



Growth Centres Biodiversity Offset Program Annual Report 2014–15

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: Regenerating Cumberland Plain Woodland on Glenmore Park biobank site. The biobank site was established in November 2014. In 2014–15 the program funded the protection and management of 13.5 hectares of threatened vegetation on the site, including 4.7 hectares of critically endangered Cumberland Woodland.

Other cover photos from left to right: common species found within the Cumberland Plain Woodland include the native thornbush *Bursaria spinosa*, bearded dragon *Pogona barbata* and the hairy clerodendrum *Clerodendrum tomentosum*. OEH staff undertaking a site inspection at the Glenmore Park biobank site.

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Executive summary

The Growth Centres Biodiversity Offset Program (the program) enables Sydney's future housing needs to be met without compromising the balance of the social, economic and environmental values of western Sydney. The program is an innovative solution in an area of major land use change and population growth.

In the seven years that the program has been operating (2008–09 to 2014–15) it has protected 471 hectares of native vegetation at 10 locations across western Sydney. In accordance with the program's aims, the protected areas are some of the largest areas of bushland with high conservation values left in the region.

In 2014–15, the program received an annual allocation from the Environmental Trust of \$2,325,000 as well as an additional advance from the Trust for \$44,119. Combined with a grant of \$63,632 from the Office of Environment and Heritage (OEH), the total Program revenue for the year amounted to \$2,432,751.

The funding received in 2014–15 resulted in an additional 18.2 hectares of threatened vegetation being protected at two biobank sites. One of these sites is located on the historic Fernhill Estate near Mulgoa. The site adjoins Blue Mountains National Park and was established independently of the program but within the program's first preference investment area. Funds from the program were used to purchase biodiversity credits to protect 4.7 hectares of critically endangered Shale Sandstone Transition Forest on the site.

An additional 13.5 hectares of vegetation was protected through purchasing biodiversity credits from the Glenmore Park biobank site near Penrith. The biobank site demonstrates the importance that private land conservation plays in supporting public reserves. The site provides a crucial link between two previously separated portions of Mulgoa Nature Reserve, enhancing the long-term viability of the habitat protected within the reserve. The combined area of the Mulgoa biobank site (which was funded through the program in 2012–13) and the Glenmore Park biobank site is just under one-third of the size of the adjoining 213 hectare Mulgoa Nature Reserve. The total area of this special bushland that has now been protected is 276 hectares.

The high-value bushland protected by the program to date is part of an offset for the clearing of 223 hectares of vegetation that has occurred in the developable areas of Sydney's Growth Centres since 2007. 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.

More information on the program and this annual report is available at www.environment.nsw.gov.au/biocertification/growthcentres.htm

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 (see Figure 1). Bushland is protected under the program by either acquiring land for new reserves from willing landowners or by funding the establishment of perpetual conservation agreements on private land.

In the seven years that the program has been operating, 471 hectares of native vegetation has been protected (note that all values in the report have been rounded and are presented in Table 2 to one decimal place). This land contains:

- 162 hectares of state-listed critically endangered Cumberland Plain Woodland
- 287 hectares of threatened ecological communities other than Cumberland Plain Woodland
- habitat for 10 recorded threatened fauna species
- ten 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.



Figure 1: Important areas of bushland, such as this regenerating Cumberland Plain Woodland on the Glenmore Park biobank site, are protected under the program. Funding for the biobank site will ensure that invasive weeds and other threats can be managed to maintain and restore the bushland.

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 New South Wales 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.

Through biodiversity certification, biodiversity values are assessed and conservation issues are resolved 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:

- 2000 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 Environment.
- \$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* (Commonwealth) (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. Table 1 shows the actual funding allocation from 2008–09 to 2014–15, and the funding allocation for the next 10 years based on the 2014–15 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 Environment 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: Payment timetable for the Growth Centres Biodiversity Offset Program*

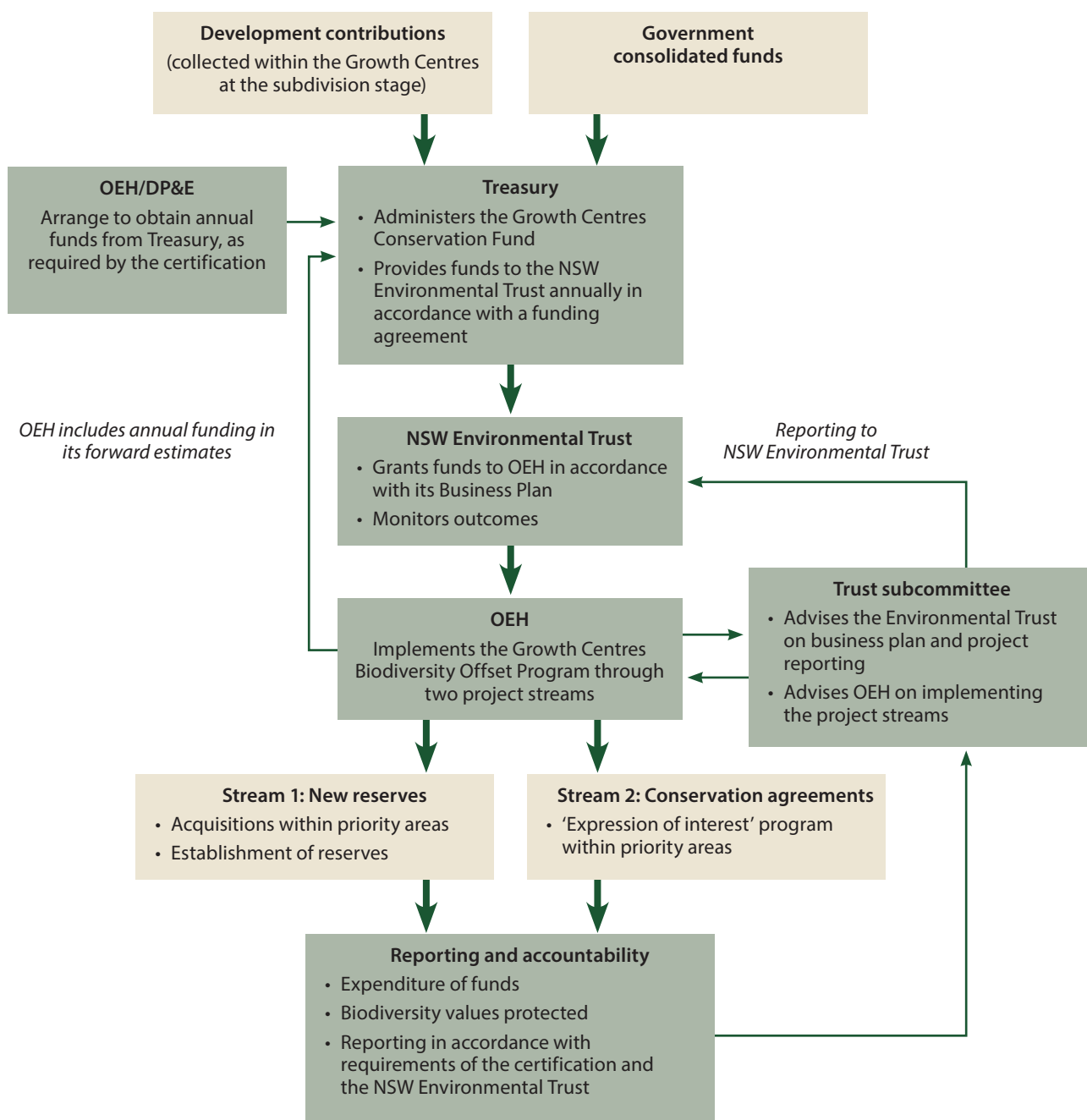
Funding received			
Financial year	Funds received (2005–06 \$ values)	Indexed funds received ** (\$ values at receipt)	Cumulative proportion of total funding (%)
2008–09	917,647	780,000	0.23
2009–10	1,409,606	1,198,000	0.59
2010–11	2,269,735	1,930,000	1.16
2011–12	1,852,340	1,575,000	1.62
2012–13	4,021,886	3,527,000	2.63
2013–14	6,416,203	5,719,000	4.25
2014–15	4,174,449	3,825,000	5.30
Subtotal: funds received	16,887,417	14,729,000	5.30
Future funding			
Financial year	Future funding (2005–06 \$ values)	Indexed future funding (2014–15 \$ values)	Cumulative proportion of total funding (%)
2015–16	8,173,153	7,701,000	7.35
2016–17	10,295,209	9,700,000	9.94
2017–18	11,849,548	11,165,000	12.93
2018–19	12,891,870	12,147,000	16.17
2019–20	13,861,046	13,060,000	19.66
2020–21	14,738,790	13,888,000	23.36
2021–22	16,613,140	15,653,000	27.54
2022–23	17,026,411	16,043,000	31.83
2023–24	16,759,431	15,792,000	36.04
2024–25	18,260,739	17,207,000	40.64
2025–26 – End of program	235,968,797	203,096,000	100.00
Subtotal: future funding	376,438,134	335,452,000	94.70
Total program funding	397,500,000	354,006,000	100

* Updated based on information received from the Department of Planning and Environment in February 2015.

