

AUDITOR-GENERAL'S REPORT

PERFORMANCE AUDIT

Recycling and Reuse of Waste by the NSW Public Sector

Department of Environment and Climate Change



The Legislative Assembly
Parliament House
SYDNEY NSW 2000

The Legislative Council
Parliament House
SYDNEY NSW 2000

In accordance with section 38E of the *Public Finance and Audit Act 1983*, I present a report titled **Recycling and Reuse of Waste by the NSW Public Sector: Department of Environment and Climate Change**.

A handwritten signature in black ink that reads 'Peter Achterstraat'.

Peter Achterstraat
Auditor-General

Sydney
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Contents

Foreword

Executive summary	1
1. Has the Waste Reduction and Purchasing Policy been implemented effectively?	9
1.1 Was a program developed to achieve the government's policy objectives?	11
1.2 Have the requirements for each agency been adequately communicated and support provided?	12
1.3 Is progress adequately monitored, evaluated and reviewed?	14
1.4 Are results and progress reported adequately?	14
1.5 Is the program reviewed and Government informed of any need for change?	15
1.6 Do the WRAPP program goals compare favourably with similar programs in other jurisdictions?	17
2. Has the public sector reduced waste and increased recycling?	19
2.1 Has recycling and reuse increased?	20
2.2 Has the use of recycled content material increased?	24
2.3 Are the results outlined in the implementation program being achieved?	27
2.4 Does WRAPP performance compare favourably with similar programs in other jurisdictions?	28
Appendix	29
Appendix 1 About the audit	30
Performance Audits by the Audit Office of New South Wales	33

Foreword

The New South Wales Government has a policy objective to reduce greenhouse gases.

Minimising, reusing and recycling waste material are important activities for reducing the consumption of natural resources and energy, and the generation of greenhouse gases.

The NSW Government has an important role to play in encouraging the public sector, industry and the community to minimise, reuse and recycle waste. The NSW public sector is also a large consumer of products and a significant generator of waste.

In 1997, the NSW Government introduced the Waste Reduction and Purchasing Policy (WRAPP). This policy applies to all of its agencies and aims to reduce waste and increase recycling and reuse.

This audit examines what has been achieved since WRAPP was introduced, and how well it has been implemented.

It highlighted to me that we can all do more to increase recycling and reuse.

For our part, the Audit Office looked more closely at printing and found the quality and cost of recycled content paper is now very close to virgin paper.

I have therefore decided to print this and future reports on paper with recycled content.

I encourage other agencies to have another look at their practices to see if they too can do more to increase recycling and reuse.

Peter Achterstraat
Auditor-General

June 2008

Executive summary

The focus of our audit

The Waste Reduction and Purchasing Policy (WRAPP) was introduced in September 1997 to encourage NSW Government agencies to minimise waste generation and reduce the amounts of waste going to landfill.

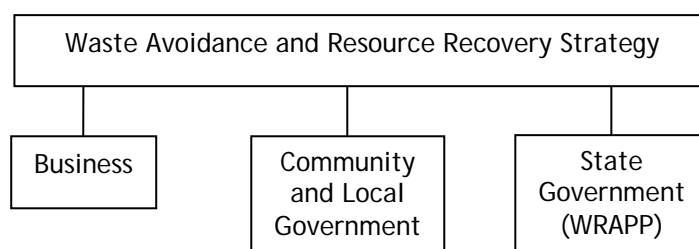
Specifically, the policy required each government agency to minimise, reuse and recycle generated wastes and to give priority to buying materials with recycled content where they are cost and performance competitive. The policy was the first of its kind in Australia and other governments now have similar policies.

The policy applies to four key areas: paper products; office equipment and components; vegetation materials such as leaves, tree clippings and prunings; and construction, demolition and excavated materials.

The Department of Environment and Climate Change (DECC) collects and analyses individual agency results and prepares a whole-of-government performance report every two years. DECC assists agencies with WRAPP Plans, reviews performance, identifies and promotes best practice and provides some training. The Department also manages the WRAPP website for information sharing between agencies and the public.

This audit assesses whether DECC has successfully supported the policy and whether its implementation has been effective in reducing waste and improving recycling and reuse. This audit did not focus on individual agency performance on waste reduction, but rather the results achieved across the public sector.

Statewide targets for waste reduction were introduced as part of the Waste Avoidance and Resource Recovery Strategy in 2003. This Strategy applies to business, government and the community and sets overall targets to work towards. The WRAPP program is an integral component of this strategy.



Audit opinion

The Government's WRAPP initiative has achieved its intended outcome. The public sector has reduced the proportion of waste going to landfill from 27 per cent to eight per cent over the last six years, and has increased its use of recycled content materials.

Most agencies have played their part, identifying how waste can be reduced and changing practices accordingly.

Some of the success of this policy can be attributed to the approach taken to support it. DECC provided clear guidance and support to agencies to implement the policy. It has also routinely monitored and evaluated agency performance and published the results. It has even compared this program to similar programs elsewhere to see if changes were needed.

However, the policy is now ten years old and much has changed in community expectations about reducing damage to the environment. For example, reducing an organisation's carbon footprint is one of the latest initiatives where government intends to take a leading role. There have also been other changes in the quality and variety of recycled product available on the market that agencies may not be aware of.

It is time to review the policy, both to renew its impetus and to ensure it remains relevant.

Key findings

Chapter 1: Has WRAPP been implemented effectively?

The NSW public sector has effectively implemented the government's waste reduction and purchasing policy.

DECC has done a good job in promoting the implementation of WRAPP by public sector agencies. It:

- developed a program to achieve the government's policy objectives
- communicated the program requirements to each agency
- provided support to agencies through seminars, publications and contact officers
- monitored, evaluated and reviewed progress at agency and whole-of-government levels
- publicly reported whole-of-government progress and results in 2004 and 2006.

For the most part, agencies have also done well in implementing WRAPP. Most of them have met program requirements to:

- produce and implement plans to minimise waste and increase recycling
- submit data and information to DECC on progress with WRAPP on a biennial basis
- reported on WRAPP progress in their annual report.

However, a recent change in WRAPP reporting requirements for small agencies, following a review of government reporting, is likely to have a negative impact on DECC's ability to monitor WRAPP outcomes.

We identified some opportunities to further improve the program.

**Chapter 2:
Has the public
sector reduced
waste and
increased
recycling?**

DECC reviewed and provided feedback to agencies on their initial WRAPP plans and reports, but regular review would provide more assurance that these are up-to-date.

There are targets for waste reduction, reuse and recycling, but no targets for purchasing materials with recycled content.

Some relevant State Contracts do not contain specific clauses to encourage the purchase of price and performance competitive recycled content products.

The WRAPP program was the first of its kind in Australia when introduced in 1997, and DECC has expanded the range of materials covered by it since then. Given the increased opportunities for recycling and reuse which have emerged over the last decade, and the continued pressure on the public sector to reduce waste, DECC should undertake a review of WRAPP to determine appropriate improvements.

The WRAPP program has been successful. Public sector recycling and the use of materials with recycled content have both increased since the introduction of WRAPP. For example, the proportion of waste reused or recycled increased from 73 per cent in 2001 to 92 per cent in 2007. The proportion of paper purchased with recycled content increased from 27 per cent in 2001 to 35 per cent in 2007.

Targets for recycling and reuse are contained in the Waste Avoidance and Resource Recovery Strategy. Whilst the public sector may not achieve the overall target to hold level the total waste generated between 2003 and 2008, it has largely achieved the recycling targets set for 2014.

Recommendations

In order to build on the Government's current efforts to reduce waste and increase recycling, we made a number of recommendations in this report. These include:

- introducing targets to encourage the purchase of recycled content materials
- making it easier for agencies to buy recycled content goods such as recycled content paper and toner cartridges
- identifying practices to reduce paper consumption such as greater use of electronic publishing and double-sided printing.

