



Parliament House 2004-2005 Environmental Performance Report

Introduction

1 The information in this report is structured using the core Global Reporting Initiative (GRI) environment performance indicators as a framework. The Global Reporting Initiative is an independent institution whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines. These Guidelines are for voluntary use by organisations for reporting on the economic, environmental, and social dimensions of their activities, products, and services.

Materials

EN 1 Total materials use other than water, by type

2 Parliament House uses a variety of materials for the efficient functioning of Parliament. Some of the major items that have an impact on the environment are paper, fertiliser and chemicals. The number of separate organisations occupying Parliament House and the diverse functions performed by them make it impossible to gather accurate data against this indicator.

3 In 2004-2005 all printers in the Department of Parliamentary Services were defaulted to double sided printing in an effort to reduce paper consumption.

4 Environmental considerations played a significant role in many major purchasing decisions by the parliamentary departments including the new computer fleet, photocopier contract, fax machine contract and for paper in the Departments of the Senate and the House of Representatives.

5 The purchase of technology by the Department of the Senate focussed on minimising resource consumption, including power, reusability and recycling of equipment at the end of its life and on having suppliers take back packaging for reuse and or recycling.

EN 2 Percentage of materials used that are wastes (processed or unprocessed) from sources external to the reporting organisation.

6 In 2004-2005 Parliament House did not use any significant quantity of materials that are wastes from sources external to the organisation.

Energy

EN 3 Direct energy use segmented by primary source.

7 The main components of energy use in Parliament House are gas and electricity. Gas is used for heating, domestic hot water and catering equipment. Electricity is used to provide a variety of services including office power, lighting, mechanical services, lifts, chillers, computer equipment, catering equipment, water features, central waste plant and boosted hot water heating.

8 Each year Parliament House reports its energy consumption to the Australian Greenhouse Office as part of the Energy Use in Australian Government's Operations Report. In 2004-2005 Parliament House consumed the following energy:

Parliament House Building

Electricity (kWh)	22,485,495
Natural Gas (MJ)	42,306,000
Diesel (Generators & Boilers)(L)	10,372
Greenpower (kWh)	2,853,996
Total GJ	133,929
Area (m ²)	152,000
MJ/Area (m ²)/annum	881

West Block Office - Tenant Light and Power

Electricity (kWh)	360,013
Greenpower (kWh)	18,948
Total GJ	1,364
Occupancy (People)	83
Area (m ²)	2,326
MJ/Occupancy (People)/annum	16,437
MJ/Area (m ²)/annum	587
m ² /person	28.02

West Block Office - Central Services

Electricity (kWh)	89,167
Greenpower (kWh)	4693
Total GJ	338
Area (m ²)	2,326
MJ/Area (m ²)/annum	145

Passenger Vehicles¹

LPG (L)	3,280
Petrol (L)	89,702
Automotive Diesel (L)	
Total GJ	3,152
Distance Travelled (km)	844,833
MJ/Distance Travelled (km)/annum	3.73

