NSW GOVERNMENT | Office of Environment & Heritage

Growth Centres Biodiversity Offset Program

Annual Report 2012–13

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

Main cover photo: The Cumberland Plain Woodland on the Mt Hercules biobank site at Razorback was permanently protected through the program in 2013.

Photo far left: OEH staff undertaking a biobanking assessment. Other photos from left to right: Common species found within the Cumberland Plain Woodland that have been recorded on or near the Mt Hercules biobank site include the forest red gum *Eucalyptus tereticornis*, native raspberry *Rubus parviofolius* and owlet nightjar *Aegotheles cristatus* – photo: R. Eckermann.

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Foreword

The NSW Government's interest in working with landholders to revegetate and improve land is formalised in its strategic ten-year plan, *NSW 2021*. A priority action under Goal 22 of *NSW 2021* is for the Government to protect strategic areas of high conservation value and ensure there are more green spaces across Sydney and NSW through the $40 million Green Corridors program.

The **Growth Centres Biodiversity Offset Program** (the program) is a part of the Green Corridors program, and I am pleased to report significant progress being made in delivering on the Government's priorities. The new biobank site established at Mulgoa in 2013 is protecting 38 hectares of critically endangered Cumberland Plain Woodland (CPW). It is one of the largest remaining stands of privately owned CPW in existence. The fact that it adjoins Mulgoa Nature Reserve increases the significance of this conservation effort. This site is now protected forever as a biobank site through the willingness of the landowner, and funding provided through the program and from the Australian Government. The partnerships established to conserve the Mulgoa biobank site and the 22-hectare Mt Hercules biobank site which has also been protected this year are prime examples of the type of private and public sector partnerships that can be achieved through the program.

These conservation outcomes have been achieved through the use of offset funding, which is an effective way of conserving bushland as the population grows in western Sydney. Through the program, Sydney's future housing needs can be met without compromising the balance of the social, economic and environmental values of western Sydney. High conservation areas are protected though a combination of private land covenants and additions to formal conservation reserves under the *National Parks and Wildlife Act 1974*. In the program's first five years, 399 hectares of native vegetation have been permanently conserved in western Sydney.

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.

Terry Bailey
Acting 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 five years that the program has been operating, it has protected 399 hectares of native vegetation (note that all values in the report have been rounded and are presented in tables 3 and 4 to one decimal place). This land contains:

- 133 hectares of state-listed critically endangered Cumberland Plain Woodland (CPW)
- 188 hectares of threatened ecological communities other than CPW
- habitat for eight recorded threatened fauna species
- seven threatened plant populations.

The program demonstrates how pooling offset funds can secure significant bushland areas on large holdings, providing better conservation outcomes than protecting numerous small and often isolated parcels in new urban areas.

As part of the program, OEH staff work with participating landholders to discuss opportunities for protecting bushland on their properties, with the help of bush regeneration contractors. Photos: 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 delivered in the Growth Centres of Western Sydney over the next 30–40 years. *State Environmental Planning Policy, Sydney Region Growth Centres* (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. Under the *Threatened Species Conservation Act 1995* (TSC Act), the Minister for the Environment may certify a plan if they are 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 supports a more streamlined and cost effective land release process than site-by-site assessment.

Certification also enables the NSW Government to be 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 offset resources, the largest and best remaining bushland on and around the Cumberland Plain can be conserved.

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 the Government's Consolidated Fund.

Of the $530 million in conservation funding:

- **$132.5 million (25%) is being 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%) is being 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.* 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. Table 1 shows the actual funding allocation from 2008–09 to 2012–13, and the funding allocation for the next 10 years based on the 2012–13 forecast.

The total funding for the program when measured in current dollar values is just over $354 million (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 land index is used 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
2012–13	4,021,886	3,527,000	2.63
Subtotal: funds received	**10,471,214**	**9,010,000**	**2.63**
Future funding			
Financial year	**Future funding (2005–06 $ values)**	**Indexed future funding (2012–13 $ values)**	**Cumulative proportion of total funding (%)**
2013–14	6,416,203	5,719,000	4.25
2014–15	6,524,240	5,816,000	5.89
2015–16	6,699,399	5,972,000	7.58
2016–17	7,768,414	6,924,000	9.53
2017–18	8,189,158	7,300,000	11.59
2018–19	8,902,436	7,936,000	13.83
2019–20	10,220,647	9,111,000	16.40
2020–21	11,863,895	10,575,000	19.39
2021–22	16,197,738	14,439,000	23.46
2022–23	17,295,645	15,417,000	27.81
2023–24 – End of program	286,951,011	255,787,000	100.00
Subtotal: future funding	**387,028,786**	**344,996,000**	**97.37**
Total program funding	**397,500,000**	**354,006,000**	**100**

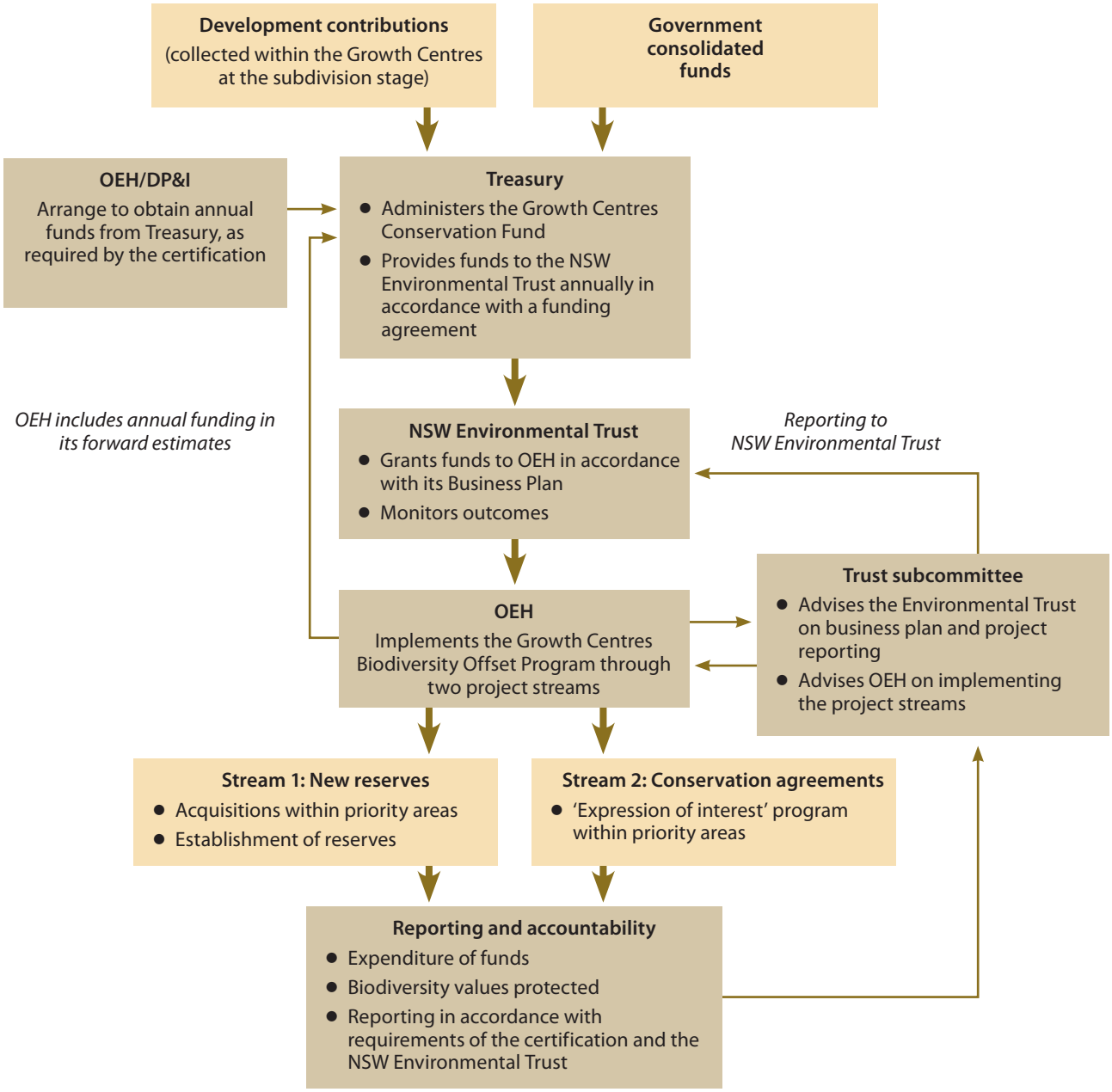
* Updated based on information received from the Department of Planning and Infrastructure in January 2013.