** Funding is calculated in 2005–06 dollar values and then indexed each year. 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 2.803% and this indexing has been applied to the February 2015 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 2). 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 Environment and NSW Treasury. A subcommittee of the Trust oversees the governance of the program and contains two non-government representatives.



OEH refers to the Office of Environment and Heritage
DP&E refers to the Department of Planning and Environment

Figure 2: Administration of funds and program structure

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 Figure 3 as a series of preferences. The Growth Centres Strategic Assessment under the EPBC Act confirmed that the conservation fund will secure offsets on the Cumberland Plain as a first priority.

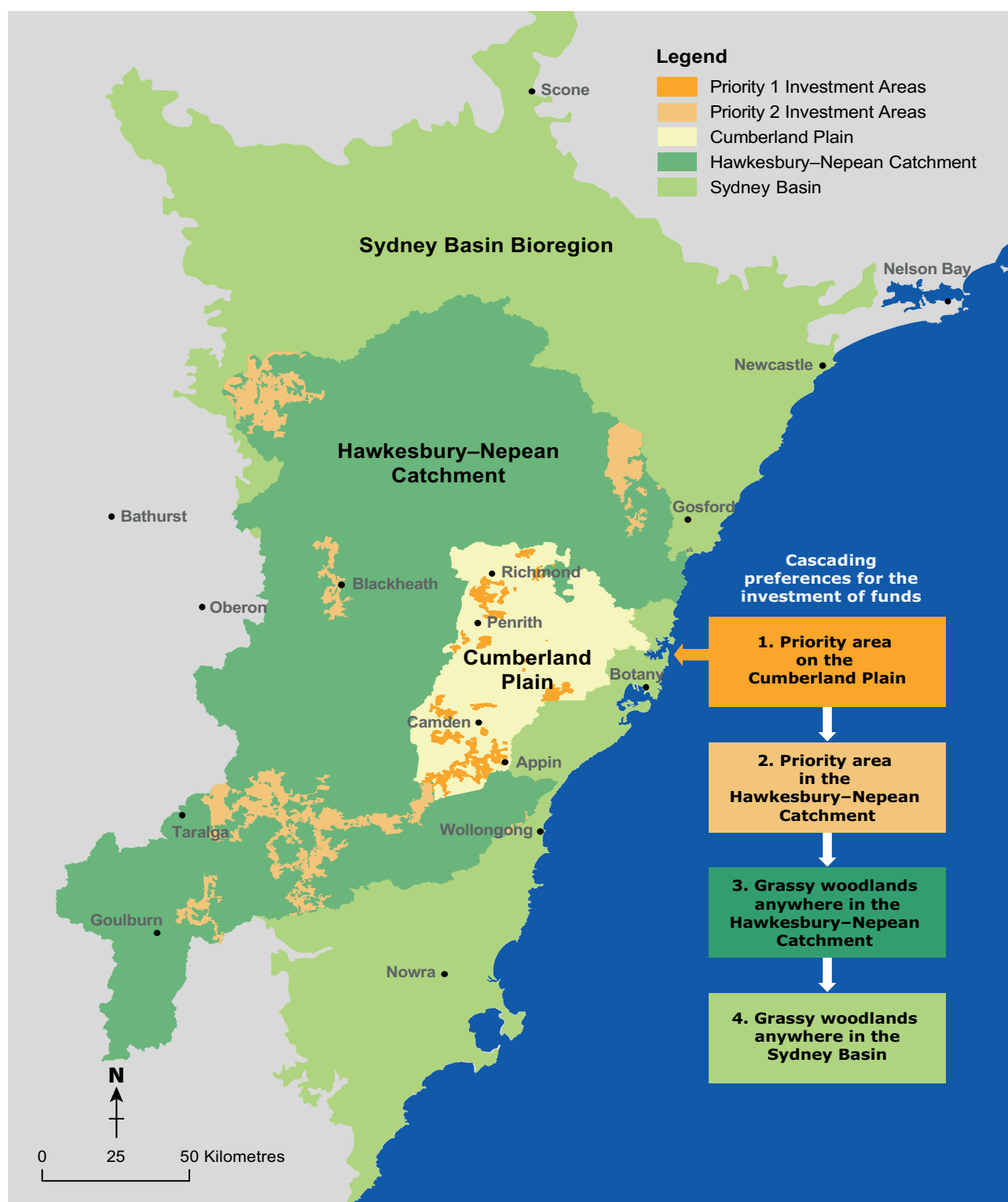


Figure 3: Areas of program operation

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 were 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 next be considered. If these areas are 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 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, the land's landscape context and the cost effectiveness of the investment are considered (see Figure 4).



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Figure 4: OEH staff assessing the biodiversity values present in the Glenmore Park biobank site to ensure that the site meets the program's funding criteria.

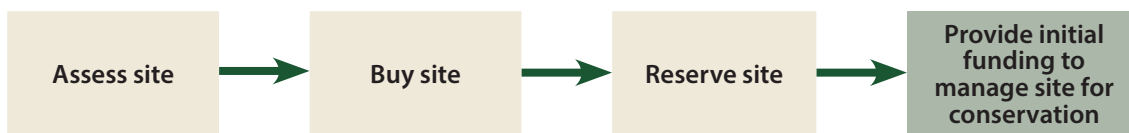
1.4 How the program works

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 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 where the landowner is not interested in selling. The preferred conservation agreement is a biobanking agreement which 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 under the program in exceptional circumstances.

One advantage of biobanking agreements compared to reserve acquisitions is that all future management costs are secured up front. The disadvantages are that biobank sites remain in private ownership and public access is usually not available.



Conservation agreements with willing landowners

In some cases, OEH will work in partnership with other government authorities to establish biobanking agreements on properties with high conservation values 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 under three agreements:

1. Biodiversity certification of the Growth Centres SEPP
2. Growth Centres Strategic Assessment approval
3. 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.

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 Australian Government). The approval enables development to proceed in the Growth Centres in accordance with the EPBC Act while protecting biodiversity values through offsets implemented under the program.

As part of the requirements of the approval, the following will be protected under the program:

- at least 2400 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 205 hectares is protected
- 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, large-eared pied bat and grey-headed flying-fox.

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

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 Mulgoa biobank site. Of the 50 hectares of high conservation bushland protected on the site, 38 hectares is Cumberland Plain Woodland of which 30 hectares meet the definition of Commonwealth-listed Cumberland Plain Woodland. This agreement therefore contributes significantly to the program 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 the NSW Government meeting its offset requirements, OEH is committed to protecting Commonwealth-listed vegetation in addition to the vegetation required to be protected under the Strategic Assessment approval. The amount of additional vegetation protected over the next 10 years will be equivalent to \$1,942,043 (in 2012–13 dollar values), which is the contribution provided by the Australian Government towards protecting the 30 hectares of Commonwealth-listed Cumberland Plain Woodland on the Mulgoa site.



Figure 5: Through the program, large remnants of vegetation like the Cumberland Plain Woodland on the Glenmore Park biobank site are protected. Funding for the biobank site will ensure that the threats such as invasive weeds can be managed to maintain and restore the bushland.