Specifically, we recommend that DECC:

- develop specific targets as part of WRAPP for purchasing materials with recycled content and report on performance in its biennial reports (page 12)
- regularly review agency WRAPP plans, including plans prepared by state owned corporations, against policy requirements and provide feedback (page 14)
- in consultation with the Department of Commerce, review relevant State Contracts to ensure they assist agencies to optimise WRAPP outcomes (page 14)
- encourage and assist the large waste generators exempted from biennial reporting to continue to provide data on their WRAPP performance (page 14)

- in consultation with NSW Treasury, write to non-complying agencies and remind them of their WRAPP obligations under annual reporting legislation (page 15)
- review the WRAPP program to:
 - ensure it reflects current thinking in sustainable purchasing, recycling and reuse (page 16)
 - recognise the important role of the Department of Commerce in the implementation of WRAPP (page 16)
 - consider requiring large waste generating agencies to report performance against their own individual targets (page 17)
 - identify further measures to reduce overall paper consumption and increase the use of recycled content paper (page 26)
 - clarify the method to be used for assessing and reporting the amounts of construction waste generated, especially fill and virgin excavated natural material (page 28)
 - consider introducing more challenging targets for recycling and reuse which are specific to WRAPP (page 28).

Response from the Department of Environment and Climate Change

Thank you for the opportunity to provide comments on the Performance Audit Report - Recycling and reuse of Waste by the NSW Public Sector.

I am pleased to note that the report finds that the implementation of the Government's Waste Reduction and Purchasing Policy (WRAPP) has been implemented effectively by the Department of Environment and Climate Change (DECC) and that this has assisted NSW government agencies to deliver substantial improvements in waste reduction, recycling and use of materials with recycled content by government agencies since the policy commenced in 1997.

I am pleased that the report recognises the work that DECC has done over the last 10 years to support agencies to establish baseline performance and implement the policy through Action Plans and biennial reporting of data. The policy principles are now generally well integrated into agency purchasing and waste management decisions. To build the knowledge and skills of agency staff, DECC has developed guidelines, training courses, education resources, conducted information seminars and workshops and maintains a comprehensive WRAPP web site.

I believe that the report's recommendations will assist DECC and other agencies to continue to improve their waste reduction and purchasing performance. A number of these recommendations have already been addressed in the recent announcement by the Premier relating to a range of Government Agency Sustainability actions. These include a requirement for agencies to purchase 85 per cent of their copy paper with recycled content by 2014 and to specify inclusion of recycled content paper when seeking quotes for external printing of documents.

DECC will incorporate the other recommendations in this Report into its ongoing work program commencing in 2008-9. Specifically, DECC will:

- Further review the WRAPP program to ensure it maximises opportunities to reduce waste and use recycled content products. In particular, DECC will explore synergies with other government initiatives and commitments including the NSW State Plan, the Climate Change Action Plan, the Sustainability Policy for NSW Government Agencies and Waste Avoidance and Resource Recovery Strategy;*
- Further review and monitor WRAPP agency plans, commencing with major generators and purchasers since these can provide a model to others as well as helping to drive market development for recycled materials;*
- Monitor progress against the recently established targets for recycled content paper purchase and examine opportunities to establish further specific targets;*
- Examine opportunities to further streamline agency reporting and encourage large exempted waste generators to continue to report data and encourage exempted agencies to report in their Annual reports; and*
- Continue to work closely with the Department of Commerce to ensure that relevant State Contracts optimise purchasing and recycling opportunities.*

The outcome of the audit is a positive one and I would extend my thanks to the audit team for the open and professional manner in which the audit was conducted.

We look forward to meeting the challenges of improved resource recovery and the reduction of waste to landfill as we work together for a sustainable future for all.

(signed)

*Lisa Corbyn
Director General*

Dated: 28 May 2008

1. Has the Waste Reduction and Purchasing Policy been implemented effectively?

At a glance

In this chapter, we answer the question: Has the NSW public sector implemented adequately the government's waste reduction and purchasing policy?

Our assessment

The NSW public sector has effectively implemented the government's waste reduction and purchasing policy.

DECC has done a good job in promoting the implementation of WRAPP by public sector agencies. It:

- developed a program to achieve the government's policy objectives
- communicated the program requirements to each agency
- provided support to agencies through seminars, publications and contact officers
- monitored, evaluated and reviewed progress at agency and whole-of-government levels
- publicly reported whole-of-government progress and results in 2004 and 2006.

For the most part, agencies have also done well in implementing WRAPP. Most of them have met program requirements to:

- produce and implement plans to minimise waste and increase recycling
- submit data and information to DECC on progress with WRAPP on a biennial basis
- reported on WRAPP progress in their annual report.

However, a recent change in WRAPP reporting requirements for agencies with fewer than 200 employees, following a review of government reporting, is likely to have a negative impact on DECC's ability to monitor WRAPP outcomes.

We identified some opportunities to further improve the program.

DECC reviewed and provided feedback to agencies on their initial WRAPP plans and reports, but regular review would provide more assurance that these are up-to-date.

There are targets for waste reduction, reuse and recycling, but no targets for purchasing materials with recycled content.

Some relevant State Contracts do not contain specific clauses to encourage the purchase of price and performance competitive recycled content products.

The WRAPP program was the first of its kind in Australia when introduced in 1997, and DECC has expanded the range of materials covered by it since then. Given the increased opportunities for recycling and reuse which have emerged over the last decade, and the continued pressure on the public sector to reduce waste, DECC should undertake a review of WRAPP to determine appropriate improvements.

1.1 Was a program developed to achieve the government's policy objectives?

Our assessment The WRAPP program was introduced in 1997. Agencies were required to develop waste reduction and purchasing strategies and report to DECC on progress. DECC has enhanced the program by expanding the range of materials covered by the policy and better reporting on outcomes.

DECC could improve the program further by setting targets for purchasing materials with recycled content.

Agencies required to minimise waste The WRAPP program was introduced in September 1997, requiring all government agencies to minimise, reuse and recycle waste and to purchase price and performance competitive recycled content products.

Exhibit 1: Processing construction material for reuse



Source: DECC 2008

A guide, produced by DECC, was issued with the policy. Agencies needed to reduce waste in four areas: paper products, office equipment and components, vegetation material, and construction and demolition material. Priority was also to be given to buying materials with recycled content where they were cost and performance competitive.