** 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 1.649% and this indexing has been applied to the January 2013 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 legislation to support and supervise the expenditure of grants. Chaired by the Minister for the Environment, members include the OEH's Chief Executive and representatives from Local Government NSW, the NSW Nature Conservation Council, the Department of Planning and Infrastructure and NSW Treasury. In November 2012, governance arrangements were changed with an Environmental Trust subcommittee established to oversee the program in place of the former Advisory Group.

Figure 1: Administration of funds and program structure



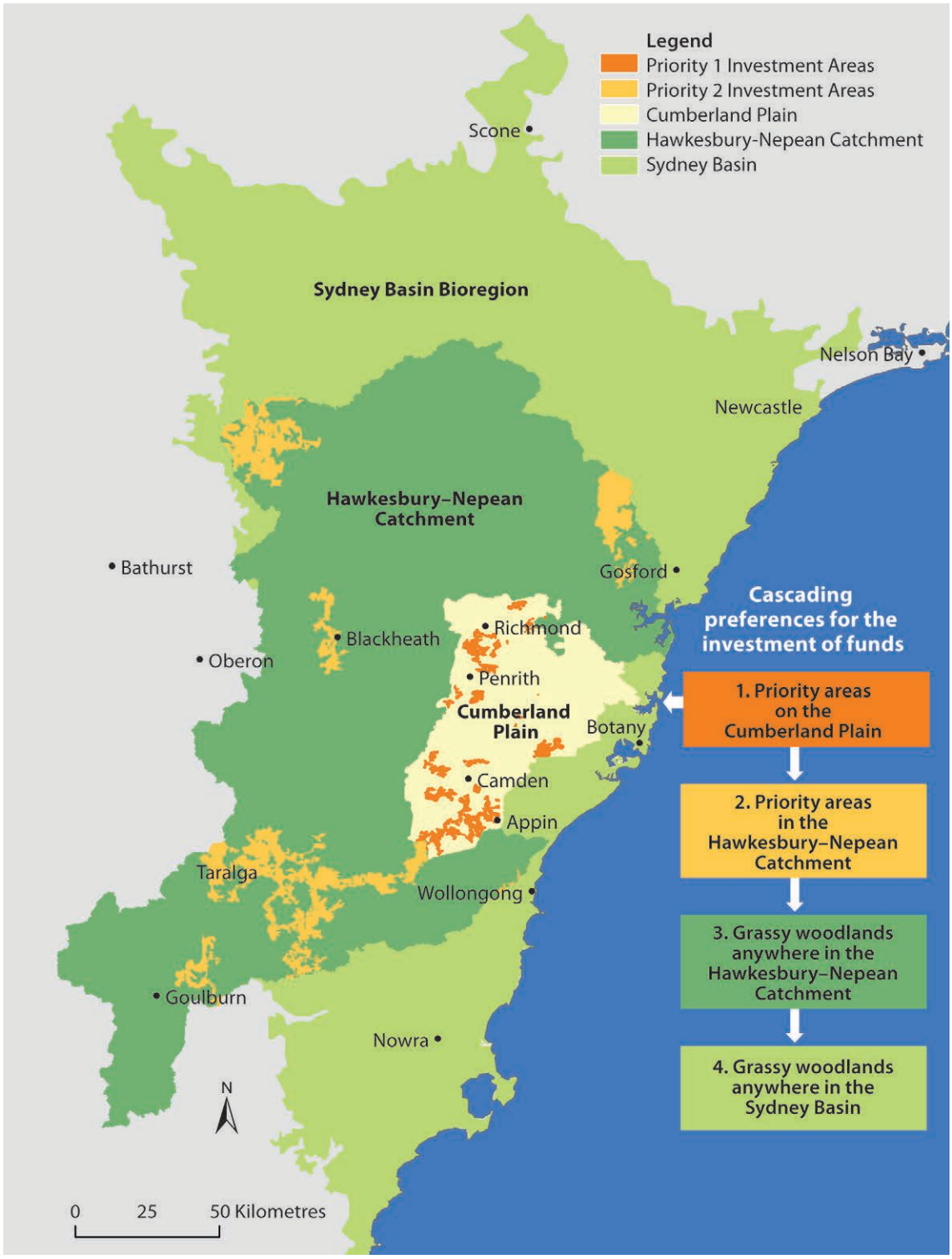
OEH = Office of Environment and Heritage

DP&I = Department of Planning and Infrastructure

1.3 Where the program operates

The program's focus areas are specified in the biodiversity certification of the Growth Centres SEPP. These areas are shown in map 1 as a series of preferences. The Growth Centres Strategic Assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) 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, the program's 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 next considered. If this option is not available, funding can be spent on conserving grassy woodlands 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 is given to protecting the largest remnants of intact vegetation with the greatest potential for long-term retention of biodiversity values. Factors such as conservation values, the size of the land, its landscape context and the cost effectiveness of the investment are considered.