2 What we have achieved

2.1 Seven years of land conservation

In the seven years that the program has been operating (2008–09 to 2014–15) it has protected 471 hectares of high conservation value land at 10 locations in western Sydney (Figure 6).

Work by the program has included:

Wianamatta Nature Reserve (2008–09). Assisting in the purchase of the 181-hectare Wianamatta Nature Reserve at Cranebrook and funding the fencing of the reserve's perimeter to prevent illegal damage.

St Mary's Towers (2009–10). Establishing the state's first biobank site at St Mary's Towers, Douglas Park, protecting 80 hectares of significant bushland.

Beulah (2010–11). Jointly funding the purchase of the historic Beulah property near Appin by the Historic Houses Trust and protecting 60 hectares of its important bushland through a biobanking agreement.

Mater Dei (2011–12). Establishing the Mater Dei biobank site on the banks of the Nepean River at Cobbitty and protecting 26 hectares of threatened bushland.

Mt Hercules (2012–13). Establishing the Mt Hercules biobank site on the Razorback Range, protecting 22 hectares of threatened vegetation containing critically endangered Cumberland Plain Woodland.

Mulgoa (2012–13). Jointly funding the protection of Mulgoa biobank site, protecting 50 hectares of ecologically rich bushland directly adjoining Mulgoa Nature Reserve.

Fernhill East (2013–14). Assisting in protecting 16 hectares of critically endangered Cumberland Plain Woodland on the historic Fernhill Estate.

Orangeville (2013–14). Establishing the Orangeville biobank site, protecting 38 hectares of ecologically rich bushland on a working farm at Orangeville from clearing and grazing and increasing the number of protected areas in the Camden district.

Fernhill Central West (2014–15). Protecting 5 hectares of the critically endangered ecological community Shale Sandstone Transition Forest, all of which meet the condition criteria for the Commonwealth-listed Shale Sandstone Transition Forest.

Glenmore Park (2014–15). Assisting in the protection of a 14 hectare biobank site providing a crucial missing link between two parts of the Mulgoa Nature Reserve.

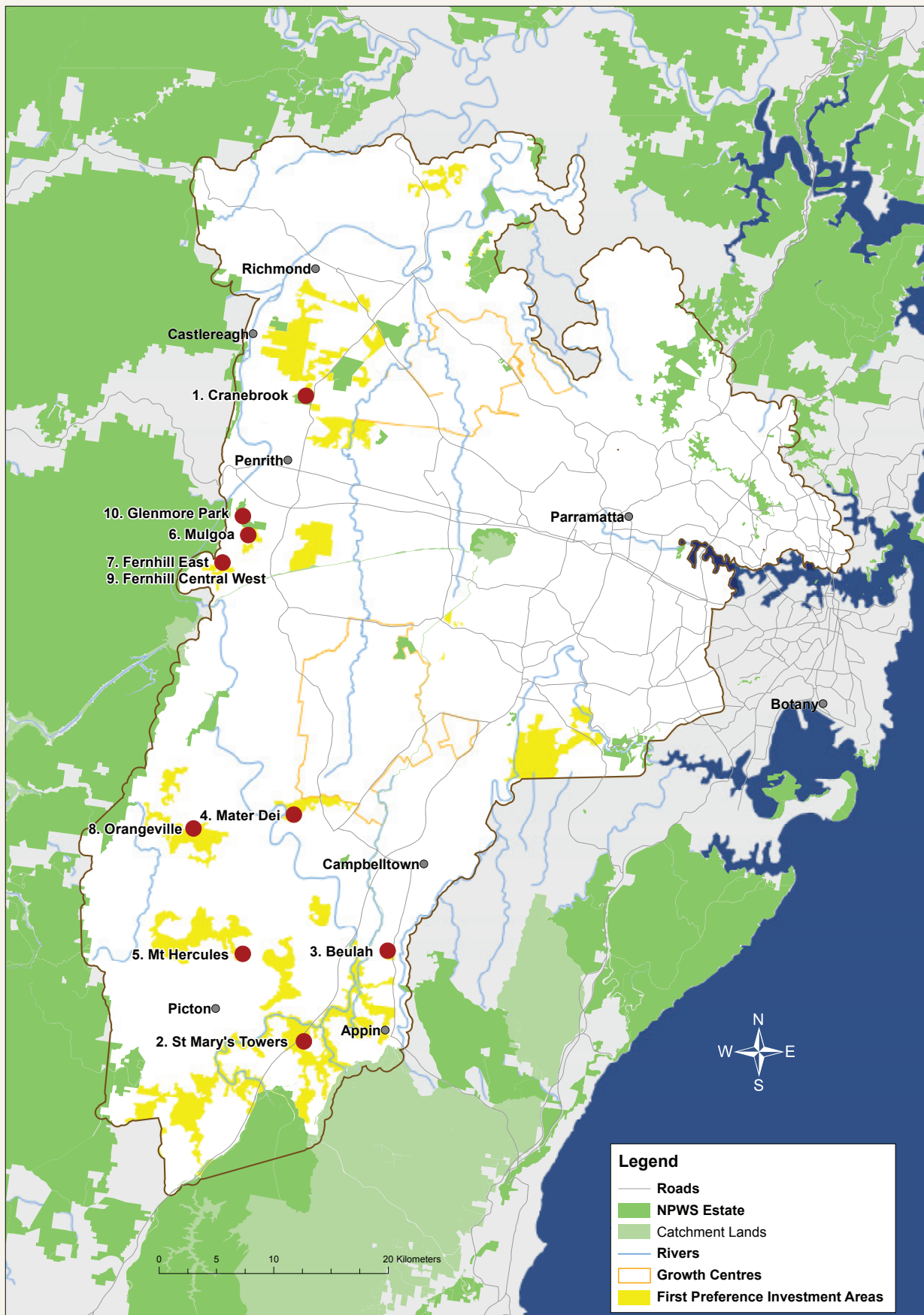


Figure 6: Vegetation and habitat protected by the program to date

Key to locations identified in Figure 6



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



2. St Mary's Towers biobank site (2009–10)



3. Beulah biobank site (2010–11)



4. Mater Dei biobank site (2011–12)



5. Mt Hercules biobank site (2012–13)



6. Mulgoa biobank site (2012–13)



7. Fernhill East biobank site (2013–14)



8. Orangeville biobank site (2013–14)



9. Fernhill Central West biobank site (2014–15)



10. Glenmore Park biobank site (2014–15)

2.2 Progress towards the program's conservation targets

Protecting native vegetation

Of the 471 hectares of native vegetation protected to date, 449 hectares comprise threatened ecological communities listed under state legislation (Table 2 and Appendix A). In accordance with the program's aims, the protected areas are some of the largest areas of bushland with high conservation values left in western Sydney.

Table 2: Vegetation communities protected by the program as at June 2015

Vegetation types	Status TSC Act ¹	Total (ha)
Cumberland Plain Woodland	CE	162.2
Shale Sandstone Transition Forest	CE	81.7
Cooks River Castlereagh Ironbark Forest	E	41.2
Shale Gravel Transition Forest	E	3.5
Castlereagh Swamp Woodland	E	50.5
Moist Shale Woodland	E	11.0
River-flat Eucalypt Forest	E	10.7
Sydney Coastal River-flat Forest	E	5.6
Western Sydney Dry Rainforest	E	1.6
Sydney Turpentine Ironbark Forest	E	14.7
Castlereagh Scribbly Gum Woodland	V	66.1
Sydney Hinterland Transition Woodland	-	3.0
Hinterland Sandstone Gully Forest	-	8.6
Grey Myrtle Dry Rainforest	-	10.5
Cleared land	-	(20.0)
Area protected by Program		490.9
Total vegetation protected by Program ²		470.9
Commonwealth-listed communities	Status EPBC Act ³	Total (ha)
Comm.-listed Cumberland Plain Woodland	CE	134.1
Shale Sandstone Transition Forest	CE	81.7
Turpentine-Ironbark Forest	CE	2.3
Western Sydney Dry Rainforest and Moist Woodland on Shale	CE	2.6
Total Commonwealth-listed communities protected		220.7

¹ TSC Act refers to the *NSW Threatened Species Conservation Act*. Status refers to either Critically Endangered (CE); Endangered (E) or Vulnerable (V).