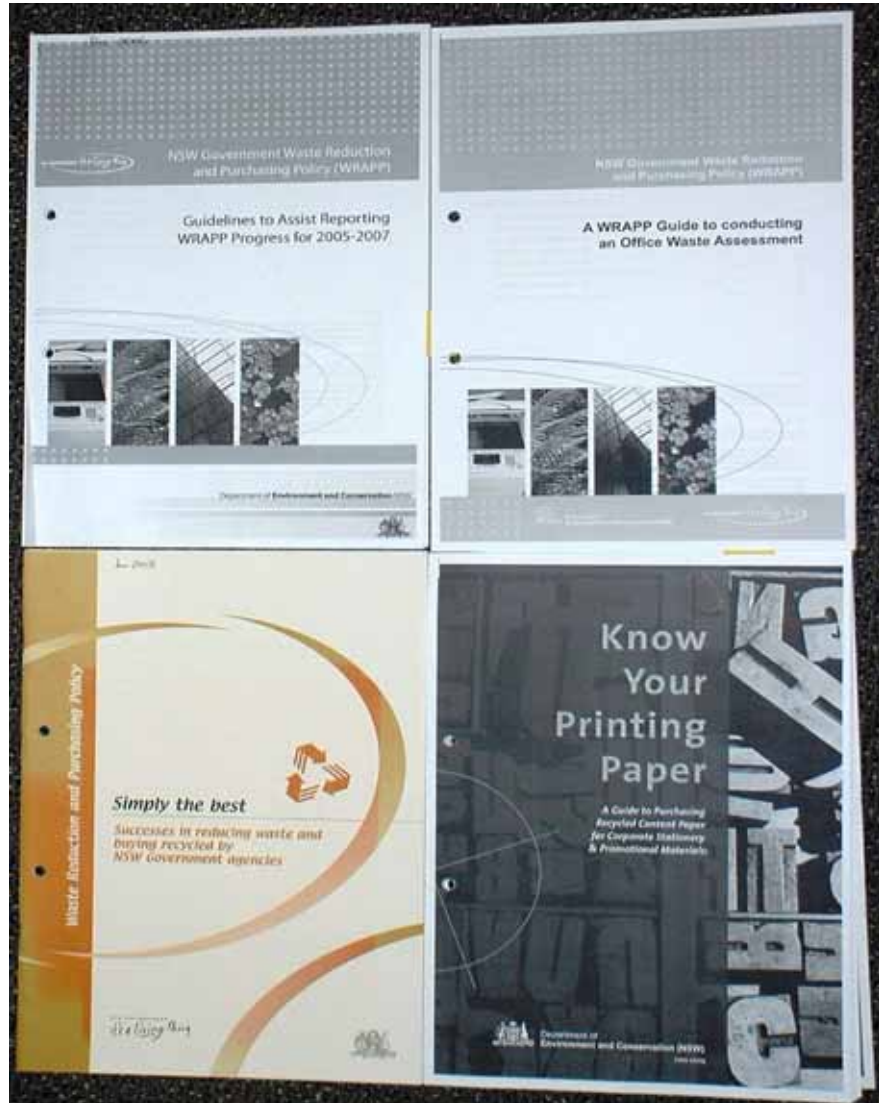
Agencies required to submit plans Agencies had to develop and submit WRAPP plans to DECC outlining how they would meet the requirements of the policy, as well as keep track of the amounts of waste generated.

Agencies also had to submit biennial reports on performance. Guidelines to assist in WRAPP reporting were issued by DECC for the four reporting periods (ie 2001, 2003, 2005 and 2007). At each cycle, the guidelines have extended the types of waste and activities to be covered by the program. For example, the latest guidelines require agencies that manage public places, such as the Department of Arts, Sport and Recreation, to provide information on their recycling systems.

Targets set in 2003	<p>Although the WRAPP program does not include specific targets for public sector performance, statewide targets were introduced as part of the Waste Avoidance and Resource Recovery Strategy in 2003. This Strategy applies to business, government and the community and sets targets to work towards. The relevant targets are:</p> <ul style="list-style-type: none">▪ to hold level the total waste generated for the next five years (2003-2008)▪ increase recovery and use of materials from the commercial and industrial waste stream, from 26 per cent (in 2000) to 66 per cent by 2014▪ increase recovery and use of materials from the construction and demolition sector from 65 per cent in 2000 to 76 per cent by 2014. <p>DECC considers the WRAPP program should meet or better these targets.</p> <p>However, the Strategy does not include a target for purchasing recycled content products, such as recycled paper, whereas some other jurisdictions do. For example, the Scottish Government has set targets for recycled content in printing and writing paper and also recycled content for construction materials.</p>
Recommendation	<p>We recommend that DECC develop specific targets as part of WRAPP for purchasing materials with recycled content and report on performance in its biennial reports.</p>
	<p style="text-align: center;">1.2 Have the requirements for each agency been adequately communicated and support provided?</p>
Our Assessment	<p>DECC provided guidance and feedback to agencies on the quality of initial plans and reports. Agency performance may be improved further if DECC reviewed agency WRAPP plans on a regular basis and provided feedback. Better results may also be achieved by ensuring WRAPP requirements are included in procurement contracts.</p>
DECC has supported WRAPP	<p>DECC issued a guide to WRAPP in 1997 outlining how agencies could minimise waste and purchase more recycled content products. DECC also issued guidelines for agencies on what and how to report on performance for the four reporting periods.</p> <p>In supporting agencies, DECC has conducted seminars explaining WRAPP requirements for each reporting period.</p> <p>DECC has also produced a range of publications designed to support recycling and reuse in NSW. These include recycling directories, better practice case studies, specifications for recycled materials, guides to purchasing recycled paper products and guidelines for preparing waste assessments and for developing WRAPP plans.</p> <p>DECC also provided feedback to agencies on WRAPP plans in 1999 and on reports in 2001 and 2003. DECC has not provided feedback on plans submitted by agencies after that time.</p> <p>Whilst DECC has done well to provide feedback on agency plans and reports, it may further improve WRAPP by reviewing plans on a more regular basis.</p>

In addition, state owned corporations (SOCs) have only been required to submit WRAPP plans since September 1999. So far no feedback has been provided to SOC's on these plans.

Exhibit 2: Some of the WRAPP guidance material issued by DECC



Source: Audit Office 2008

State Contracts can help results

Agencies can only do so much when it comes to purchasing recycled content products. Many purchasing decisions are influenced by what is available through State Contracts as established by the Department of Commerce.

However, some pre-existing State Contracts relevant to WRAPP, such as the contracts for office supplies and for imaging equipment, including photocopiers, do not contain specific clauses that would encourage the purchase of price and performance competitive recycled content products. The Department of Commerce advises that it is now current practice for relevant contract Requests For Tender to include WRAPP principles in the specifications, evaluation process and contracts.

- Recommendations** We recommend that DECC:
- regularly review agency WRAPP plans, including plans prepared by SOCs, against policy requirements and provide feedback
 - review relevant State Contracts in consultation with Department of Commerce to ensure they assist agencies to optimise WRAPP outcomes.

1.3 Is progress adequately monitored, evaluated and reviewed?

Our assessment DECC monitors and evaluates agency performance regarding the implementation of WRAPP and produces whole-of-government reports on achievements.

A recent change in WRAPP reporting requirements for small agencies may adversely impact DECC's ability to provide a complete report on WRAPP outcomes.

Progress has been monitored DECC monitors WRAPP progress. It produced a whole-of-government report on WRAPP in 2004 and 2006, based on data from agencies. The reports include results for reuse and recycling and the use of recycled content material. They also highlight better practice initiatives to encourage agencies to do more.

Data from agencies is not audited. To test the validity of results, DECC advises that it reviews the data from agencies to identify any significant divergence from previously reported levels. DECC liaises with officers in each agency if any anomalies are identified.

DECC also requires the Chief Executive to sign-off that the agency WRAPP report is complete.

Reporting requirements have changed Recent changes to government reporting requirements mean that agencies with less than 200 employees are no longer required to:

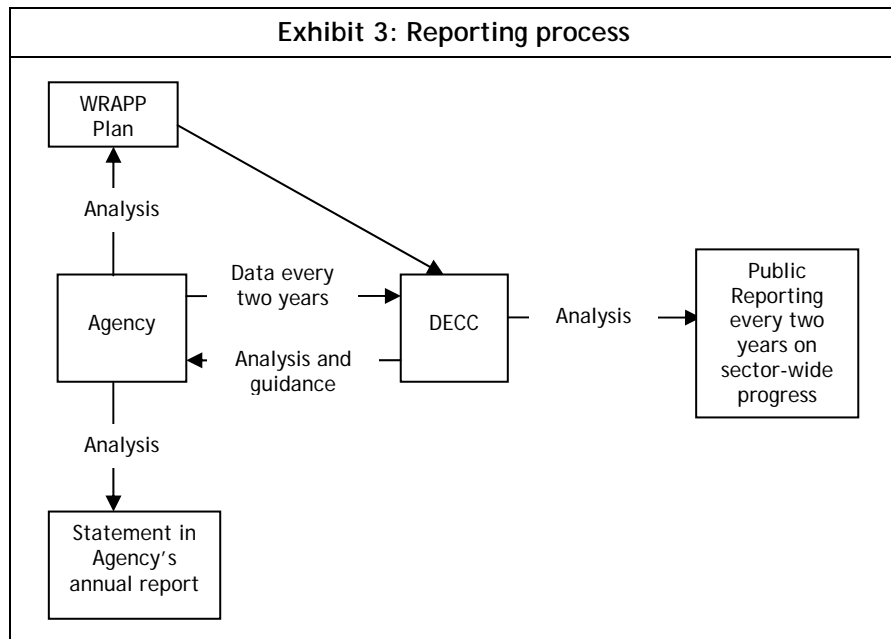
- provide information and data on WRAPP progress to DECC
- provide WRAPP progress reports each year in their annual report, and instead need to do so every three years.