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

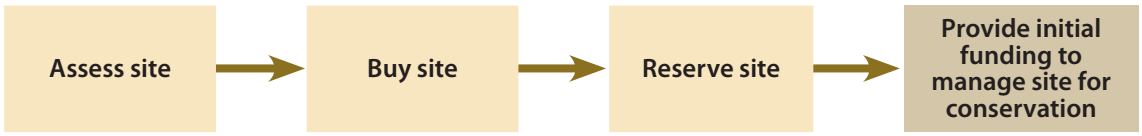
1.4 How the program works

Areas of conservation value are protected by voluntarily acquiring land for reservation or establishing perpetual conservation agreements with willing landowners.

Reserve acquisition

Reserve acquisition is the highest priority for the program when a property with 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 acquire it. Land will only be purchased from willing sellers.

Funding for management will be provided over the first five years following the acquisition of new reserves to treat 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 can be on-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 four agreements:

1. Biodiversity certification of the Growth Centres SEPP
2. Edmondson Park Conservation Agreement
3. Growth Centres Strategic Assessment approval
4. Mulgoa biobank site funding agreement with the Australian Government.

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 *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The agreement provided Commonwealth approval for development of the Edmondson Park precinct in the South West Growth Centre subject to a number of conditions. These conditions included 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.

Growth Centres Strategic Assessment approval

In 2012, the Australian 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 following will be protected through the program:

- at least 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
- at least 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
- at least 132 hectares of Shale Sandstone Transition Forest
- at least 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 Commonwealth.

Two threatened species occurring on the Cumberland Plain are the swift parrot *Lathamus discolor* (left – photo: K. Stepnell) and grey-headed flying-fox *Pteropus poliocephalus* (right – photo: M. Schulz).

Mulgoa biobank site funding agreement with the Australian Government

In May 2013, OEH entered into a funding agreement with the Australian Government, which provided OEH with a grant of $4,110,230 (excluding GST) to purchase biodiversity credits from the Mulgoa biobank site. Of the 50 hectares of high conservation bushland protected on the site, 38 hectares is Cumberland Plain Woodland of which 30 meets the Commonwealth definition. This is a significant contribution to meeting the 205-hectare target for conserving Cumberland Plain Woodland set by the Growth Centres Strategic Assessment approval.

Given the co-contribution of Commonwealth funds to NSW meeting its offset requirements, OEH is committed to protecting additional Commonwealth-listed vegetation to the vegetation required by the Strategic Assessment approval. The amount of additional vegetation protected over the next ten years will be equivalent to $1,942,043 (in 2012–13 dollar values), which is the amount provided by the Australian Government to protect the 30 hectares of Commonwealth-listed Cumberland Plain Woodland on the Mulgoa site.

Robyn Parker, NSW Minister for the Environment (centre right) launching the Mulgoa biobank site in August 2013 with the former Federal Member for Lindsay, David Bradbury (left), one of the landowners (centre left) and the State Member for Mulgoa, Tanya Davies (right). Photo: OEH.

2 What we have achieved

2.1 Five years of land conservation

In the five years that the program has been operating (2008–09 to 2012–13), significant conservation outcomes have been achieved, including:

- assisting in the purchase of the 181-hectare Wianamatta Nature Reserve at Cranebrook, near Penrith (note that all values in the report have been rounded and are presented in tables 2, 3 and 4 to one decimal point)
- funding the fencing of Wianamatta Nature Reserve to prevent illegal damage
- establishing the state's first biobank site at St Mary's Towers, Douglas Park
- jointly funding the purchase of the historic Beulah property near Appin by the Historic Houses Trust and protecting its important bushland through a biobanking agreement
- establishing the Mater Dei biobank site on the bank of the Nepean River at Cobbitty
- establishing the Mt Hercules biobank site on the Razorback range
- jointly funding the protection of the Mulgoa biobank site which directly adjoins Mulgoa Nature Reserve.

Protecting native vegetation

To date, 399 hectares of native vegetation have been protected (Table 3). Of this vegetation, 321 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 eight threatened animal species and seven species of threatened plants has now been protected using the program's funds. The populations of three threatened shrubs (*Dillwynia tenuifolia*, *Micromrytus minutiflora* and *Pultenaea parviflora*) are among the largest recorded for those species (Table 4).

Protecting matters of national environmental significance

To date, 183 hectares of nationally listed ecological communities have been protected through the program (Table 3), including 110 hectares of Commonwealth-listed Cumberland Plain Woodland.

The target of protecting 72 hectares of Commonwealth-listed Cumberland Plain Woodland under the **Edmondson Park Conservation Agreement** was met in September 2012 (Table 2) by protecting 76 hectares of Commonwealth-listed Cumberland Plain Woodland on four biobank sites: St Mary's Towers, Beulah, Mater Dei and Mt Hercules.

Since 2011, 72 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 first milestone was met in 2012 when the Mt Hercules biobank site was established (Table 2).

Through the program, 96 hectares of potential habitat for the swift parrot and 157 hectares for the grey-headed flying fox have been protected in accordance with the offset requirements for the Strategic Assessment approval (Table 2).

More details of the conservation outcomes achieved in 2012–13 are provided in section 2.2.

Table 2: Progress towards the program's conservation targets

Biodiversity feature	Target	Target due date	Progress to date
Biodiversity certification of the Growth Centres			
• *Cynanchum elegans*[1]	> 0 populations[2]	End of program[3]	0
Edmondson Park Conservation Agreement[4]			
• Commonwealth-listed Cumberland Plain Woodland[5]	72 ha	August 2012	COMPLETED
Growth Centres Strategic Assessment approval[6]			
• Commonwealth-listed Cumberland Plain Woodland or other 'grassy woodlands'	2,400 ha	End of program	72.4 ha
• 'High management viability' Cumberland Plain Woodland, or other areas of Cumberland Plain Woodland with regeneration capacity [7]	205 ha	End of program	72.4 ha
• Shale Sandstone Transition Forest	132 ha	End of program	40.1 ha
• Turpentine Ironbark Forest	4.4 ha	End of program	0
• *Acacia pubescens*	> 0 populations[2]	End of program	0
• *Pimelea spicata*	> 0 populations[2]	End of program	0
• Swift parrot (potential habitat)	> 0 ha habitat[2]	End of program	115.3 ha
• Large-eared pied bat (potential habitat)	> 0 ha habitat[2]	End of program	0 ha
• Grey-headed flying-fox (potential habitat)	> 0 ha habitat[2]	End of program	157.2 ha
Mulgoa biobank site funding agreement			
• Threatened ecological communities listed under the EPBC Act	$1,942,043[8]	May 2023	$0

1. Refer to Relevant Biodiversity Measure 34 of the Growth Centres Biodiversity Certification.
2. The terms '>0 populations' or '>0 ha habitat' indicate that no specific targets have been set and the program will endeavour to protect at least one population or as many hectares as possible.
3. 'End of program' refers to the completion of the program over a 30–40 year period.
4. Only investments from 2010 onwards count towards the Edmondson Park target. The target therefore excludes the Commonwealth-listed Cumberland Plain Woodland protected at Wianamatta Nature Reserve.
5. Refer to Clause 3.3 of Schedule 4 of the Edmondson Park Conservation Agreement.
6. Only investments from 2011 onwards count towards the Strategic Assessment target. The targets therefore exclude the biodiversity values protected at Wianamatta Nature Reserve and on St Mary's Towers biobank site.
7. Note that all Commonwealth-listed Cumberland Plain Woodland protected since 2011 has been assessed as being either of 'high management viability' or as having regeneration capacity, as defined by the criteria contained in Commitment 6 of the Sydney Growth Centres Strategic Assessment Program Report.
8. $1,942,043 in 2012–13 dollar values with indexing must be spent protecting Commonwealth-listed threatened vegetation communities in western Sydney.