² The total vegetation protected excludes 20 hectares of cleared land protected at Wianamatta Nature Reserve.

³ EPBC Act refers to the *Commonwealth's Environmental Protection and Biodiversity Conservation Act*. Refer to Appendix A for notes and further information on this table.

Protecting threatened animals and plants

Valuable habitat for 20 threatened flora and fauna species has now been protected using the program's funds. The populations of three threatened shrubs (*Dillwynia tenuifolia*, *Micromyrtus minutiflora* and *Pultenaea parviflora*) are among the largest recorded for those species (Appendix B).

Protecting matters of national environmental significance

To date, 221 hectares of nationally listed ecological communities have been protected through the program (Table 2), including 134 hectares of Commonwealth-listed Cumberland Plain Woodland (see Figure 7).

Since 2011, 97 hectares of Commonwealth-listed Cumberland Plain Woodland have been protected in accordance with the Growth Centres Strategic Assessment approval (Table 3). 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 Mt Hercules biobank site was established.

Through the program, 172 hectares of potential habitat for the swift parrot and 225 hectares for the grey-headed flying-fox have been protected in accordance with the offset requirements for the Strategic Assessment approval (Table 3). The vulnerable swift parrot was observed at the Mater Dei biobank site by the bush regeneration team in June 2014 during the winter migration. This sighting indicates that the potential habitat for the species, which is required to be protected as part of the Strategic Assessment approval, is actually being utilised by the species.

The purchase of 50 biodiversity credits of Shale Sandstone Transition Forest (SSTF) from Fernhill Central West biobank site at a cost of \$500,000 (plus GST) has been counted towards the Program's commitment to the Australian Government to protect 'Additional Conservation Outcomes' under the Mulgoa biobank site funding agreement (Table 3). The credit purchase protects 4.7 hectares of SSTF and, in accordance with the terms of the Mulgoa funding agreement, this vegetation has not been counted towards New South Wales's compliance obligations under the Strategic Assessment Approval.

The target of protecting 72 hectares of Commonwealth-listed Cumberland Plain Woodland under the Edmondson Park Conservation Agreement was completed in September 2012 (Table 3) by protecting 76 hectares of Commonwealth-listed Cumberland Plain Woodland on four biobank sites: St Mary's Towers, Beulah, Mater Dei and Mt Hercules. More details of the conservation outcomes achieved in 2014–15 are provided in section 2.3.



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Figure 7: The regenerating Cumberland Plain Woodland (CPW) in the background is a part of the 4.7 hectares of Commonwealth-listed CPW protected by the program in 2014–15. Protecting this vegetation assists the NSW Government in meeting its offset requirements with the Australian Government under the Growth Centres Strategic Assessment Approval.

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 ²	End of program ³	0
Edmondson Park Conservation Agreement⁴			
• Commonwealth-listed Cumberland Plain Woodland ⁵	72 ha	August 2012	COMPLETED
Growth Centres Strategic Assessment approval⁶			
• Commonwealth-listed Cumberland Plain Woodland or other 'grassy woodlands'	2,400 ha	End of program	96.8 ha
• 'High management viability' Cumberland Plain Woodland, or other areas of Cumberland Plain Woodland with regeneration capacity ⁷	205 ha	End of program	96.8 ha
• Shale Sandstone Transition Forest ⁸	132 ha	End of program	44.2 ha
• Turpentine Ironbark Forest	4.4 ha	End of program	2.3
• <i>Acacia pubescens</i>	> 0 populations ²	End of program	0
• <i>Pimelea spicata</i>	> 0 populations ²	End of program	0
• Swift parrot (potential habitat)	> 0 ha habitat ²	End of program	172.4 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	224.6 ha
Mulgoa biobank site funding agreement			
• Threatened ecological communities listed under the EPBC Act	\$1,942,043 ⁹	May 2023	Remaining expenditure required \$1,484,768 ¹⁰

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 meeting 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 2010–11 onwards count towards meeting the Strategic Assessment target. The targets therefore exclude the biodiversity values protected at Wianamatta Nature Reserve and St Mary's Towers biobank site.

7 'High management viability' Cumberland Plain Woodland (CPW) is a subset of Commonwealth-listed CPW that is of particularly high quality. The vegetation protected as part of the 205 ha for 'High management viability' CPW is therefore also counted towards the 2400 ha target for CPW. All of the Commonwealth-listed CPW protected since 2010–11 has been assessed as being 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 Report.

8 Progress towards the target for Shale Sandstone Transition Forest (SSTF) excludes the 4.7 ha protected at Fernhill Central West biobank site in 2014–15 as the funding to protect this vegetation has been counted towards the Mulgoa funding agreement. As noted above, it also excludes SSTF protected prior to 2010–11 at St Mary's Towers.

9 \$1,942,043 in 2012–13 dollar values with indexing must be spent protecting Commonwealth-listed threatened vegetation communities in western Sydney.

10 \$1,484,768, in current dollar values, remains to be spent by the Program in order to meet the target.

2.3 Outcomes for 2014–15

During 2014–15, the program protected an additional 18.2 hectares of threatened vegetation at two biobank sites. Case studies on these investments are provided on the following pages.

In summary, conservation outcomes for the program in 2014–15 included protecting:

- 4.7 hectares of Shale Sandstone Transition Forest by purchasing 50 biodiversity credits from the Fernhill Central West biobank site
- 13.5 hectares of threatened vegetation by purchasing 126 biodiversity credits from the Glenmore Park biobank site. The vegetation comprises:
 - 4.7 hectares of Cumberland Plain Woodland
 - 2.6 hectares of Moist Shale Woodland
 - 6.2 hectares of River-flat Eucalypt Forest.

The Fernhill Central West biobank site adjoins Blue Mountains National Park. The Glenmore Park biobank site (see Figure 8) adjoins and links two separated portions of Mulgoa Nature Reserve. Both sites provide additional conservation benefits by increasing the extent of viable habitat for woodland fauna and flora populations that are supported by the reserves.



Figure 8: The Moist Shale Woodland present on the Glenmore Park biobank site is threatened by invasive under-storey weeds such as African olive, privet and lantana. Ongoing funding through the Biobanking Trust Fund will pay for removal of the weeds and for the regeneration of the native vegetation on the site.

2.4 Case study

Biobanking preserves biodiversity on Fernhill Estate

The Fernhill Central West biobank site

Fernhill Estate (see Figure 9) is a 648-hectare privately owned property in Mulgoa in the Penrith local government area. The estate contains an 1840s homestead as well as stables, paddocks and large areas of remnant bushland. Part of the estate is listed as a 'historic landscape' in the State Heritage Register.

Through the BioBanking Scheme, the landholder is protecting the biodiversity on the estate in perpetuity. The landholder is also considering creating a trust fund to ensure the future of the historic homestead and the establishment of a horse-riding business in the centre of the estate.

The Fernhill Central West biobank site was established independently of the program in April 2014 and protects 147 hectares of bushland in the central part of the property. This is the second biobank site established on the Fernhill property. The 128-hectare Fernhill East biobank site was established in January 2014.