These reporting changes are likely to diminish DECC's ability to monitor WRAPP progress for large waste generators, such as Landcom and the Sydney Olympic Park Authority. These agencies have fewer than 200 employees and are therefore exempt from providing data. Conversely, agencies with just over 200 employees that operate solely in an office environment, producing relatively small quantities of waste, are still required to provide biennial data on recycling.

Recommendation We recommend that DECC encourage and assist the large waste generators exempted from biennial reporting to continue to provide data on their WRAPP performance.

1.4 Are results and progress reported adequately?

Our assessment DECC and agencies report adequately on performance with WRAPP on a biennial basis. Around 95 per cent of agencies provided data and information to DECC in 2007.



Source: Audit Office 2008

Agencies are required to provide data and information to DECC on progress with WRAPP on a biennial basis. Compliance has been high with around 95 per cent of agencies submitting WRAPP data and information in 2007.

Results have been reported

DECC has analysed agency information and published reports on WRAPP progress in 2004 and 2006. These reports include results against statewide targets for waste avoidance. The reports were circulated to agencies and are available to the public on the DECC website and a dedicated WRAPP website.

Annual reporting could improve

Annual reporting legislation requires agencies to provide a statement on the implementation of WRAPP, including information on measures taken and progress in reducing waste, resource recovery, and the use of recycled materials. DECC reviewed agency annual reporting in 2006 and found that only around 80 per cent of agencies were providing this information.

Recommendation

We recommend that DECC, in consultation with NSW Treasury, write to non-complying agencies and remind them of their obligations under annual reporting legislation.

1.5 Is the program reviewed and Government informed of any need for change?

Our assessment

The WRAPP program, when implemented in 1997, was the first of its kind in Australia. Although DECC has updated WRAPP guidelines and expanded the range of materials covered by the program, given the increased opportunities for recycling and reuse which have emerged since that time and the continued pressure on the public sector to reduce all forms of waste, WRAPP should now be reviewed.

Waste management is improving

Since the WRAPP program was introduced in 1997, there have been developments in waste management and the production of materials with recycled content. These include the introduction of the Waste and Environment Levy, changes to legislation dealing with waste, improved capacity to process different kinds of waste and a growing awareness and demand for recycled content materials.

DECC has updated and improved WRAPP reporting guidelines and extended the range of materials covered by the program to include computer equipment and containers such as bottles and cans. It could further expand reporting to include car tyres and other office equipment such as photocopiers and printers.

Exhibit 4: Sorting of containers for recycling



Source: DECC 2008

The public and private sector are under increasing pressure to reduce waste and reduce environmental impacts. In addition, encouraging sustainable production through environmentally responsible purchasing is becoming an increasingly important issue for government. For example, in purchasing paper products, the New Zealand Government considers whether the harvesting was legal, the recycled content, the type of bleaching chemicals used and the proportion harvested from sustainable growth forests.

Recommendation

We recommend that DECC review the WRAPP program to ensure it reflects current thinking in sustainable purchasing, recycling and reuse. The program should also recognise the important role of the Department of Commerce in the implementation of WRAPP.

1.6 Do the WRAPP program goals compare favourably with similar programs in other jurisdictions?

Our assessment	The WRAPP program goals compare favourably with program goals in other jurisdictions. It provides for purchasing and recovery categories and requires performance reports to be published.
Comprehensive data on performance	<p>DECC reviewed the WRAPP against similar policies in Australia and overseas in 2006. Three international programs scored highest in DECC's analysis with the WRAPP program ranked fourth out of 12 programs and first compared to other Australian States. The attributes that made WRAPP one of the highest scoring programs were the inclusion of purchasing and recovery categories and the availability of data to provide performance trends over time.</p> <p>The three international programs that scored highest required detailed annual reporting by individual agencies against specific targets.</p>
Recommendation	It is recommended that DECC, in reviewing the program, consider requiring large waste generating agencies to report performance against their own individual targets.

2. Has the public sector reduced waste and increased recycling?

At a glance

In this chapter we answer the question: Has the NSW public sector reduced waste and increased recycling?

Our assessment

Since the introduction of WRAPP, the public sector has increased recycling and reduced the amount of waste going to landfill.

Agencies have developed plans to promote the recycling and reuse of generated waste and the purchase of recycled content materials. The greater recycling and reuse occurring suggests that these plans have been successful. For example, the proportion of waste reused or recycled increased from 73 per cent in 2001 to 92 per cent in 2007. The proportion of paper purchased with recycled content increased from 27 per cent in 2001 to 35 per cent in 2007.

Targets for waste reduction, reuse and recycling are contained in the Waste Avoidance and Resource Recovery Strategy. Whilst the public sector may not achieve the overall waste reduction target in the Strategy, it has largely achieved the recycling targets set down for 2014.

2.1 Has recycling and reuse increased?

Our assessment

The public sector has increased the recycling and reuse of waste, and reduced the amount of waste going to landfill.

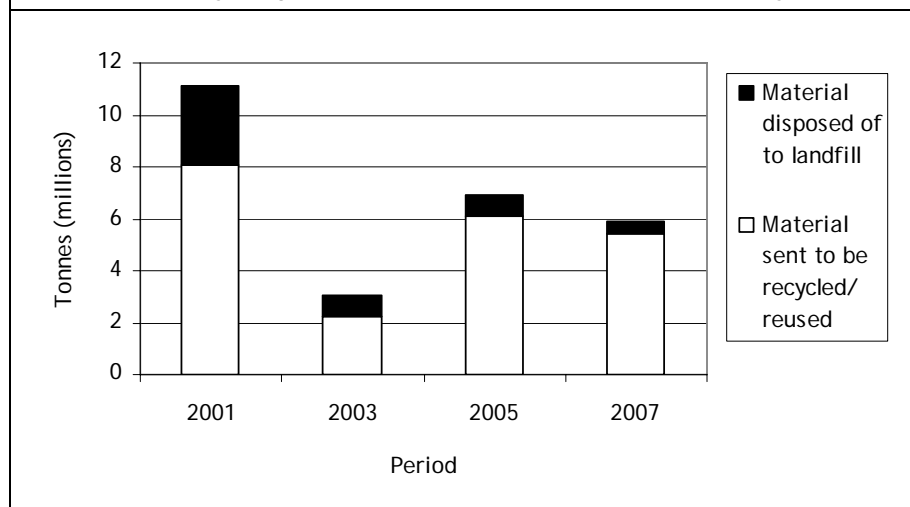
Exhibit 5: Waste recycling and reuse by the public sector		
Waste type	Percentage reused or recycled	
	2001	2007
Overall	73	92
Construction materials	73	93
Paper and cardboard	60	79
Vegetation	88	64
Computer equipment	51	92

Source: DECC 2008

Reduced amounts of waste going to landfill

Since the introduction of WRAPP, the public sector has increased the proportion of material it sends for recycling and reuse. Between 2001 and 2007, the overall amount of material covered by WRAPP going to landfill fell from around three million tonnes to around 500,000 tonnes. The proportion of waste recycled increased from 73 per cent in 2001 to 92 per cent in 2007. Although vegetation waste going to landfill increased, this was more than offset by a decrease in construction waste going to landfill.