2.2 Outcomes for 2012–13

In January 2013, the fourth biobanking agreement funded by the program was established to protect 22 hectares of bushland on the Mt Hercules property on the Razorback range north of Picton. The bushland was under threat from the invasive weed African olive. The program's funds will ensure that African olive and other weeds are controlled and the bushland is returned to good condition.

In May 2013, the program funded a fifth biobanking agreement at Mulgoa with the support of a grant from the Australian Government. The site:

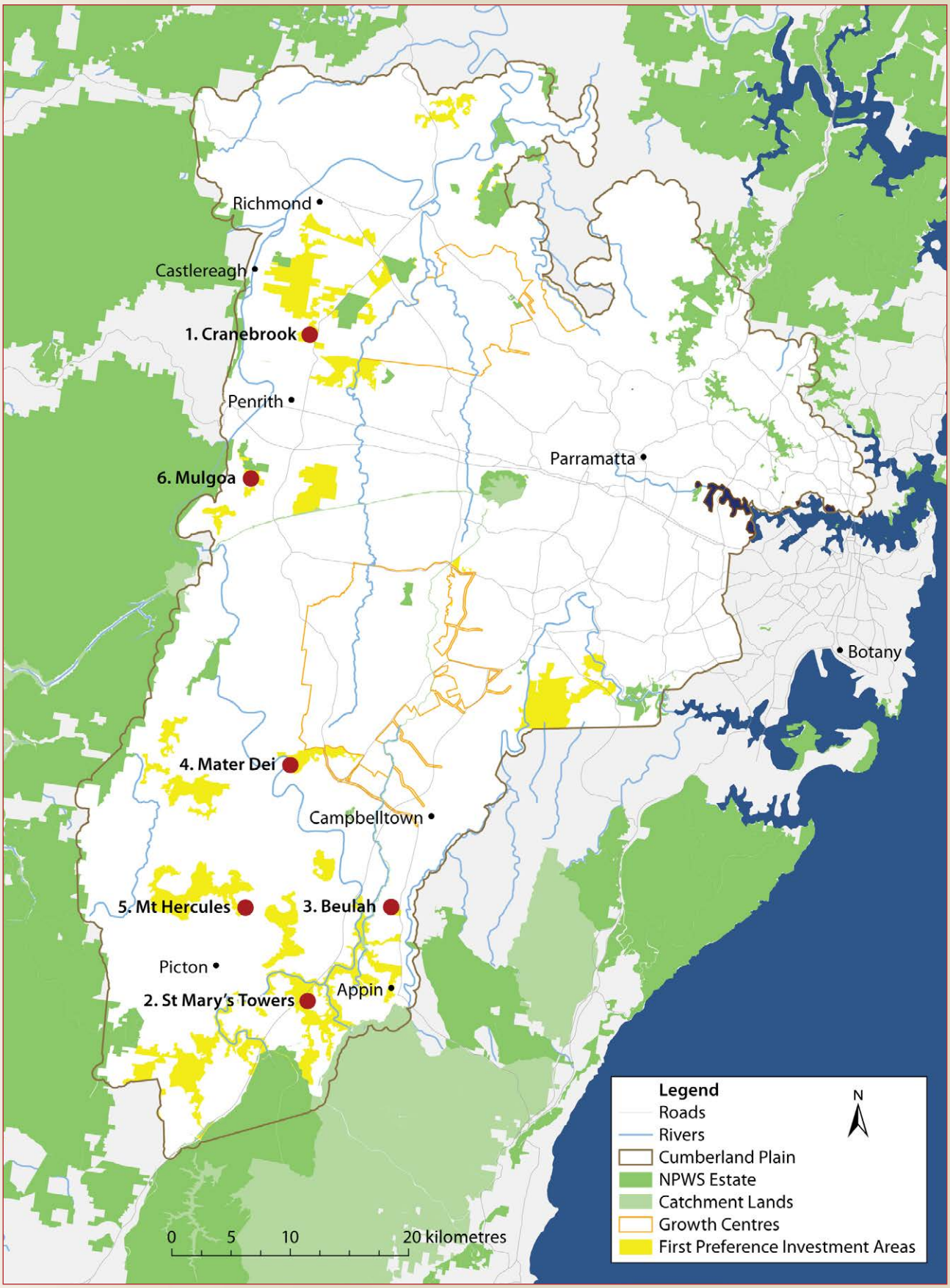
- protects 50 hectares of high conservation bushland in excellent condition that directly adjoins Mulgoa Nature Reserve
- contains one of the largest areas of Cumberland Plain Woodland remaining in private ownership.

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 2012–13 include:

- funding the establishment of a biobanking agreement on the Mulgoa site that permanently protects 50 hectares of high conservation bushland, including:
  - 38 hectares of critically endangered Cumberland Plain Woodland – of this vegetation, 30 hectares meet the criteria for Commonwealth-listed Cumberland Plain Woodland
  - 7 hectares of endangered Moist Shale Woodland and 5 hectares of Sydney Coastal River-flat Forest
  - known habitat for the vulnerable varied sittella and black-chinned honeyeater
  - potential habitat for five threatened bats, two threatened owls, an endangered land snail and a number of woodland birds that are in broad decline in NSW (see the case study for more information)
- establishing a biobanking agreement that permanently protects 22 hectares of high conservation bushland, including:
  - 19 hectares of critically endangered Cumberland Plain Woodland – of this vegetation, 13 hectares meet the criteria for Commonwealth-listed Cumberland Plain Woodland
  - 2 hectares of endangered Western Sydney Dry Rainforest and 1 hectare of Moist Shale Woodland
  - known habitat for the endangered Cumberland Plain land snail
  - potential habitat for an additional 22 threatened animal species including the Commonwealth and state-listed swift parrot, diamond firetail, powerful owl and grey-headed flying-fox (see the case study for more information)
- purchasing and retiring 105 biodiversity credits that were generated from the establishment of the Beulah biobank site and 232 credits from the Mater Dei biobank site.