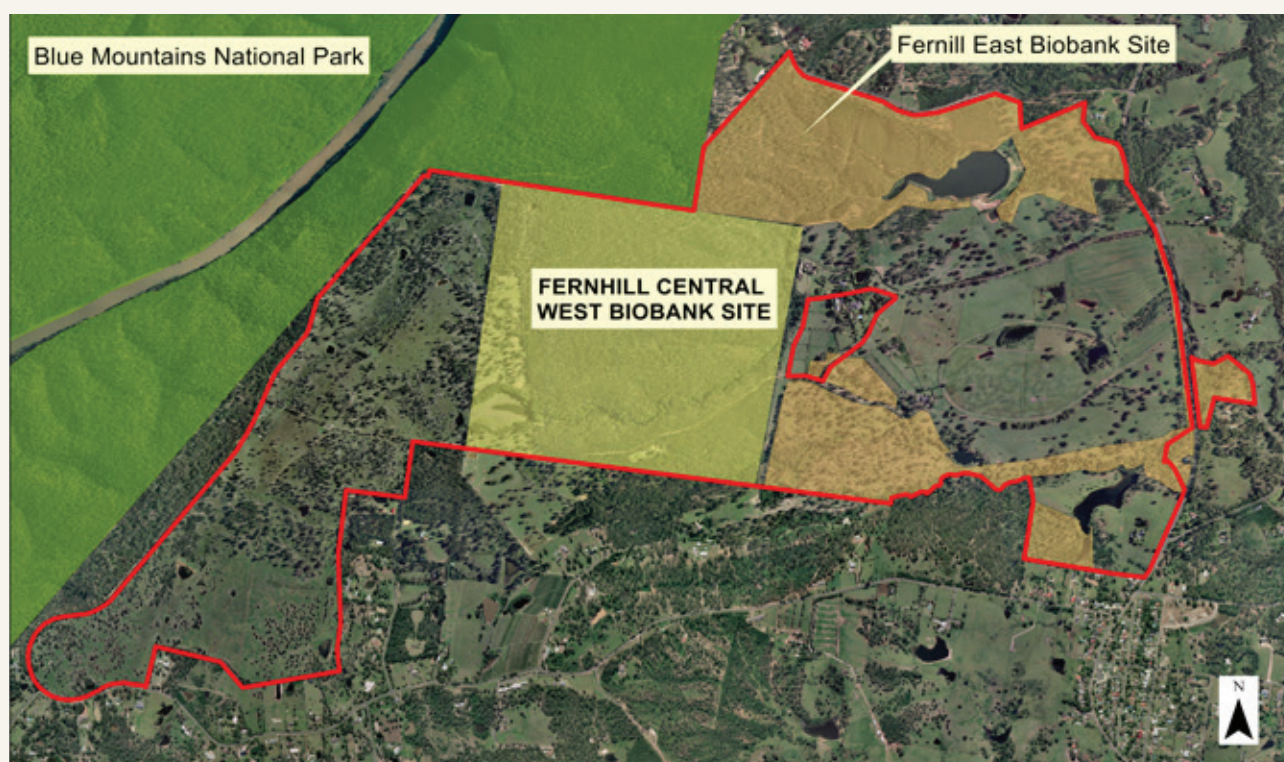


Figure 9: The Fernhill Estate property showing the two biobank sites.

Conserving threatened biodiversity

Fernhill Central West biobank site contains a diversity of regenerating woodland and forests. Almost one-third of the site contains threatened ecological communities including 39 hectares of endangered Shale Sandstone Transition Forest, which is home to threatened woodland birds including the vulnerable varied sittella and glossy black-cockatoo (Table 4). The threatened red-crowned toadlet was also heard calling in two of the creeklines that run through the southern portion of the Fernhill Central West biobank site during the biobanking assessment. There is breeding habitat for this species and extensive areas of additional habitat associated with the riparian areas located within the biobank site.

Table 4: Vegetation summary – Fernhill Central West biobank site

Vegetation community	TSC Act status	Area (hectares)
Shale Sandstone Transition Forest	CE	38.8 ha
Western Sydney Dry Rainforest	E	1.7 ha
Castlereagh Scribbly Gum Woodland	V	2.0 ha
Sydney Hinterland Transition Woodland	Not listed	92.2 ha
Coastal Sandstone Ridgetop Woodland	Not listed	5.0 ha
Lower Blue Mountains Wet Forest	Not listed	5.0 ha
Coastal Freshwater Wetlands	N/A (Artificial)	2.7 ha
Total		147.4 ha

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

Purchasing biodiversity credits

The BioBanking Scheme addresses the loss of biodiversity in New South Wales by giving land with high conservation value an economic value through creating biodiversity credits. These credits can then be sold on the open market. The establishment of Fernhill Central West biobank site created 1233 biodiversity credits for seven vegetation types, including three threatened ecological communities.

In June 2015, 50 biodiversity credits were purchased under the program to protect 4.75 hectares of the critically endangered ecological community Shale Sandstone Transition Forest (see Figure 10), all of which meets the condition criteria for the Commonwealth-listed Shale Sandstone Transition Forest.

The credits were purchased at market value for \$500,000 (excluding GST). This amount was paid directly to the landowner as the Total Fund Deposit for the site had already been satisfied through the sale of other biodiversity credits.

Financial summary – Fernhill Central West biobank site	
Cost to the program to purchase 50 biodiversity credits	\$500,000
GST	\$50,000
Total cost (including GST)	\$550,000

The credit purchase has been counted against the Program's commitment to the Australian Government to protect 'Additional Conservation Outcomes' under the Mulgoa biobank site funding agreement (see Section 1.5).

Management of the biobank site

The site is generally in very good condition. The main threatening processes are weed invasion and grazing by livestock. These threats can be controlled with active and ongoing management. 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.

Figure 10: Critically endangered Shale Sandstone Transition Forest.



OEH

2.5 Case study

Mulgoa's missing link – Glenmore Park biobank site

The Glenmore Park biobank site (see Figure 11) was established in November 2014 on a rural residential property in the Penrith Local Government Area. The biobank site is 15 hectares in size and covers the entire property with the exception of a curtilage for the existing dwelling.

The Glenmore Park biobank site demonstrates the importance that private land conservation plays in supporting public reserves. The biobank site provides a crucial link between the two previously separated portions of Mulgoa Nature Reserve, enhancing the long-term viability of the habitats and species that are protected within the reserve. The combined area of the Mulgoa biobank site (which was funded through the program in 2012–13) and the Glenmore Park biobank site is just under one-third of the size of the adjoining 213-hectare Mulgoa Nature Reserve. The total area of this special bushland that has now been protected is 276 hectares.

The biobank site also forms part of an important biodiversity corridor adjoining Mulgoa Creek (a tributary of the Nepean River), which connects to the Blue Mountains National Park. These corridors play a crucial role in maintaining connections between populations of both animals and plants. They provide links between core areas of habitat for species that would otherwise be isolated and at a greater risk of local extinction.

The biobank site contains the same vegetation types that are present in the adjoining Mulgoa Nature Reserve and consequently their fauna habitat values are likely to be similar. The existing reserve has relatively high fauna habitat values with field surveys identifying seven frog, nine reptile, 18 native mammal and 100 bird species.

Four threatened fauna species have been recorded in the near vicinity of the biobank site during recent field surveys, including the Cumberland Plain land snail (*Meridolum corneovirens*), black-chinned honeyeater (eastern subspecies) (*Melithreptus gularis gularis*), glossy black-cockatoo (*Calyptorhynchus lathami*) and the varied sittella (*Daphoenositta chrysoptera*) (see Figure 13).