Exhibit 6: Recycling and disposal of all materials covered by WRAPP



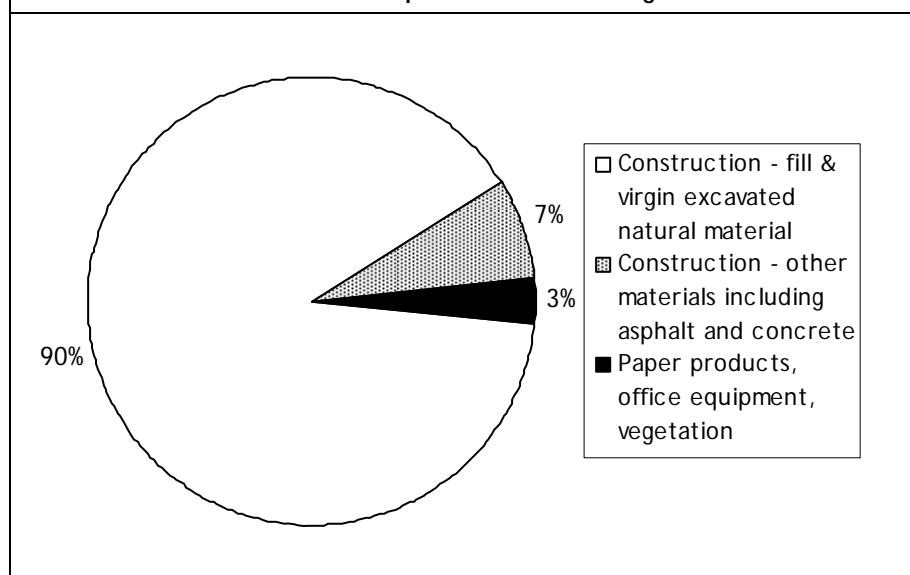
Note: Large variations in totals attributed to construction activity (see Exhibit 8)
 Source: DECC 2008

It should be noted that these results have been achieved while other environmental policy initiatives such as stronger regulation of waste and increases in the waste levy have come into play. Nevertheless, the results do suggest an increased effort by agencies to reuse and recycle waste.

Most waste is generated from construction

Construction activity generates the vast majority of public sector waste. Construction and demolition material makes up around 97 per cent of waste reported under WRAPP. It therefore provides some of the best opportunities for recycling and reuse of materials.

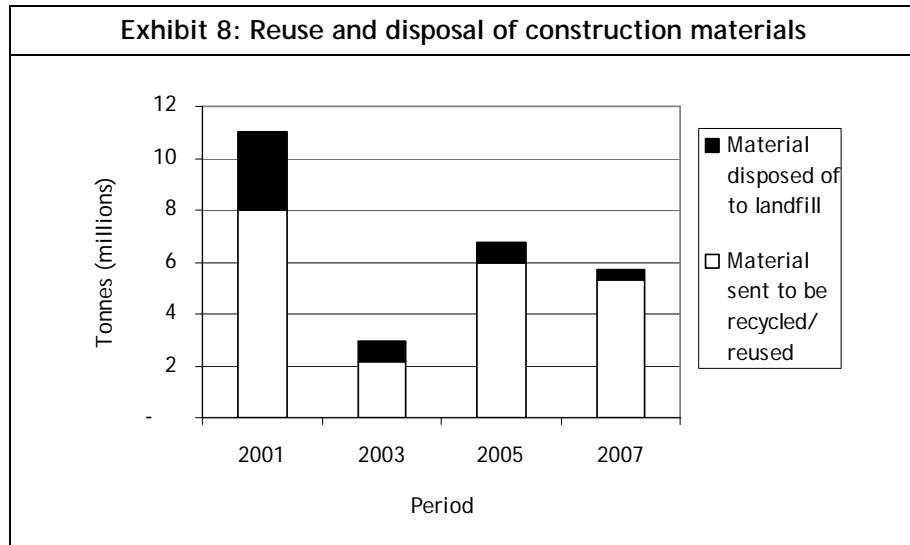
Exhibit 7: Relative quantities of waste generated



Source: DECC 2008

Increased recycling of construction waste

The proportion of construction and demolition material recycled and reused increased between 2001 and 2007 from 73 per cent to 93 per cent.



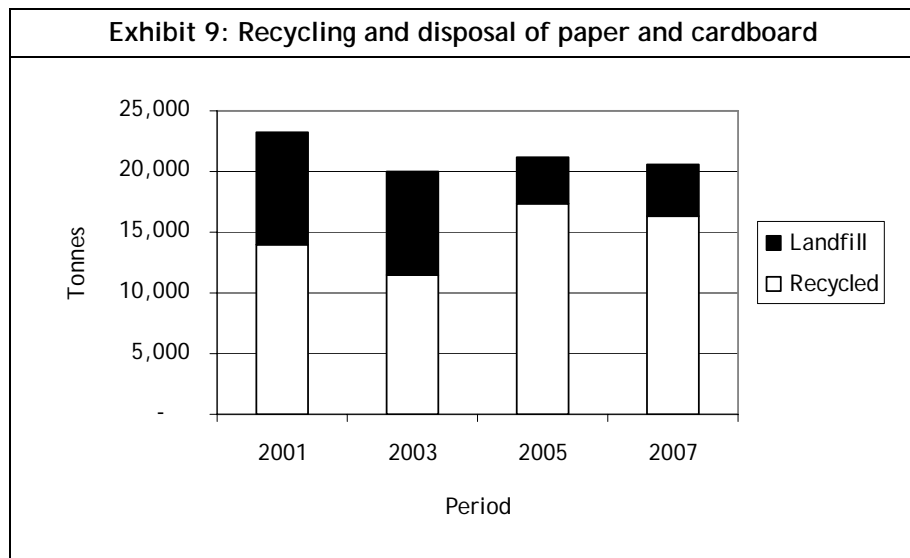
Source: DECC 2008

As can be seen, the total amount of construction waste generated by the public sector varied markedly between reporting periods. DECC advise that the amount of construction material generated each year is heavily dependent on the timing of major infrastructure projects. For example, the 2001 data reflects some of the construction projects for the 2000 Olympics. Construction of various road tunnels and freeway extensions has also had a major impact on material produced.

Importantly, while the total generated has varied, the trend in reuse has been improving. The amount of construction waste sent to landfill dropped from over three million tonnes in 2001 to around 410,000 tonnes in 2007. DECC advise that in addition to WRAPP, improved regulation of landfill practices and stricter waste disposal levy requirements have provided an incentive for greater recycling of construction material.

Increased recycling of paper products

The proportion of office paper and cardboard recycled increased between 2001 and 2007 from around 60 per cent to 79 per cent, although there was a slight decline from 2005 when the reported figure was 82 per cent.