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



1. Wianamatta Nature Reserve – Cranebrook (2008–09)

181 hectares of land containing several threatened plant communities are now protected at Wianamatta Nature Reserve near Penrith. Photo: OEH

2. St Mary's Towers (2009–10)

80 hectares of significant bushland are protected though the state's first biobanking agreement at Douglas Park. Photo: OEH

3. Beulah (2010–11)

A 60-hectare biobank site of threatened vegetation is protected on a historic property near Appin. Photo: OEH

4. Mater Dei (2011–12)

A 26-hectare biobank site is protected on the bank of the Nepean River at Cobbitty. Photo: OEH

5. Mt Hercules (2012–13)

A 22-hectare biobank site containing critically endangered Cumberland Plain Woodland is protected at Mt Hercules. Photo: OEH

6. Mulgoa (2012–13)

50 hectares of ecologically rich bushland directly adjoining the Mulgoa Nature Reserve are protected. Photo: OEH

Table 3: Vegetation communities protected by the program as at June 2013

Vegetation types	Status TSC Act	Cranebrook	St Mary's Towers	Beulah	Mater Dei	Mt Hercules	Mulgoa	TOTAL
		Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Cumberland Plain Woodland	CE		35.7	19.4	20.1	19.2	38.2	132.6
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
Moist Shale Woodland	E					1.4	7.0	8.4
River-flat Eucalypt Forest	E						4.5	4.5
Sydney Coastal River-flat Forest	E				5.6			5.6
Western Sydney Dry Rainforest	E					1.6		1.6
Castlereagh Scribbly Gum Woodland	–	66.1						66.1
Sydney Hinterland Transition Woodland	–		3.0					3.0
Hinterland Sandstone Gully Forest	–		8.6					8.6
Cleared land	–	20						N/A
Size of biobank site (ha)		**181.3**	**80.1**	**59.5**	**25.7**	**22.2**	**49.7**	–
							Total vegetation protected	**398.5**

Commonwealth-listed communities	Status EPBC Act	Cranebrook	St Mary's Towers	Beulah	Mater Dei	Mt Hercules	Mulgoa	TOTAL
		Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Commonwealth-listed Cumberland Plain Woodland	CE	3.5	33.8	15.0	14.1	12.9	30.4	109.7
Shale Sandstone Transition Forest	E		32.8	40.1				72.9
							Total Commonwealth-listed communities protected	**182.6**

TSC Act = *Threatened Species Conservation Act 1995*; EPBC Act = *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth);
CE = critically endangered; E = endangered.

Table 4: Threatened species protected by the program as at June 2013

Known habitat for threatened species	Status TSC Act	Cranebrook	St Mary's Towers	Beulah	Mater Dei	Mt Hercules	Mulgoa	No. of sites protected
Fauna								
Cumberland Plain land snail	E	Y	Y	Y	Y	Y		**5**
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**
Varied sittella	V						Y	**1**
Black-chinned honeyeater (eastern subsp)	V						Y	**1**
Flora								
Nodding geebung *(Persoonia nutans)*	E	Y						**1**
Bynoe's wattle (*Acacia bynoeana)*	V	Y						**1**
Allocasuarina glareicola	E	Y						**1**
Dillwynia tenuifolia	V	Y						**1**
Grevillea juniperina subsp. *juniperina*	V	Y						**1**
Micromyrtus minutiflora	V	Y						**1**
Sydney bush pea *(Pultenaea parviflora)*	V	Y						**1**

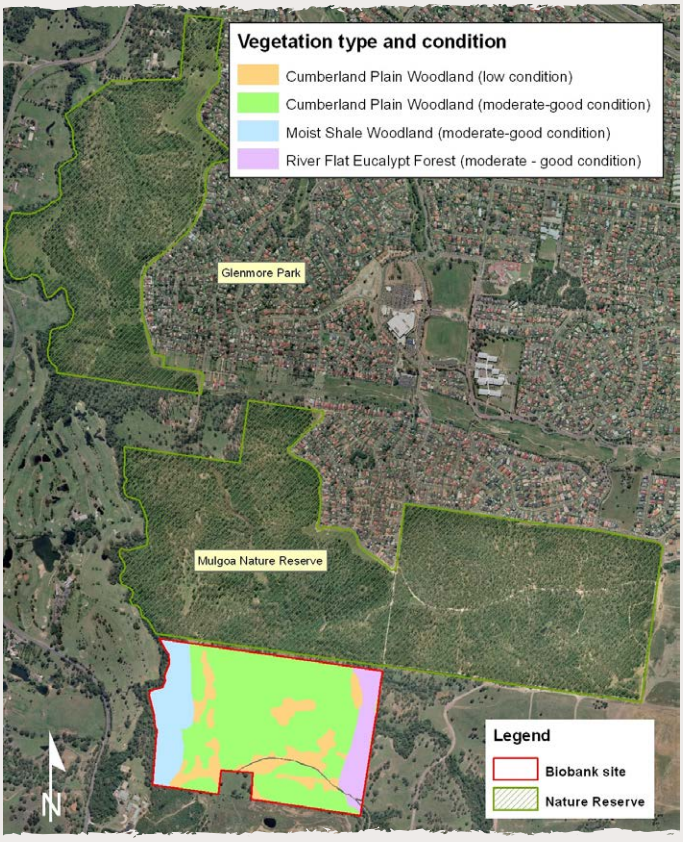
Potential habitat for targeted Commonwealth-listed threatened fauna species	Status EPBC Act	Cranebrook	St Mary's Towers	Beulah	Mater Dei	Mt Hercules	Mulgoa	TOTAL
		Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Swift parrot	E	161.3	35.7	19.4	25.7	20.5	49.7	**312.3**
Large-eared pied bat	V	0	80.1	0	0	0	0	**80.1**
Grey-headed flying fox	V	161.3	80.1	59.5	25.7	22.2	49.7	**398.5**

TSC Act = *Threatened Species Conservation Act 1995*; EPBC Act = *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth);
E = endangered; V = vulnerable; Y = yes.

Case study: A biobank site adjoining Mulgoa Nature Reserve

Conservation on private land plays an important role in supporting public reserves, particularly in areas where vegetation communities have been highly cleared and are not well-represented in the public reserve system.

The Mulgoa biobank site, which was established in May 2013, is an excellent example of the conservation of important woodland habitat across land tenures. While located in a fragmented landscape, the site adjoins Mulgoa Nature Reserve and provides habitat for a range of native fauna.



The Mulgoa biobanking site.

Funding the Mulgoa 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 Mulgoa biobank site created 591 biodiversity credits. All credits were purchased by the program for **$6,375,117** (excluding GST). This was achieved with the combined funding of $2,264,887 from the program and a grant to the program from the Australian Government of $4,110,230 (excluding GST). The purchased credits have been 'retired' so they cannot be used for any other offsets.