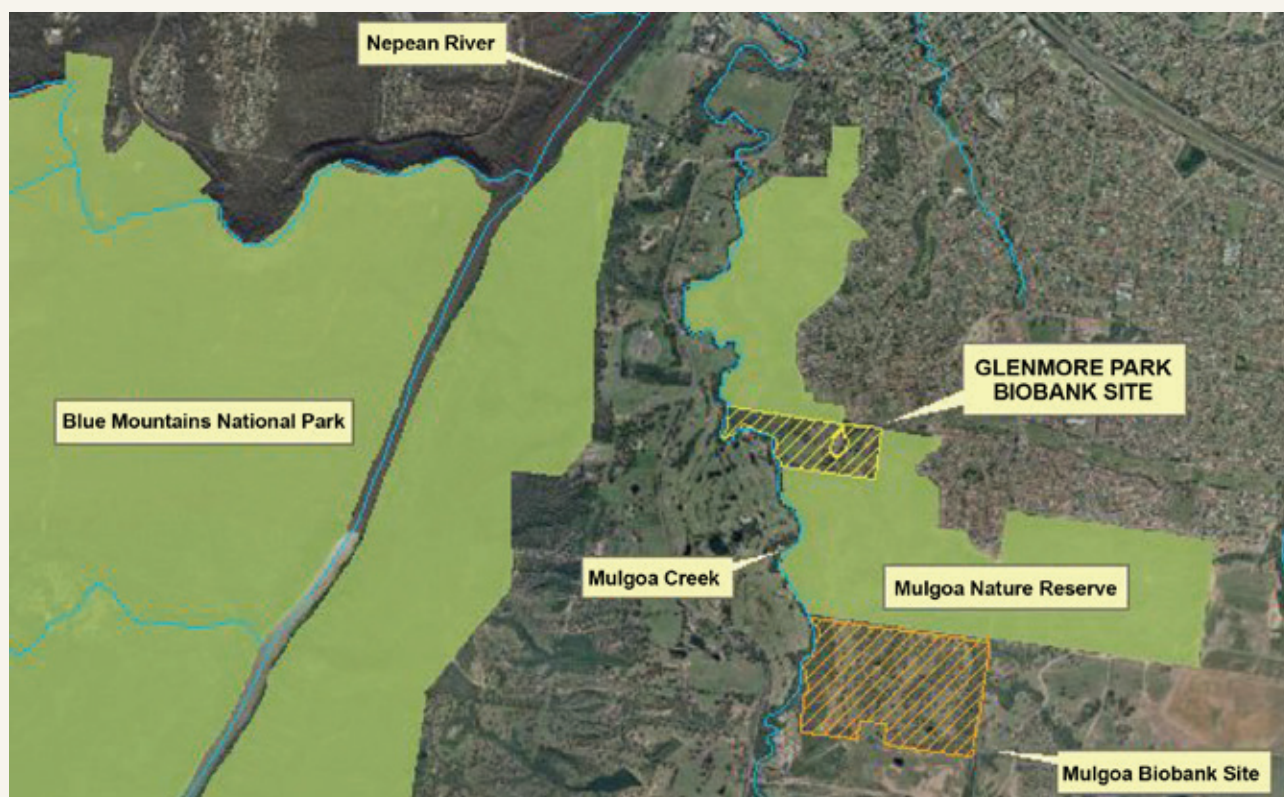


Figure 11: Location of the Glenmore Park biobank site in relation to the Mulgoa Nature Reserve and other protected areas.

Purchasing biodiversity credits

The establishment of the Glenmore Park biobank site created 148 biodiversity credits. In December 2014, the Office of Environment & Heritage (OEH) entered into a credit sale agreement with the owners of the site to purchase all of the credits within a two-year period. (Figure 12.)

A total of 126 biodiversity credits from the biobank site were purchased by the program in 2014–15 for a sum of \$1,558,368 (excl. GST) (Table 5). Of this amount, \$465,142 (excl. GST) was invested in the Biobank Trust Fund to cover the cost of managing the biobank site in perpetuity. The remaining \$1,093,226 (excl. GST) was paid directly to the landowners.

An additional credit, equivalent to 0.10 hectares of Cumberland Plain Woodland, was purchased by OEH this financial year with funding that is not related to the program. The area of the site that is being protected by the program is therefore marginally less than the total area of the biobank site.



It is intended that the remaining 21 biodiversity credits from the biobank site be purchased in the 2015–16 financial year with \$259,728 (excl. GST) of program funds. The biodiversity credits purchased by OEH from the biobank site will be retired so they cannot be used for any other offsets.

Figure 12: Tom Grosskopf, OEH Director Metropolitan Branch (left) signing the credit sale agreement with the owners of the Glenmore Park biobank site in December 2014.

Table 5: Financial summary – Glenmore Park biobank site

Cost to the program to purchase 126 biodiversity credits	\$1,558,368.00
GST	\$155,836.80
Total cost (including GST)	\$1,714,204.80

Conserving threatened bushland

The bushland on the biobank site comprises remnant woodland and forest, all of which are threatened. With the 126 biodiversity credits purchased this financial year through the program, 13.5 hectares of threatened vegetation has been protected (Table 6). The remaining 1.6 hectares will be protected with the final credit purchase in the 2015–16 financial year.

Table 6: Vegetation summary – Glenmore Park biobank site

Vegetation community	TSC Act status	Area (hectares)	Area currently meeting EPBC Act condition criteria (hectares)
Cumberland Plain Woodland	CE	4.7	4.7
Moist Shale Woodland	CE	2.6	1.3
River-flat Eucalypt Forest	E	6.2	not listed
Total		13.5	6.0

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

Managing the biobank site



R. Eckermann

Figure 13: Threatened bird species such as the vulnerable varied sittella *Daphoenositta chrysoptera* have been sighted close to the Glenmore Park biobank site.

The biobank site contains areas of cleared or partially cleared land as well as more densely vegetated areas. Much of the site has been recently grazed.

There are moderate to severe infestations of environmental weeds, such as lantana (*Lantana camara*), blackberry (*Rubus fruticosus* spp. agg.), African olive (*Olea europaea* subsp. *cuspidata*) and privet (*Ligustrum* spp.).

Much of the native woodland and grassland vegetation has high natural resilience and will recover relatively well with the removal of key disturbance factors. Supplementary planting is required in areas of low natural resilience.

Under the biobanking agreement between the landowner and the Minister for the Environment, the owner (any future owner of the property) can continue to use the bushland for passive recreation but cannot develop the site or use it for livestock grazing (Figure 14).

The landowner is responsible for managing the biodiversity on the site by maintaining fences to keep the stock out, revegetating areas where natural regeneration is not sufficient and controlling weeds and feral animals. The program funds invested in the Biobanking Trust Fund will provide the landowner with annual payments to fund, monitor and report on these actions.



OEH

Figure 14: The landowners showing a previously grazed area of the Glenmore Park biobank site to OEH staff. This area will now be managed for conservation.

3 Clearing in the Growth Centres

3.1 Clearing of vegetation in the 'protected lands'

The biodiversity certification of the Growth Centres SEPP requires a minimum of 2000 hectares of 'existing native vegetation' (ENV) identified in Figure 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 2000-hectare target.

When it was certified in 2007, 1981 hectares of 'existing native vegetation' were protected by the Growth Centres SEPP (see Table 7 and Appendix C). All values in the report have been rounded and are presented in Table 7 to one decimal point.

In 2015, 2033 hectares of ENV is protected within the Growth Centres, exceeding the 2000-hectare target. Changes to the overall amount of ENV protected in the Growth Centres occurred for two different reasons in the last year, as set out below:

- 4.1 hectares of ENV was cleared from the protected lands; and
- in March 2015 an amendment was gazetted to the boundaries of certified (i.e. developable) and non-certified land across 12 rezoned precincts. The gazetted changes reflected the outcome of the precinct planning in each of these precincts. The amended boundaries better align with the ENV that is intended to be protected in these precincts and this has resulted in the protection of an additional 69.9 hectares of ENV in non-certified areas.

Table 7: Vegetation change in the Growth Centres

(All values in hectares)	Vegetation present in 2007	Vegetation present in 2015	Vegetation cleared in last year	Vegetation change in last year due to boundary changes	Total vegetation change in last year	Total vegetation change since 2007
Protected land	1,980.7	2,033.1	-4.1	69.9	65.8	52.4
Developable land	1,765.1	1,489.7	-66.9	-69.2	136.2	-275.4
Total	3,745.8	3,522.8	-71	0.7	-70.4	-223.1

Refer to Appendix C for more details.

3.2 Clearing of vegetation in the 'developable lands'

Vegetation amounting to 1765 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 four hectares or is highly threatened with future degradation. The certification provided for 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. (Figure 15.)

As indicated in Appendix C, 1490 hectares of 'existing native vegetation' remains in the 'developable lands' in 2015, with 275 hectares either lost through clearing or reclassified as 'protected land'. This amount includes 67 hectares that have been cleared in the last year.