Source: DECC 2008

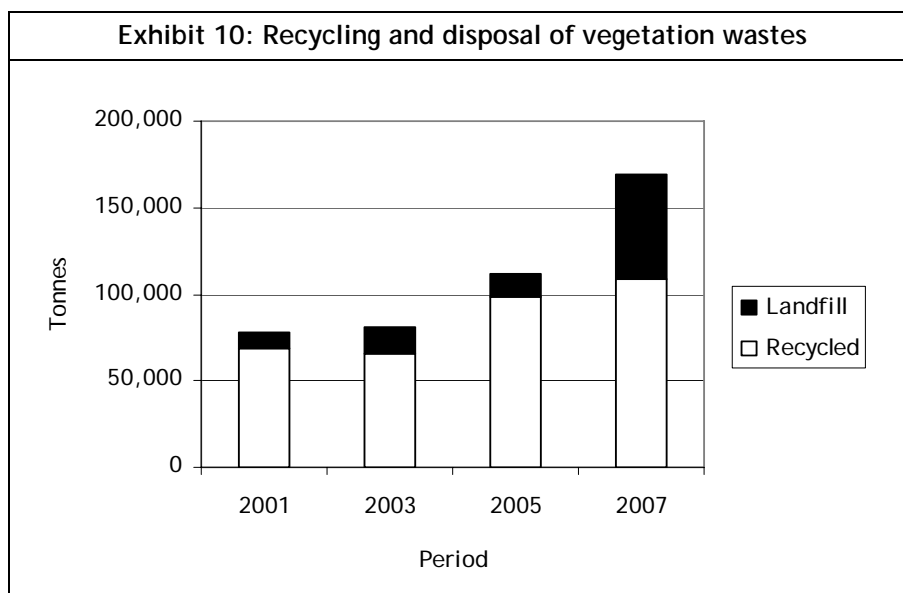
Mixed results for reuse of office products

The reuse of toner cartridges declined from 79 per cent in 2001 to 47 per cent in 2007, although this represents a six per cent increase over 2003 levels. DECC advises that this reported decline may be partially due to the lag between the introduction of new equipment and the use of remanufactured cartridges, that is the new cartridges have to be consumed in the new equipment before they can be remanufactured.

The definition of a computer was expanded in 2007 to include laptops, hard drives and servers. The proportion of computers and monitors reported as being reused or recycled increased from 51 per cent in 2003 to 92 per cent in 2007.

Amounts of vegetation waste being recycled increased

The total amount of vegetation waste recycled has increased. The proportion of vegetation waste being recycled had been relatively constant with 88 per cent recycled in 2001, 81 percent in 2003 and 87 per cent in 2005. However, this declined to 64 per cent in 2007 due to two agencies disposing of a large amount of waste to landfill. One of these agencies reported the increase was the result of catching up on a backlog of works.



Source: DECC 2008

Commingled containers have been included

Recycling now includes commingled containers such as glass bottles and jars, aluminium cans, steel cans, PET bottles, foil and food trays. DECC recently introduced the requirement for agencies to report on the recycling of commingled containers as well as other WRAPP materials as part of the Government’s commitment to the National Packaging Covenant.

Agencies reported that 85 per cent of commingled containers were recycled in the 2007 period.

2.2 Has the use of recycled content material increased?

Our assessment

Since the introduction of WRAPP, the public sector has increased the overall purchases of materials with recycled content, although the proportion of recycled content products has declined in two areas.

Material type	Percentage of recycled content material purchased	
	2001	2007
Construction materials	6	45
Paper used for publishing	39	19
Copy paper	19	45
Stationery items	15	72*
Toner cartridges	49	22

Source: DECC 2008 (*data for 2005 period)

Significant increase in the purchase of recycled content construction material

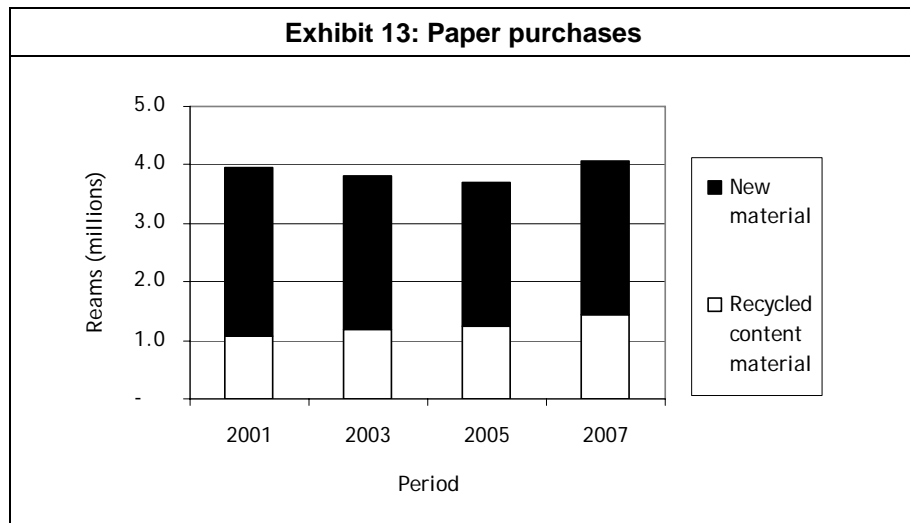
Construction work offers significant opportunities for the use of material with recycled content. The public sector has increased the purchase of recycled content construction material including concrete, asphalts, aggregate, timber, sand, bricks and landscaping material from six per cent in 2001 to 45 per cent in 2007.



Note: excludes fill material
Source: DECC 2008

Increased use of recycled content paper

The public sector is now purchasing more recycled content paper. The proportion of paper with recycled content increased from 27 per cent in 2001 to 35 per cent in 2007. This paper is used for either photocopying, in printers or for publications.



Source: DECC 2008

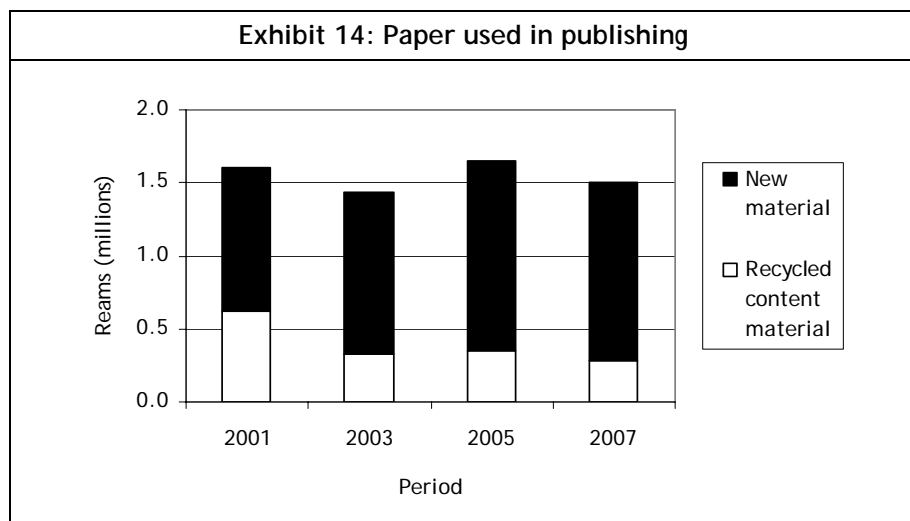
Whilst waste minimisation, reuse and recycling results are good overall we noted two main areas where performance has declined. There was an increase in paper usage and a decline in the use of recycled content paper for publishing. We also noted a decline in the use of remanufactured toner cartridges.

Paper usage has increased

Despite the promotion of waste avoidance strategies such as double sided printing, electronic publishing and extensive use of email, the purchase of paper exceeded four million reams for the first time in the 2007 reporting period.

Use of recycled paper for publishing remains low

The purchase of paper for publishing with recycled content declined from 39 per cent in 2001 to 19 per cent in 2007 (625,000 to 285,000 reams). This may be due to cost or performance issues associated with recycled paper. DECC advises that agencies may lack the awareness to specify recycled paper in printing contracts or request separate quotes for printing publications on virgin and recycled paper to allow costs to be compared. DECC also advises that it has had some success in reducing any cost differential between virgin paper and recycled content paper in its own printing contracts.

