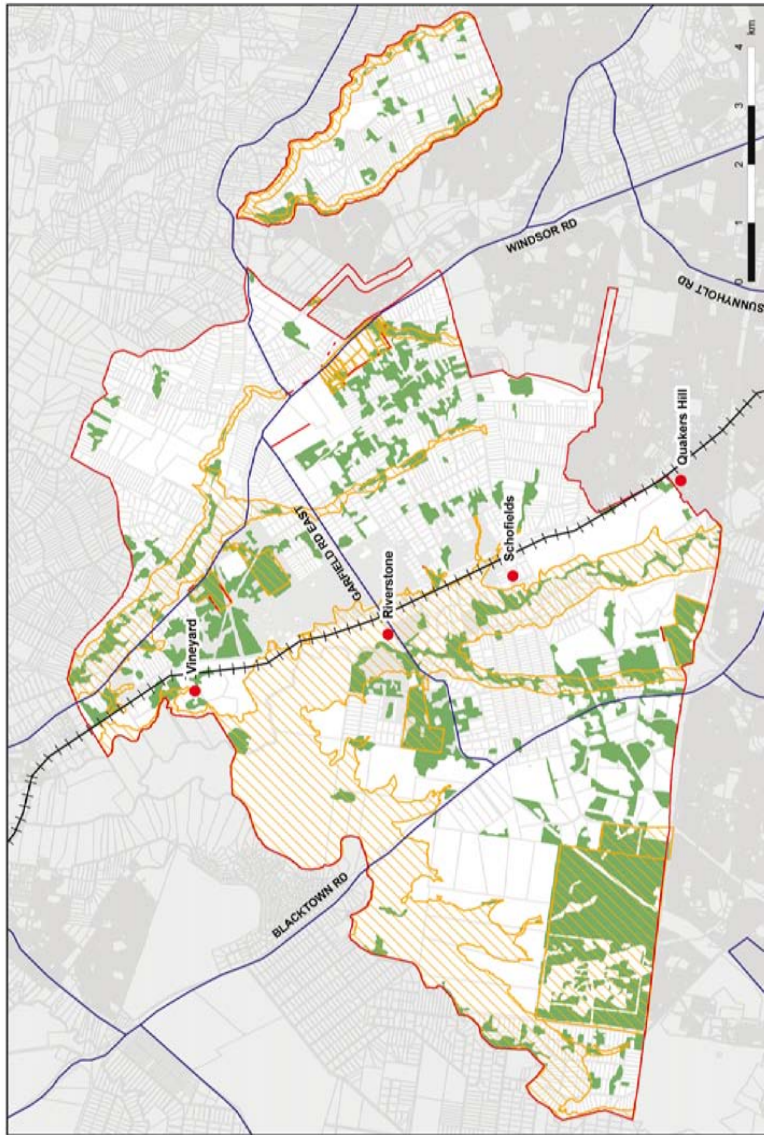
Table 4: Vegetation clearing in the Growth Centres

Land class	Vegetation community	2007	2012	2012	2012
		Vegetation present (hectares) ¹	Vegetation present (hectares) ²	Vegetation cleared in last year (hectares) ³	Loss of vegetation since 2007 (hectares) ⁴
Protected	Castlereagh Swamp Woodland	35.6	35.6	0.0	0.0
Protected	Cooks River Castlereagh Ironbark Forest	140.4	140.4	0.0	0.0
Protected	Cumberland Plain Woodland	664.4	660.8	-1.5	-3.6
Protected	Moist Shale Woodland	0.6	0.6	0.0	0.0
Protected	Shale Sandstone Transition Forest	37.7	37.1	-0.5	-0.6
Protected	Shale Gravel Transition Forest	390.7	390.7	0.0	0.0
Protected	River-flat Eucalypt Forest	711.3	707.8	-0.6	-3.5
Protected	Total	1,980.7	1,973.0	-2.6	-7.7
Developable	Castlereagh Swamp Woodland	0.0	0.0	0.0	0.0
Developable	Cooks River Castlereagh Ironbark Forest	26.0	23.8	0.0	-2.1
Developable	Cumberland Plain Woodland	1,252.2	1,211.1	-13.4	-41.1
Developable	Moist Shale Woodland	0.0	0.0	0.0	0.0
Developable	Shale Sandstone Transition Forest	66.2	64.9	-1.2	-1.3
Developable	Shale Gravel Transition Forest	221.5	218.6	-1.6	-2.9
Developable	River-flat Eucalypt Forest	199.2	182.1	-1.0	-17.1
Developable	Total	1,765.1	1,700.6	-17.2	-64.5
Total	Vegetation	3,745.8	3,673.6	-19.9	-72.3