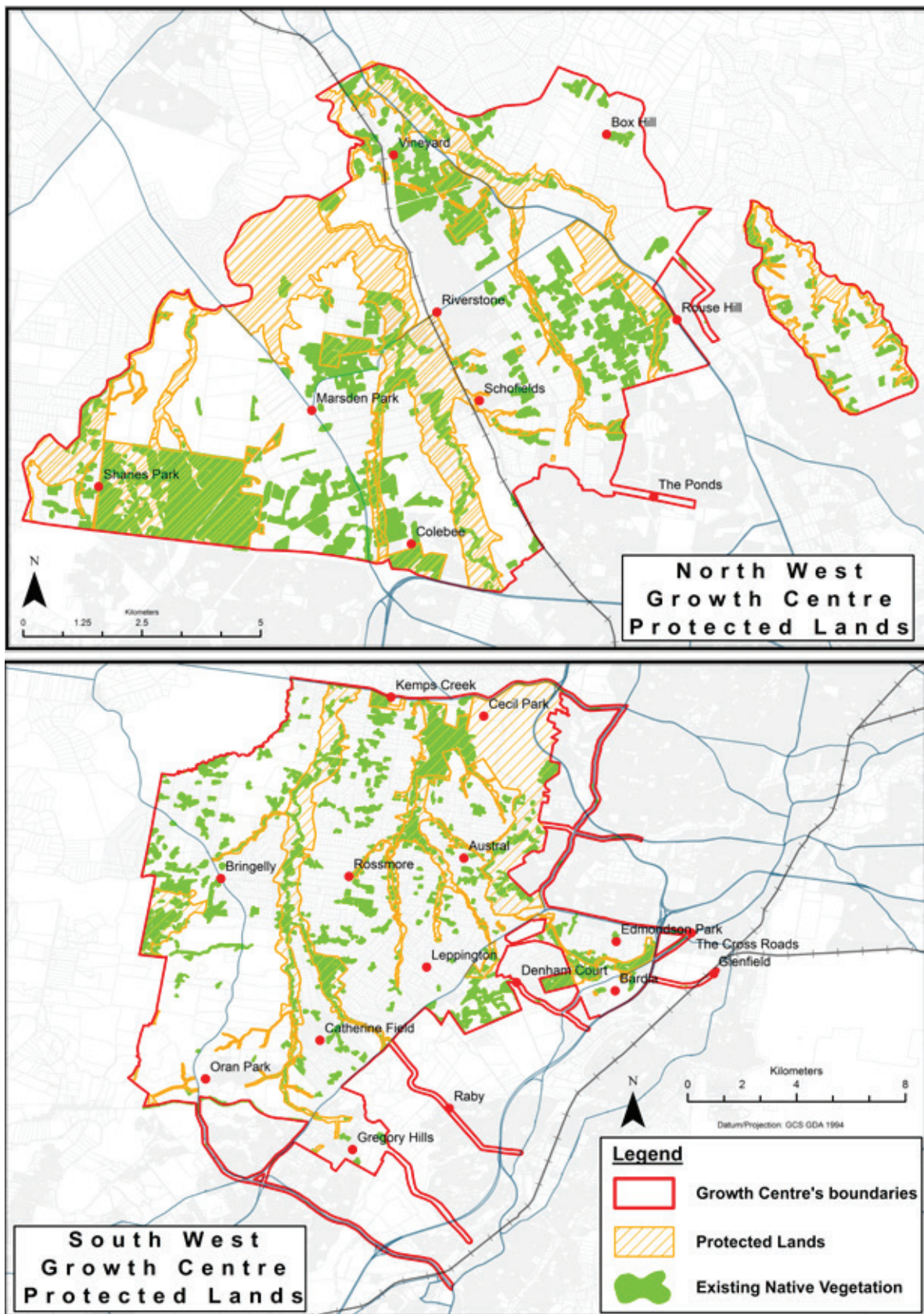


Figure 15: Growth Centres protected lands

Note: The term 'Protected lands' refers to land within the Growth Centres that is not certified, as identified in Amendment 1 to the subject lands maps for the biodiversity certification.

4 Financial report

Opening balance

The program commenced operation in 2014–15 with a deficit of \$5650 owing to a minor overspend in the previous year (see Table 8).

Revenue

Total revenue for the program in 2014–2015 was \$2,432,751 and this was sourced from the NSW Environmental Trust (Trust) \$2,369,119 and the Office of Environment and Heritage (OEH) \$63,632.

Initial funding from the Trust in 2014–2015 was \$3,825,000 (see Appendix D). However, this was reduced by \$1,500,000 following the acceleration of the program in previous financial years which needed to be returned in 2014–2015. In June an advance of \$44,119 was received from the Trust to purchase additional biodiversity credits from the Glenmore Park site. The receipt of these funds will be adjusted in the 2015–2016 financial year.

The OEH funding of \$63,632 was also used to purchase credits from Glenmore Park.

Expenditure

Total expenditure through the program for 2014–15 was \$2,430,218. Of this amount, \$2,058,368 was allocated to the purchase of credits from Fernhill Central West biobank site (\$500,000) and Glenmore Park biobank site (\$1,558,368). Combined with the costs of two operational staff who work with landowners to purchase land or establish conservation agreements, 99% of the total expenditure for the year was spent on operational costs.

The remaining 1% of total expenditure was spent on the program's administrative costs. Administrative costs comprised the salary and on-costs of 0.9 OEH staff. These costs included 60% of the funding for a program manager to address the planning and reporting requirements of the Environmental Trust, administer funding arrangements, supervise staff and coordinate the program's implementation. It also funded 30% of a project officer position to assist in administering the establishment of biobank sites that were vital for the expenditure of project funds.

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 2014–15, these costs amounted to \$120,751 which is 3.2% of the Environmental Trust's initial allocation for the year of \$3,825,000.

Closing balance

The program ended the year with a minor overspend of \$3,117, or 0.1% of total revenue received.

Table 8: Financial summary report^{1,2}

Balance at 1 July 2014	Funds (\$)
Opening balance	5,650
Revenue	
Environmental Trust allocation (net of prior fund acceleration) ³	(2,369,119)
Grant from OEH	(63,632)
TOTAL REVENUE	(2,432,751)
TOTAL REVENUE PLUS OPENING BALANCE	(2,427,101)
Expenditure	
Land purchase for reservation	0
Conservation agreements	
Fernhill Central West biobank site: Credit purchase	500,000
Glenmore Park biobank site: Credit purchase	1,558,368
Operational costs: salaries for 2.0 staff with 26.5% on-costs	248,802
Miscellaneous expenses	2,297
Sub-Total	2,309,467
Initial management of purchased land	0
Administration expenses	
Administration: salaries for 0.9 staff with 26.5% on-costs	120,751
TOTAL EXPENDITURE	2,430,218
Balance at 30 June 2015	
Closing balance	3,117

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.
2. Values in brackets represent either revenue received by the program or a positive balance.
3. The net payment of \$2,369,119 from the Environmental Trust included:
 - allocation of \$3,825,000 as new program funding for 2014–15;
 - allocation of \$44,119 as an advance for re-payment in 2015–16;
 - deduction of \$1,200,000 as the third and final repayment to the Trust for an advance of \$2,670,000 received in 2011–12.
 - This advance enabled the purchase of credits from Mater Dei biobank site; and
 - deduction of \$300,000 as the second of three repayments to the Trust for an advance of \$1,900,000 received in 2012–13.
 - This advance enabled the purchase of credits from Mulgoa biobank site.

Appendix A

Table 9: Vegetation protected by the program at each location

Location ¹		WNR	SMT	Beu	MDei	MHerc	Mul	FE	Ora	FCW	GP	
Vegetation types	Status TSCA ²	Area (ha)	Area (ha)	Area (ha)	Area (ha)	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	16.0	8.9		4.7	162.2
Shale sandstone transition forest	E		32.8	40.1					4.1	4.7		81.7
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				2.6	11.0
River-flat eucalypt forest	E						4.5				6.2	10.7
Sydney coastal river-flat forest	E				5.6							5.6
Western Sydney dry rainforest	E					1.6						1.6
Sydney turpentine ironbark forest	E								14.7			14.7
Castlereagh scribbly gum woodland	V	66.1										66.1
Non-threatened vegetation	-		11.6						10.5			22.1
Cleared land	-	20.0										N/A
Area protected by Program		181.3	80.1	59.5	25.7	22.2	49.7	16.0	38.2	4.7	13.5	490.9
Total vegetation protected by Program³												470.9
Commonwealth-listed communities	Status EPBCA ⁴	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Area (ha)	Total (ha)
Comm.-listed Cumberland Plain woodland ⁵	CE	3.5	33.8	15.0	14.1	12.9	30.4	16.0	3.7		4.7	134.1
Shale sandstone transition forest	E		32.8	40.1					4.1	4.7		81.7
Turpentine-ironbark forest	CE								2.3			2.3
Western Sydney dry rainforest and moist woodland on shale ⁶	CE					3.0	7.0				1.3	11.3
Total Commonwealth-listed communities protected												229.4

1 Locations: WNR (Wianamatta Nature Reserve); Biobank sites: SMT (St Mary's Towers); Beu (Beulah); MDei (Mater Dei); MHerc (Mt Hercules); Mul (Mulgoa); FE (Fernhill East); Ora (Orangeville); FCW (Fernhill Central West); GP (Glenmore Park).