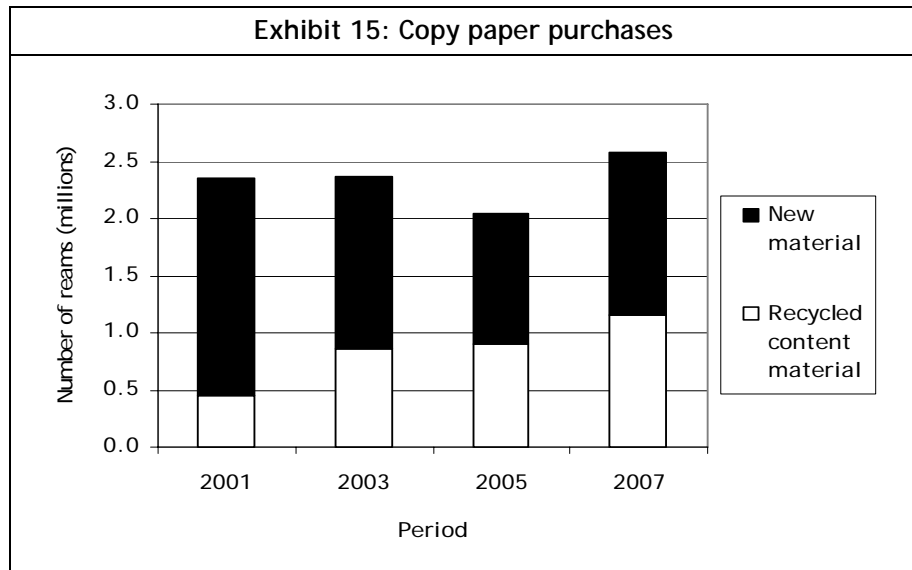


Source: DECC 2008

In Chapter 1 we recommended that DECC review the WRAPP program to ensure it reflects current thinking in sustainable purchasing, recycling and reuse including the use of recycled paper.

Recommendation It is recommended that DECC, in reviewing the program, also focus its efforts on identifying further measures to reduce overall paper consumption and increase the use of recycled content paper.

Increase in use of recycled content copy paper In contrast, there was a significant increase in the proportion of copy paper purchased with recycled content from 19 per cent in 2001 to 45 per cent in 2007 (445,000 to 1,160,000 reams).



Source: DECC 2008

Increase in use of recycled content stationery The purchase of recycled content stationery items, such as A4 pad and notebooks, envelopes, toner cartridges and diaries, increased from 15 per cent of total purchases in 2001 to 72 per cent in 2005 (70,000 to 4,425,000 items). The single largest contributor to this dramatic increase was the Department of Education and Training, which switched to recycled content exercise books for students. Data on stationery items was not collected for the 2007 period.

The purchase of remanufactured toner cartridges decreased from around 67,000 in 2001 to approximately 32,500 in 2007. This represents a decline in the proportion of total cartridges purchased from 49 per cent in 2001 to 22 per cent in 2007.

Overall, the increase in recycling and the use of recycled content materials may have been assisted by a greater awareness and availability of performance and price competitive recycled content products. It may also be due to improved understanding of WRAPP requirements amongst agencies and improved reporting on outcomes.

2.3 Are the results outlined in the implementation program being achieved?

Our assessment Statewide targets for waste reduction, reuse and recycling, covering business, Government and the community, are contained in the Waste Avoidance and Resource Recovery Strategy. Whilst the public sector has some way to go to achieving the overall waste reduction target in the Strategy, it has largely achieved the recycling targets set down for 2014.

Targets set in 2003 The WRAPP program did not incorporate targets when it was introduced. The NSW Government introduced overall targets for waste reduction and recycling in 2003 in the Waste Avoidance and Resource Recovery Strategy, covering business, Government and the community. The Government did not set targets for the purchase of materials with recycled content.

The following table displays NSW public sector and statewide performance against the targets contained in the Strategy. The statewide data is collected from landfill operators, reprocessing companies and councils whereas WRAPP data is collected directly from NSW Government agencies.

It should be noted that the statewide data does not capture the material reprocessing that occurs within large construction sites, whereas the WRAPP data is more likely to capture this information and thus provide a better overall result. It should also be noted that WRAPP does not cover material from industrial processes, which may occur in large volumes and be difficult to process.

Exhibit 16: Performance against targets in the Strategy		
Target	Results for NSW Government agencies for 2007 (WRAPP)	Results for NSW 2004-05 (public and private sectors)
To hold level the total waste generated for the next five years (2003-2008).	Total waste generated increased between 2003 and 2005 but was lower for 2007. Greater recycling and reuse meant that the amount of waste sent to landfill has been declining. (see Exhibit 6)	Total waste generated increased between 2003 and 2005. Although recycling improved, the total disposed of to landfill also increased.
Increase recovery and use of materials from the commercial and industrial waste stream, from 26 per cent in 2000 to 66 per cent by 2014.	80 per cent of commercial waste including paper, cardboard, computers and toner cartridges was recycled.	38 per cent of commercial and industrial waste generated was recycled.
Increase recovery and use of materials from the construction and demolition sector from 65 per cent (in 2000) to 76 per cent by 2014.	72 per cent of materials generated by construction activities were reused/recycled. (Note: excludes fill and virgin excavated natural material)	62 per cent of materials generated by construction activities were reused/recycled. (Note: excludes fill and virgin excavated natural material)

Source: DECC 2003, 2007 and 2008

Whilst the public sector may not achieve the overall waste reduction target in the Strategy, it has largely achieved the recycling targets set down for 2014. DECC may wish to introduce more challenging targets for the public sector that would serve the purpose of leading waste reduction by example.

It has been difficult to contain the total amount of waste generated by the public sector (see Exhibit 6) due to its involvement in major infrastructure projects. Whilst waste generation rates have fluctuated, the proportion of total tonnes generated that are being reused and recycled instead of disposed of to landfill has increased from 73 per cent of the total generated in 2003 to 92 per cent in 2007.

Fill and virgin excavated natural material removed during construction activities makes up over 90 per cent of the total construction waste generated. DECC advises that some agencies may be counting the material they dig up in one spot and use in another spot on the same project as reuse, whereas other agencies may not. These different counting methods will result in an inaccurate total and an unclear result.

- Recommendation** It is recommended that DECC, in reviewing the WRAPP program:
- clarify the method to be used for assessing and reporting the amounts of construction waste generated, especially fill and virgin excavated natural material
 - consider introducing more challenging targets for recycling and reuse which are specific to WRAPP.

2.4 Does WRAPP performance compare favourably with similar programs in other jurisdictions?

Our assessment NSW is the only state to provide performance reporting on the recycling and reuse of waste specifically by the public sector.

Comparison is not possible Whilst other Australian states gather and report performance on reuse and recycling on a statewide basis, NSW is the only state to provide reporting specifically on public sector performance. Therefore it is not possible to compare NSW public sector performance with the performance of other Australian jurisdictions.

Appendix

Appendix 1 About the audit

Audit objective The objective of this performance audit was to determine whether the NSW public sector is effectively reducing waste and increasing its use of recycled material.

Lines of inquiry In reaching our opinion against the audit objective, we sought to answer the following questions:

1. Has the Waste Reduction and Purchasing Policy (WRAPP) been implemented effectively?
2. Has the public sector reduced waste and increased recycling?

Audit criteria In answering the lines of inquiry, we used the following audit criteria (the 'what should be') to judge performance. We based these standards on our research of current thinking and guidance on better practice. They have been discussed, and wherever possible, agreed with those we are auditing.

For line of inquiry 1, we assessed the extent to which:

- a program has been developed to achieve the government's policy objectives
- the requirements for each agency have been communicated and support provided
- progress has been monitored, evaluated and reviewed
- results and progress have been reported
- the program has been reviewed and Government informed of any need for change
- program goals compare with similar programs in other jurisdictions.

For line of inquiry 2, we assessed the extent to which:

- recycling and reuse has changed
- the use of recycled content material has changed
- the results outlined in the implementation program have been achieved
- WRAPP performance compares with similar programs in other jurisdictions.

Audit focus and scope This audit assesses whether the Department of Environment and Climate Change (DECC) has successfully supported the policy and whether its implementation has been effective in reducing waste and improving recycling and reuse. This audit did not focus on individual agency performance on waste reduction, but rather the results achieved across the public sector.