Of the amount paid for the credits, $479,867 will be invested in the Biobank Trust Fund (administered by the Environmental Trust) to cover the cost of managing the biobank site in perpetuity. The landowner will retain $5,895,250 as an 'opportunity cost' for not developing the land.

Financial summary	
In perpetuity management costs (deposited in the Biobank Trust Fund)	$479,867
Payment to landowner for 'opportunity costs'	$5,895,250
Total	**$6,375,117**
GST	$637,511
Total cost (including GST)	**$7,012,628**


Cumberland Plain Woodland on the Mulgoa property was under threat from environmental weeds such as lantana, African olive, blackberry and tree of heaven. Funding for management will ensure that these weeds are treated and the site remains as a showcase of native species diversity in the future. Photo: OEH.

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 landholder and any future landowner can continue to use the bushland for passive recreation but cannot 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 and controlling

weeds and feral animals. The landowner receives funding each year for commercial contractors to undertake this work

At Mulgoa, funding for the landholder to implement the management actions on the site is approximately $31,000 per year for the first 10 years. After 10 years, it gradually decreases over time to an in-perpetuity payment of approximately $7,600 each year.

Conserving threatened bushland

The bushland on the biobank site is predominantly regenerating woodlands, made up of three different vegetation communities, all of which are listed as endangered ecological communities (EECs) under State legislation. Less than 1% of the pre-1750 area of each of these communities currently occurs in formal conservation reserves.

The biobank site contributes to the conservation of threatened bushland on the Cumberland Plain, which is characterised by high levels of vegetation fragmentation and low levels of protection. It protects 38 hectares of state-listed critically endangered Cumberland Plain Woodland.

Vegetation summary – Mulgoa biobank site		
Vegetation community	**TSC Act status**	**Area (hectares)**
Cumberland Plain Woodland *	CE	38.2
Moist Shale Woodland	CE	7.0
Sydney Coastal River-flat Forest	E	4.5
Total		**49.7**

TSC Act = *Threatened Species Conservation Act 1995*;
CE=Critically endangered; E = Endangered.

*Of the 38.2 hectares of Cumberland Plain Woodland protected, 30.4 meets the criteria for Commonwealth-listed Cumberland Plain Woodland.

Providing habitat for threatened animals

The bushland on the property and along adjoining Mulgoa Creek provides links with nearby Blue Mountains National Park and one of the least disturbed and largest patches of Cumberland Plain Woodlands at Orchard Hills. These corridors provide important habitat for native plants and animals, particularly woodland birds.

Two threatened bird species have been recorded on the property – the varied sittella and black-chinned honeyeater.

In addition, the adjoining nature reserve provides habitat for five threatened bats, two threatened owls, an endangered land snail and a number of woodland birds that are in broad decline in NSW. The biobank site will enhance the long-term viability of the threatened species that are protected in the reserve by increasing the area of habitat they rely on to survive.

The woodlands on Mulgoa biobank site provide important habitat for woodland birds including the threatened varied sittella (left – photo: R. Eckermann) and double-barred finch (right – photo: R. Eckermann).

Case study: Restoring the woodlands at Mt Hercules

The Mount Hercules biobank site permanently protects 22 hectares of high conservation value bushland on the Razorback Range, Wollondilly.

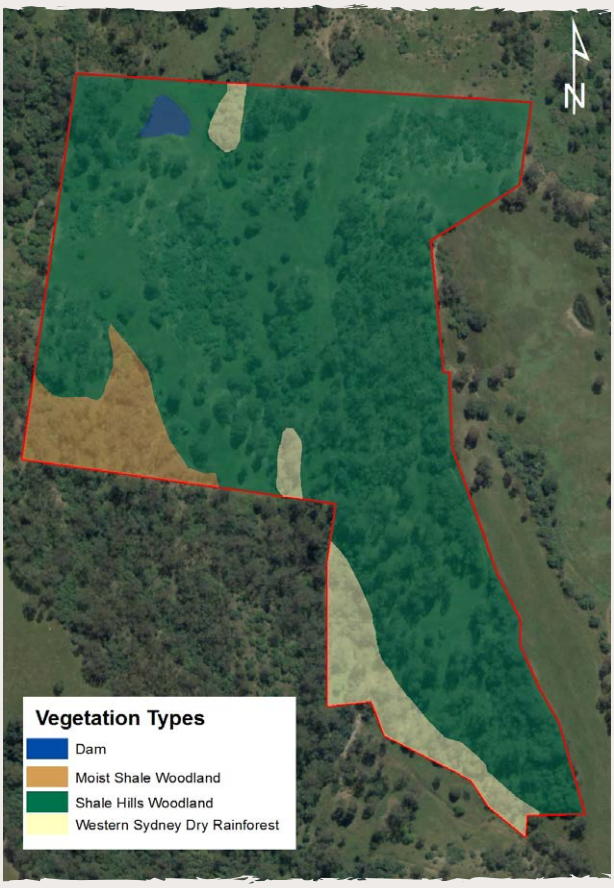
The site contains 19 hectares of critically endangered Cumberland Plain Woodland, 2 hectares of endangered Western Sydney Dry Rainforest and 1 hectare of endangered Moist Shale Woodland. It is also home to the endangered Cumberland Plain land snail *Meridolum corneovirens*.

Vegetation summary – Mt Hercules biobank site		
Vegetation community	**TSC Act status**	**Area (hectares)**
Cumberland Plain Woodland	CE	19.2
Moist Shale Woodland	CE	1.4
Western Sydney Dry Rain Forest	E	1.6
Total		**22.2**

TSC Act = *Threatened Species Conservation Act 1995*; CE=Critically endangered; E = Endangered.

Much of the bushland on the biobank site is in poor health and infested with the invasive woody weed, African olive. Without active management, the bushland will continue to degrade and eventually lose its conservation values.

Under a biobanking agreement established in January 2013 between the landowner and the NSW Government, the landowner is responsible for implementing management actions that will restore and maintain the health of this bushland in perpetuity. Annual payments will be made to the landowner to fund these actions, and monitor and report on the outcomes.



The Mt Hercules biobanking site.

The road to Mt Hercules biobank site was upgraded so it could be accessed for undertaking management actions including fire management and weed control. Photo: OEH.

Funding the Mt Hercules biobank site

Financial summary	
In perpetuity management costs (deposited in the Biobank Trust Fund)	$1,711,333
Payment to landowner for 'opportunity costs'	$445,420
Cost to program	**$2,156,753**
GST	$215,675
Total cost (including GST)	**$2,372,428**

The establishment of the Mt Hercules biobank site created 229 biodiversity credits. All the credits have been purchased with funds from the program for **$1,711,333** (excluding GST). This amount will be invested in the Biobank Trust Fund to cover the cost of managing the biobank site in perpetuity.