2 TSCA refers to the *NSW Threatened Species Conservation Act*. Status refers to Critically Endangered (CE); Endangered (E) and Vulnerable (V).

3 The total area of vegetation protected by the program excludes the 20 hectares of cleared land protected at Wianamatta Nature Reserve.

4 EPBCA refers to the *Commonwealth's Environmental Protection and Biodiversity Conservation Act*.

5 Commonwealth-listed Cumberland Plain Woodland comprises NSW TSC Act-listed 'Cumberland Plain Woodland' and 'Shale Gravel Transition Forest' where these communities meet the required condition thresholds.

6 Commonwealth-listed Western Sydney Dry Rainforest and Moist Woodland on Shale comprises NSW TSC Act-listed 'Western Sydney Dry Rainforest' and 'Moist Shale Woodland' where these communities meet the required condition thresholds.

Appendix B

Table 10: Threatened species recorded on lands protected by the program

Threatened species	Status TSC Act ¹	No. of sites protected	Locations where species is known to occur
Fauna			
Cumberland Plain land snail	E	7	WNR, SMT, Beu, MDei, MHerc, FE, GP
Eastern freetail-bat	V	1	WNR
Grey-headed flying-fox	V	1	SMT
Koala	V	1	Beu
Large-eared pied bat	V	1	SMT
Little lorikeet	V	1	SMT
Varied sittella	V	4	Mul, FE, FCW, GP
Black-chinned honeyeater: eastern subsp	V	2	Mul, GP
Glossy black-cockatoo	V	2	FCW, GP
Swift parrot	E	1	MDei
Flora			
Nodding geebung (<i>Persoonia nutans</i>)	E	1	WNR
Bynoe's wattle (<i>Acacia bynoeana</i>)	V	1	WNR
<i>Allocasuarina glareicola</i>	E	1	WNR
<i>Dillwynia tenuifolia</i>	V	1	WNR
<i>Grevillea juniperina</i> subsp. <i>juniperina</i>	V	1	WNR
<i>Micromyrtus minutiflora</i>	V	1	WNR
Sydney bush pea (<i>Pultenaea parviflora</i>)	V	1	WNR
Brown Pomaderris (<i>Pomaderris brunnea</i>)	V	1	Beu
Port Jackson heath (<i>Epacris purpurascens</i>)	V	1	SMT
Bargo geebung (<i>Persoonia bargoensis</i>)	E	1	SMT

1. TSC Act refers to the *NSW Threatened Species Conservation Act*. Status refers to Critically Endangered (CE); Endangered (E) and Vulnerable (V).

Table 11: Potential habitat for targeted Commonwealth-listed threatened fauna species

Threatened species	Status EPBC Act ¹	Total area of potential habitat protected (ha)	Locations where species is known to have potential habitat
Fauna			
Swift parrot	E	374.2	WNR, SMT, Beu, MDei, MHerc, Mul, Ora, FE, FCW, GP
Large-eared pied bat	V	80.1	SMT
Grey-headed flying-fox	V	470.9	WNR, SMT, Beu, MDei, MHerc, Mul, Ora, FE, FCW, GP

Key to location names

WNR	Wianamatta Nature Reserve
SMT	St Marys Towers biobank site
Beu	Beulah biobank site
MDei	Mater Dei biobank site
MHerc	Mt Hercules biobank site
FE	Fernhill East biobank site
Ora	Orangeville biobank site
FCW	Fernhill Central West biobank site
GP	Glenmore Park biobank site

1. EPBC Act refers to the *Commonwealth's Environmental Protection and Biodiversity Conservation Act*.

Appendix C

Table 12: Vegetation change in the Growth Centres since certification

(All values are in hectares. Totals may appear to differ from the sum of components because the components have been rounded.)

Land class	Vegetation community	Vegetation present in 2007 ¹	Vegetation present in 2015 ²	Vegetation cleared in last year ³	Vegetation change in last year due to boundary changes ⁴	Total vegetation change in last year ⁵	Total vegetation change since 2007 ⁶
Protected	Castlereagh Swamp Woodland	35.6	35.6	0.0	0.0	0.0	0.0
Protected	Cooks River Castlereagh Ironbark Forest	140.4	140.4	0.0	0.0	0.0	0.0
Protected	Cumberland Plain Woodland	664.4	683.2	-1.2	26.0	24.8	18.8
Protected	Moist Shale Woodland	0.6	0.6	0.0	0.0	0.0	0.0
Protected	Shale Sandstone Transition Forest	37.7	39.2	-0.6	2.9	2.3	1.5
Protected	Shale Gravel Transition Forest	390.7	410.2	-0.9	20.4	19.5	19.5
Protected	River-flat Eucalypt Forest	711.3	723.8	-1.5	20.6	19.1	12.5
Protected	Total	1,980.7	2,033.1	-4.1	69.9	65.8	52.4
Developable	Castlereagh Swamp Woodland	0.0	0.0	0.0	0.0	0.0	0.0
Developable	Cooks River Castlereagh Ironbark Forest	26.0	23.8	0.0	0.0	0.0	-2.2
Developable	Cumberland Plain Woodland	1,252.2	1,073.1	-47.9	-25.7	-73.6	-179.1
Developable	Moist Shale Woodland	0.0	0.0	0.0	0.0	0.0	0.0
Developable	Shale Sandstone Transition Forest	66.2	52.1	-4.4	-2.9	-7.3	-14.1
Developable	Shale Gravel Transition Forest	221.5	183.7	-10.9	-20.4	-31.3	-37.8
Developable	River-flat Eucalypt Forest	199.2	156.9	-3.8	-20.2	-24.0	-42.2
Developable	Total	1,765.1	1,489.7	-66.9	-69.2	-136.2	-275.4
Total	Vegetation	3,745.8	3,522.8	-71.0	0.7⁷	-70.4	-223.1

Notes

1. The amount of 'existing native vegetation' (ENV) present in 2007, approximating the time of certification.
2. The amount of ENV identified in March 2015 using remote sensing analysis.
3. The amount of ENV cleared between March 2014 and March 2015.
4. The change to the amount of ENV due to Amendment 1 to the subject lands maps for the biodiversity certification.
5. The total change in the amount of ENV in the last year due to either clearing or boundary changes.
6. The total change in the amount of ENV between 2007, approximating the time of certification, and March 2015.
7. During the detailed precinct planning process the boundaries of the protected lands are checked and verified. This discrepancy of 0.7 hectares is the result of cleaning the original protected lands boundaries.

Appendix D

Calculation of the program's funding allocation for 2014–15

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 13 provides the calculations for the program's funding allocation for 2014–15 and is based on information provided by the Department of Planning and Environment in February 2014.

Table 13: Calculation of program funding for 2014–15

Total remaining lot production at start of 2014–15 (Note that this contains both residential and non-residential lot equivalents)	213,080 lots
Predicted lot production for 2014–15 (Note that this contains both residential and non-residential lot equivalents)	3,320 lots
Adjustment for difference between actual and predicted lot production from the previous completed year (2012–13)	-983 lots
Predicted lot production for 2014–15 (adjusted for past actuals)	2,337 lots
Percentage of total remaining lots predicted to be produced in 2014–15 (adjusted for past actuals) (i.e. 2337 as a percentage of 213,080 lots)	1.0968 %
Total remaining unspent funds at start of 2014–15 (2005–06 \$ values)	\$380,612,545
Allocation for this year in 2005–06 \$ values (i.e. 1.0968% of \$380,612,545)	\$4,174,449
Land index value (converts 2005–06 \$ values to current \$ values) (based on an increase in the land index from 2013–14 of 2.803%)	0.9164
Required allocation for 2014–15 in current \$ values (i.e. 0.9164 x \$4,174,449)	\$3,825,320
Total allocation in current dollar values (rounded)	\$3,825,000