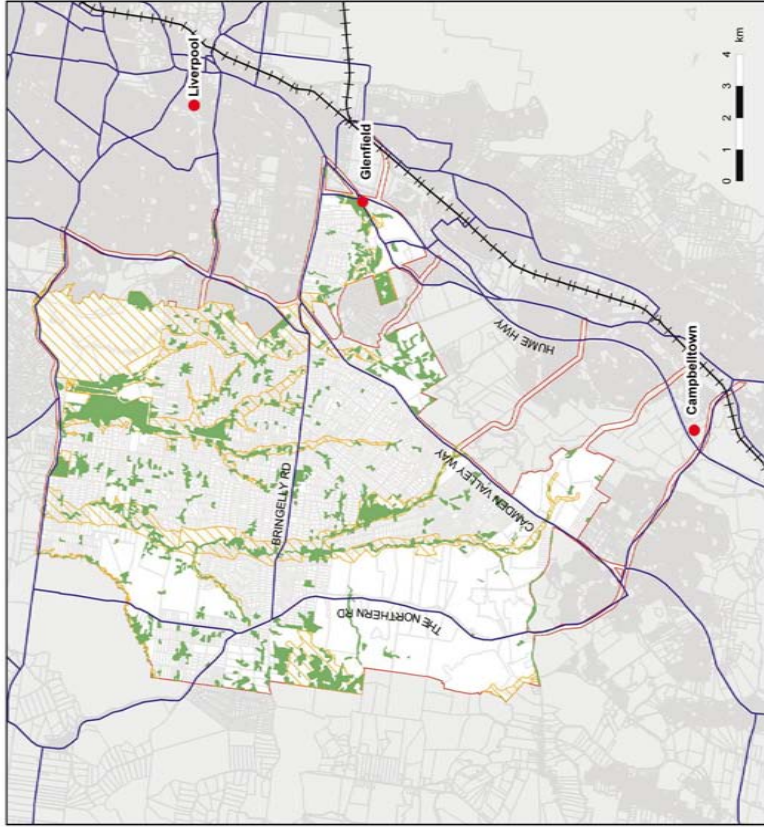
Notes

1. This column identifies the amount of 'existing native vegetation' present in 2007, approximating the time of certification.
2. This column identifies the amount of 'existing native vegetation' identified in March 2012 using remote sensing analysis.
3. This column identifies the amount of 'existing native vegetation' cleared between March 2011 and March 2012.
4. This column identifies the cumulative amount of 'existing native vegetation' cleared between 2007, approximating the time of certification, and March 2012.

Map 3: North West Growth Centre



Map 4: South West Growth Centre



4 Financial report

Opening balance

The program commenced operation in 2011–12 with a deficit of \$971 owing to a minor over-spend in the previous year (see Table 5).

Income

The allocation of new funding for the program for 2011–12 was \$1,575,000. This allocation is consistent with the rate of predicted lot production in the Growth Centres, as required by the biodiversity certification of the Growth Centres SEPP. In 2011–2012, 1,665 lots were predicted to be released, which is equivalent to 0.4714% of the total remaining lots in the Growth Centres. The same percentage of the total remaining funding for the program was allocated for this year with an adjustment for the change in land values since the time of certification (see Appendix 1).

In addition to the annual allocation of funding from the Treasury, the Environmental Trust provided \$2,670,000 as an advanced payment to the program to purchase credits from the Beulah biobank site and establish the Mater Dei site. This advance will be repaid to the Trust over three years from 2012–13 to 2014–15.

Total income for the program in 2011–12 was \$4,245,000.

Expenditure

Most of the funding available in 2011–12 was spent on three of the program's investments to date; the Wianamatta Nature Reserve at Cranebrook, the Beulah biobank site and the Mater Dei biobank site.

The administrative expenses of the program comprise the salaries, on-costs and expenses of the program team (2.6 staff), such as contracts to assist in the costing of management actions, materials for the biobanking assessment and travel.

Closing balance

The program ended the year with a balance of \$14.

Table 5: Financial statement

	Funds (\$)
Balance at 1 July 2011	
Opening balance	-971
Income	
Grant from Environmental Trust	1,575,000
Additional grant from Environmental Trust	2,670,000
Total income	4,245,000
Expenses	
Cranebrook repayment to OEH for property purchase	1,000,000
Re-payment to Environmental Trust for Beulah purchase	80,000
Beulah biobank site: purchase of 395 credits	772,669
Mater Dei biobank site: purchase of 228 credits	2,053,564
Administration: salaries for 2.6 staff with 26% on-costs	319,209
Administration: miscellaneous expenses	18,573
Total expenses	4,244,015
Balance	
Closing balance	14

Appendix 1

Calculation of the program's funding allocation for 2011–12

Annual allocations to the program are calculated based on:

- the proportion of total remaining lot production in the Growth Centres that is expected to occur in a given financial year. The certification ensures that the same proportion of the remaining, unallocated amount of the planned \$397.5 million funding is also allocated for that year (refer to measure 22b of the Growth Centres biodiversity certification).
- a land index which converts 2005–2006 dollar values into current dollar values. The land index for 2011–12 was calculated using methods described in the Growth Centres Special Infrastructure Contribution Practice Note (GCC 2008). The purpose of the index is to ensure that the conservation funding retains an equivalent ability to purchase land over the years of the program's operation.
- a correction for any difference between the predicted and actual lot yields for the previously completed year.

Table 6 below provides the calculations for the program's funding allocation for 2011–12.

Table 6: Calculation of program funding for 2011–12

Total remaining lot production at start of 2011–12 (Note that this contains both residential and non-residential lot equivalents)	224,202 lots
Predicted lot production for 2011–12 (Note that this contains both residential and non-residential lot equivalents)	1,665 lots
Adjustment for difference between actual and predicted lot production from the previous completed year (2009–10)	–608 lots
Predicted lot production for 2011–12 (adjusted for past actuals)	1,057 lots
Percentage of total remaining lots predicted to be produced in 2011–12 (adjusted for past actuals) (i.e. 1,057 as a percentage of 224,202 lots)	0.4714 %
Total remaining unspent funds at start of 2011–12 (2005–06 \$ values)	\$392,902,974
Allocation for this year in 2005–06 \$ values (i.e. 0.4714% of \$392,902,974)	\$1,852,340
Land index value (converts 2005–06 \$ values to current \$ values)	–15.00%
Required allocation for 2011–12 in current \$ values (i.e. 85% of \$1,852,340)	\$1,574,489
Total allocation in current dollar values (rounded)	\$1,575,000

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