The landholder also received an establishment payment of $445,420 as an 'opportunity cost' for not developing the land.

The Mt Hercules biobank site contains areas of high conservation value. A 20 x 20 metre plot in this photo identified 50 native species, mainly forbs and groundcovers. This diversity is representative of the floristic diversity of remnant areas of Cumberland Plain Woodland. The Mt Hercules site could become a case study for best practice woodland management. Photo: OEH.

The protection and restoration of woodlands like those on Mt Hercules biobank site is helping to reverse the decline of woodland birds on the Cumberland Plain by providing connectivity with other woodland patches and habitat. Over one-third of Australia's land birds depend on woodlands, such as the dusky woodswallow. Photo: R. Eckermann.

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, 1,981 hectares of 'existing native vegetation' were protected by the Growth Centres SEPP (see Table 5) (all values in the report have been rounded and are presented in Table 5 to one decimal point).

In 2013, 1,971 hectares remain protected. As indicated in Table 5, 10 hectares of protected vegetation have been cleared since the time of certification. Of this amount, 2 hectares were cleared in the last year.

There is currently a gap of 29 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 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, Marsden Park Industrial, Austral and Leppington North, Box Hill and Box Hill Industrial precincts. For example, about 10 hectares of additional vegetation has 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 the certification.

Clearing of vegetation in the 'developable lands'

Vegetation amounting to 1,765 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 or is exposed to a high threat of future degradation. The certification provided for the loss of all 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 5, the cumulative total of 'existing native vegetation' that has been cleared in the 'developable lands' since the time of certification is 106 hectares. Of this amount, 42 hectares have been cleared in the last year.

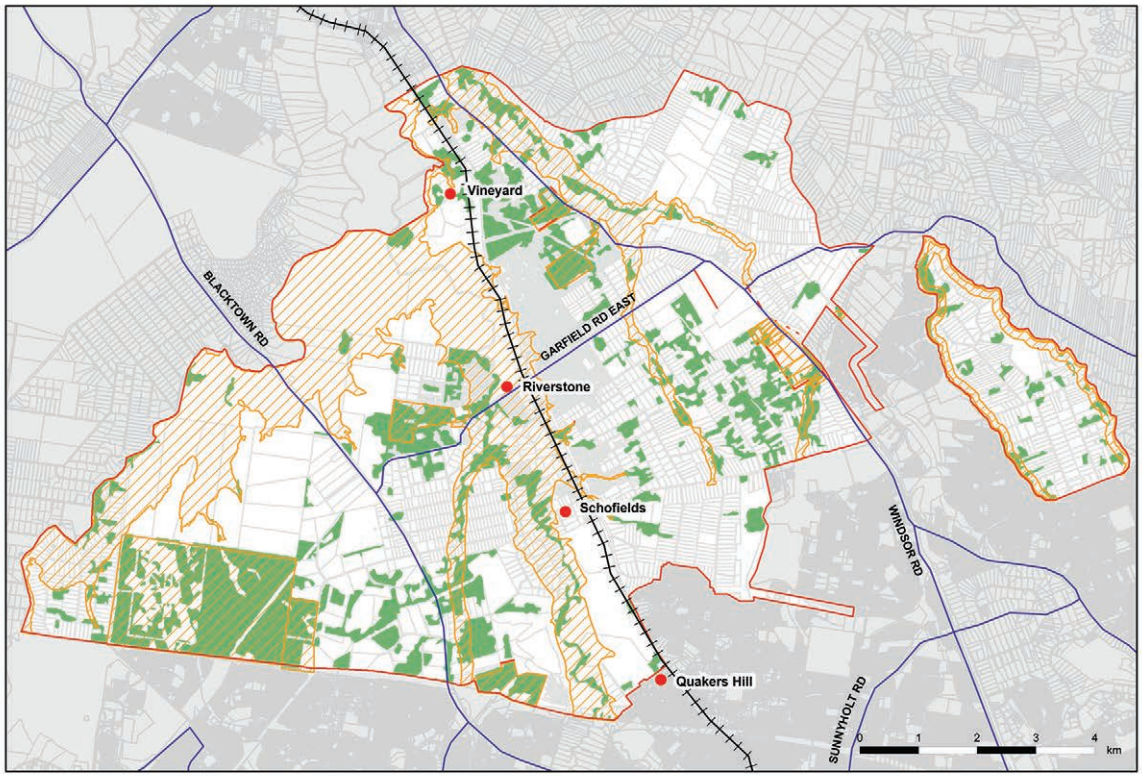
Table 4: Vegetation clearing in the Growth Centres

		2007	2013	2013	2013
Land class	**Vegetation community**	**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	659	–1.8	–5.4
Protected	Moist Shale Woodland	0.6	0.6	0.0	0.0
Protected	Shale Sandstone Transition Forest	37.7	36.9	–0.2	–0.8
Protected	Shale Gravel Transition Forest	390.7	390.7	0.0	0.0
Protected	River-flat Eucalypt Forest	711.3	707.8	–0.1	–3.6
Protected	**Total**	**1980.7**	**1,971.0**	**–2.0**	**–9.8**
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	1252.2	1,175.1	–36.0	–77.1
Developable	Moist Shale Woodland	0.0	0.0	0.0	0.0
Developable	Shale Sandstone Transition Forest	66.2	60.7	–4.3	–5.5
Developable	Shale Gravel Transition Forest	221.5	217.4	–1.2	–4.1
Developable	River-flat Eucalypt Forest	199.2	181.7	–0.4	–17.5
Developable	**Total**	**1765.1**	**1,658.7**	**–41.9**	**–106.4**
Total	**Vegetation**	**3745.8**	**3,629.7**	**–43.9**	**–116.2**

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 2013 using remote sensing analysis.
3 This column identifies the amount of 'existing native vegetation' cleared between March 2012 and March 2013.
4 This column identifies the cumulative amount of 'existing native vegetation' cleared between 2007, approximating the time of certification, and March 2013.