Audit approach We acquired subject matter expertise by:

- interviewing officers from the DECC involved with WRAPP
- interviewing officers from the Department of Commerce involved with State Contracts and policy
- analysing data provided by DECC on public sector performance
- examining policy and guidance material provided to agencies
- reviewing external communication with agencies
- examining relevant State Contracts
- researching overseas and interstate activities.

Audit selection	We use a strategic approach to selecting performance audits which balances our performance audit program to reflect issues of interest to Parliament and the community. Details of our approach to selecting topics and our forward program are available on our website.
Audit methodology	Our performance audit methodology is designed to satisfy Australian Audit Standards AUS 806 and 808 on performance auditing, and to reflect current thinking on performance auditing practices. We produce our audits under a quality management system certified to International Standard ISO 9001. Our processes have also been designed to comply with the auditing requirements specified in the <i>Public Finance and Audit Act 1983</i> .
Acknowledgements	The Audit Office gratefully acknowledges the cooperation and assistance provided by representatives of DECC and the Department of Commerce. In particular, we'd like to thank our liaison officers Roz Hall, Greg Longmuir and Peter Salier, and staff who participated in interviews, assisted with file review or provided other material relevant to the audit.
Audit team	This performance audit was completed by Rod Longford and Neil Avery. Jane Tebbatt provided direction and quality assurance.
Audit cost	Including staff costs, printing costs and overheads, the estimated cost of the audit is \$206,000.

Performance Audits by the Audit Office of New South Wales

Performance Auditing

What are performance audits?

Performance audits determine whether an agency is carrying out its activities effectively, and doing so economically and efficiently and in compliance with all relevant laws.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements.

If you wish to find out what performance audits are currently in progress, visit our website at www.audit.nsw.gov.au.

Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

Performance audits seek to improve the efficiency and effectiveness of government agencies so that the community receives value for money from government services.

Performance audits also assist the accountability process by holding managers to account for agency performance.

What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work we will meet with agency management to discuss all significant matters arising out of the audit. Following this, we will prepare a draft performance audit report.

We meet with agency management to check that facts presented in the report are accurate and that recommendations are practical and appropriate. Following this, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a

copy of the final report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope, performance audits can take several months to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our Office.

How do we measure an agency's performance?

During the planning phase, the team develops the audit criteria. These are standards of performance against which the agency or program is assessed. Criteria may be based on best practice, government targets, benchmarks, or published guidelines.

Do we check to see if recommendations have been implemented?

Every few years we conduct a follow-up audit. These follow-up audits look at the extent to which action has been taken to address issues or recommendations agreed to in an earlier performance audit.

The Public Accounts Committee (PAC) may also conduct reviews or hold inquiries into matters raised in performance audit reports. Agencies are also requested to report actions taken against each recommendation in their annual report.

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards. This includes ongoing independent certification of our ISO 9001 quality management system.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts a review of our operations every three years.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

Further information

Further information can be obtained from our website www.audit.nsw.gov.au or by contacting us on 9275 7277.

Performance Audit Reports

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
181	Department of Environment and Climate Change	<i>Recycling and Reuse of Waste in the NSW Public Sector</i>	June 2008
180	Follow-up of 2003 Performance Audit	<i>Protecting Our Rivers</i>	21 May 2008
179	NSW Office of Liquor, Gaming and Racing; NSW Police Force	<i>Working with Hotels and Clubs to reduce alcohol-related crime</i>	23 April 2008
178	Greyhound and Harness Racing Regulatory Authority	<i>Managing the Amalgamation of the Greyhound and Harness Racing Regulatory Authority</i>	3 April 2008
177	Office of the Director of Public Prosecutions	<i>Efficiency of the Office of the Director of Public Prosecutions</i>	26 March 2008
176*	Better Practice Guide	<i>Implementing Successful Amalgamations</i>	5 March 2008
175	Department of Commerce Department of Primary Industries	<i>Managing Departmental Amalgamations</i>	5 March 2008
174	Department of Education and Training	<i>Ageing workforce - Teachers</i>	13 February 2008
173	NSW Police Force	<i>Police Rostering</i>	5 December 2007
172	Department of Primary Industries	<i>Improving Efficiency of Irrigation Water Use on Farms</i>	21 November 2007
171	Department of Premier and Cabinet Department of Commerce	<i>Government Advertising</i>	29 August 2007
170	RailCorp	<i>Signal Failures on the Metropolitan Rail Network</i>	15 August 2007
169	NSW Police Force	<i>Dealing with Household Burglaries</i>	27 June 2007
168	Ministry of Transport	<i>Connecting with Public Transport</i>	6 June 2007
167	Follow-up of 2001 Performance Audit: Ambulance Service of New South Wales	<i>Readiness to Respond</i>	6 June 2007
166	Follow-up of Performance Audit Department of Education and Training	<i>Using Computers in Schools for Teaching and Learning</i>	9 May 2007
165	Homelessness	<i>Responding to Homelessness</i>	2 May 2007
164	Department of Juvenile Justice NSW Police Force	<i>Addressing the Needs of Young Offenders</i>	28 March 2007
163	Legal Aid Commission of NSW	<i>Distributing Legal Aid in New South Wales</i>	13 December 2006
162	NSW Health	<i>Attracting, Retaining and Managing Nurses in Hospitals</i>	12 December 2006
161	Follow-up of 2003 Performance Audit	<i>The Police Assistance Line</i>	6 December 2006
160	NSW Health	<i>Helping Older People Access a Residential Aged Care Facility</i>	5 December 2006

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
159	NSW Health	<i>Major Infectious Disease Outbreaks: Readiness to Respond</i>	22 November 2006
158	Department of Education and Training	<i>Educating Primary School Students with Disabilities</i>	6 September 2006
157	Roads and Traffic Authority	<i>Condition of State Roads</i>	16 August 2006
156*	Fraud Control	<i>Fraud Control Improvement Kit: Meeting Your Fraud Control Obligations</i>	20 July 2006
155	Follow-up of 2002 Performance Audit	<i>Regulating the Clearing of Native Vegetation</i>	19 July 2006
154	Follow-up of 2002 Performance Audit	<i>Managing Sick Leave in NSW Police and the Department of Corrective Services</i>	June 2006
153	Performance Information	<i>Agency Use of Performance Information to Manage Services</i>	21 June 2006
152	Roads and Traffic Authority	<i>The Cross City Tunnel Project</i>	31 May 2006
151	Department of Corrective Services	<i>Prisoner Rehabilitation</i>	24 May 2006
150	Follow-up of 2000 Performance Audit	<i>Fare Evasion on Public Transport</i>	26 April 2006
149	Agency Collaboration	<i>Agencies Working Together to Improve Services</i>	22 March 2006
148	Department of Education and Training	<i>The New Schools Privately Financed Project</i>	8 March 2006
147	Premier's Department	<i>Relocating Agencies to Regional Areas</i>	14 December 2005
146	Bus Transitways	<i>Liverpool to Parramatta Bus Transitway</i>	5 December 2005
145	Follow-up of 2002 Performance Audit	<i>Purchasing Hospital Supplies</i>	23 November 2005
144	NSW Treasury	<i>Oversight of State Owned Electricity Corporations</i>	19 October 2005
143	Asset Management	<i>Implementing Asset Management Reforms</i>	12 October 2005
142	Department of Juvenile Justice	<i>Managing and Measuring Success</i>	14 September 2005
141	State Budget	<i>In-year Monitoring of the State Budget</i>	28 July 2005
140	State Rescue Board of New South Wales	<i>Coordination of Rescue Services</i>	20 July 2005

* Better Practice Guides

Performance audits on our website

A list of performance audits tabled or published since March 1997, as well as those currently in progress, can be found on our website www.audit.nsw.gov.au.

If you have any problems accessing these reports, or are seeking older reports, please contact our Office Services Manager on (02) 9275 7116.