Map 3: North West Growth Centre



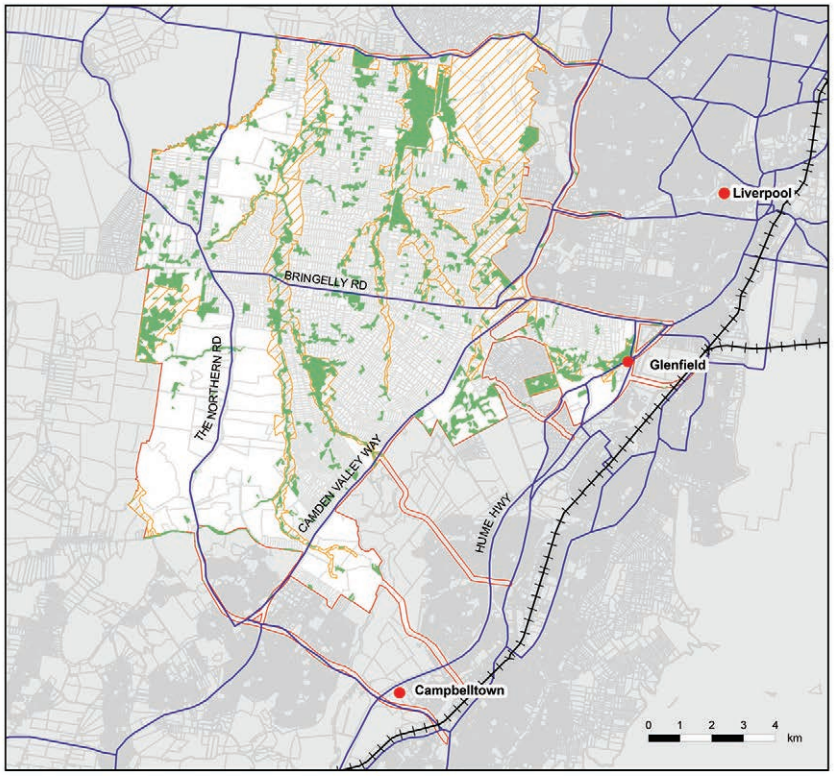
Legend

- NW Growth Centre Boundary
- NW Protected Lands
- Existing Native Vegetation

North West Growth Centre
Protected Lands

N

Map 4: South West Growth Centre



Legend

- SW Growth Centre Boundary
- Existing Native Vegetation
- SW Protected Lands

South West Growth Centre
Protected Lands

N

4 Financial report

Opening balance

The program commenced operation in 2012–13 with a surplus of $14 (see Table 6).

Revenue

Total revenue for the program in 2012–13 was $10,729,917.

The allocation of new funding for the program from NSW Treasury for 2012–13 was $3,527,000. 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 2012–2013, 2,060 lots were predicted to be developed, which is equivalent to 1.0285% 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 funding allocation, the Environmental Trust provided $1,900,000 as an advanced payment to the program to establish the Mulgoa biobank site. This advance will be repaid to the Trust over three years from 2013–14 to 2015–16.

The Australian Government also contributed grant funding of $4,110,230 to the program to enable it to purchase biodiversity credits from the Mulgoa biobank site (See Section 1.5 for further details of the grant commitment).

The program also received a grant of $1,192,687 from OEH. This additional funding bought forward the program's pre-existing commitments to purchase credits from the Mt Hercules and Mulgoa biobank sites, enabling the program to take advantage of a significant new opportunity in 2013-14.

Expenditure

Total expenditure through the program for 2012-13 was $10,731,132.

Ninety nine percent of the total expenditure for the year was spent on operational costs. These included payments for four of the program's investments to date: the Wianamatta Nature Reserve at Cranebrook, the Mater Dei biobank site, the Mt Hercules biobank site and the Mulgoa biobank site; and the costs of two operational staff who work with landowners to purchase land or establish conservation agreements.

The remaining one percent of total expenditure was spent on the program's administrative costs. Administrative costs comprise 60% of the salary and on-costs of the program manager and are used to address the planning and reporting requirements of the Environmental Trust, administer funding arrangements, supervise staff and coordinate the program's implementation.

The certification of the Growth Centres SEPP requires that from 2012-13 onwards, the administration costs for the program combined with the initial management costs of any purchased land do not exceed 5% of the annual contribution by NSW Treasury to the Growth Centres Conservation Fund.

In 2012–13, no program funds were used for the initial management costs of acquired land. The administrative expenses for the program for 2012–13 amounted to $83,355 which is 2.36% of the NSW Treasury's allocation of $3,527,000.

Closing balance

The program ended the year with a minor over-spend of $1,201.

Table 6: Financial summary report[1]

Balance at 1 July 2012	Funds ($)
Opening balance	**(14)**
Revenue	
Treasury annual allocation	(3,527,000)
Grant from Australian Government	(4,110,230)
Advance allocation from Environmental Trust	(1,900,000)
Additional grant from OEH	(1,192,687)
TOTAL REVENUE	**(10,729,917)**
TOTAL REVENUE PLUS OPENING BALANCE	**(10,729,931)**
Expenditure	
Land purchase for reservation	
Re-payment to OEH for purchase of Wianamatta Nature Reserve	1,340,000
Conservation agreements	
Repayment to Environmental Trust for Mater Dei biobank site	270,000
Beulah biobank site: purchase of 105 credits	205,912
Mater Dei biobank site: purchase of 4 credits	39,630
Mt Hercules biobank site: establishment payment	445,420
Mt Hercules biobank site: purchase of 229 credits	1,711,333
Mulgoa biobank site: purchase of 591 credits	6,375,117
Operational costs: salaries for 2 staff with 26% on-costs	242,394
Miscellaneous expenses (field)	17,970
Subtotal	**9,307,777**
Initial management of purchased land	0
Administration expenses	
Administration: salaries for 0.6 staff with 26% on-costs	83,355
Miscellaneous expenses (Administration)	0
Subtotal	**83,355**
TOTAL EXPENDITURE	**10,731,132**
Balance at 30 June 2013	
Closing balance	**1,201**

1. This financial report is not a General Purpose Financial Report and has not been separately audited. However, these financials form part of the OEH agency accounts which form part of the audited DPC Annual Report and Financial Statements.

Appendix 1

Calculation of the program's funding allocation for 2012–13

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 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. The land index is based on the Consumer Price Index as described in the *Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Growth Areas) Determination 2011*.
- a correction for any difference between the predicted and actual lot yields for the previously completed year.

Table 7 below provides the calculations for the program's funding allocation for 2012–13 and is based on information provided by the Department of Planning and Infrastructure in December 2011.

Table 7: Calculation of program funding for 2012–13

Total remaining lot production at start of 2012–13 (Note that this contains both residential and non-residential lot equivalents)	**214,977 lots**
Predicted lot production for 2012–13 (Note that this contains both residential and non-residential lot equivalents)	2,060 lots
Adjustment for difference between actual and predicted lot production from the previous completed year (2010–11)	151 lots
Predicted lot production for 2012–13 (adjusted for past actuals)	2,211 lots
Percentage of total remaining lots predicted to be produced in 2012–13 (adjusted for past actuals) (i.e. 2,211 as a percentage of 214,977 lots)	1.0285%
Total remaining unspent funds at start of 2012–13 (2005–06 $ values)	$391,050,633
Allocation for this year in 2005–06 $ values (i.e. 1.0285% of $391,050,633)	$4,021,886
Land index value (converts 2005–06 $ values to current $ values) (Based on an increase in the land index from 2011-12 of 3.167%)	0.8769
Required allocation for 2012–13 in current $ values (i.e. 0.8769 x $4,021,886)	$3,526,870
Total allocation in current dollar values (rounded)	**$3,527,000**

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