¹ Passenger Vehicle data from 2003-2004 Financial year

Other Transport - Truck

Automotive Diesel (L)	4,271
LPG (L)	
Petrol (L)	
Total GJ	165

Other Uses - Gardening Equipment & Forklifts

Automotive Diesel (L)	6,328
Petrol (L)	3,143
LPG (L)	2,773
Total GJ	528

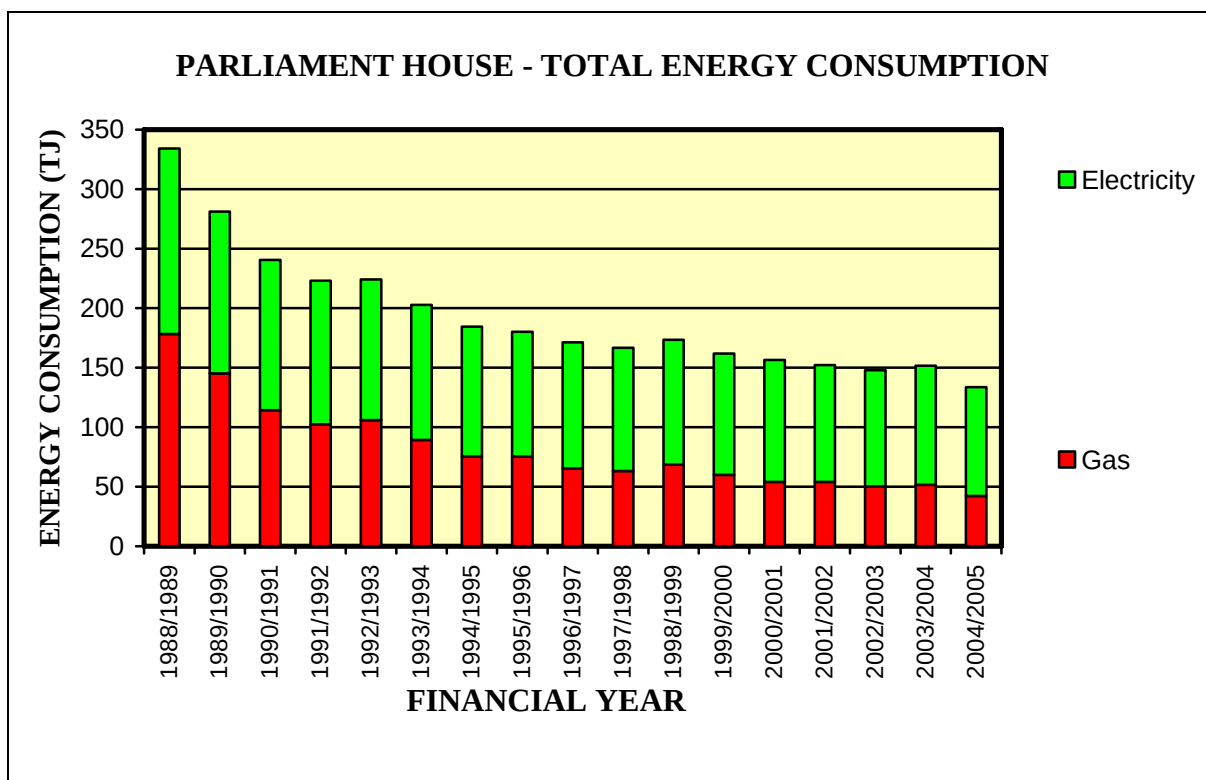
Summary

Component	Energy Consumption (GJ)	
Parliament House Electricity	91,222	133,528
Parliament House Gas	42,306	
Other		5,948
TOTAL		139,476

9 Since Parliament House was opened in 1988, DPS has achieved the following results over the 1988–89 baseline year.

- (a) Electricity reduction of 41%
- (b) Gas reduction of 76%
- (c) Carbon Dioxide emission equivalent reduction of 47%
- (d) Total energy consumption reduction of 60%.

10 The reduction in energy consumption is shown in the following graph.



11 During 2004-2005 energy consumption at Parliament House was 133,528 GJ which is lowest annual consumption since Parliament House opened in 1988 and represented a reduction of 18,077 GJ when compared to 2003-2004, a 12% reduction.

12 The decrease in both energy consumption and carbon dioxide emissions can be attributed to:

- (a) A reduced number of sitting days due to the election held in November 2004.
- (b) The water features being turned off to comply with water restrictions.
- (c) The closure of the Recreation Centre for refurbishment.
- (d) The replacement of light fittings in the basement corridors with more efficient fittings. 270 light fittings were upgraded to electronic ballasts and T5 lamps which will provide an annual saving of 32,000 kWhrs of electricity.
- (e) The introduction of a new policy to switch off personal computers which were previously left switched on.
- (f) The commissioning of the final stage of the air conditioning controls which involved the installation of, 450 additional room controllers in 2004-2005. These new electronic controllers have energy conservation features including the ability to switch off air conditioning to rooms that are unoccupied. All 1800 controllers have now been converted to electronic control.

13 In 2004-2005 Parliament House purchased 2,853,996kWhrs of green energy from the Snowy Hydro scheme. This represents approximately 10% of total electricity consumption.

14 DPS complied with all the applicable requirements of the government's policy for improving energy efficiency in Commonwealth government operations. Details can be found on the environmental portal accessible from the Parliament House web site at <http://www.aph.gov.au/JHD/EMS/index.htm>.

EN 4 Indirect energy use.

15 Indirect energy refers to the total amount of energy used to provide electricity to Parliament House and includes the energy used to produce and transmit the electricity to Parliament House. Most of Parliament House's electricity comes from coal fired power stations with 10% green energy being purchased from the Snowy Hydro scheme. For 2004-2005 the figures used to calculate indirect energy are based on the National Greenhouse Gas Inventory 2002 Table 4-19 published by the AGO

16 Based on this factor indirect energy consumption for Parliament House in 2004-2005 was 245,587 GJ.

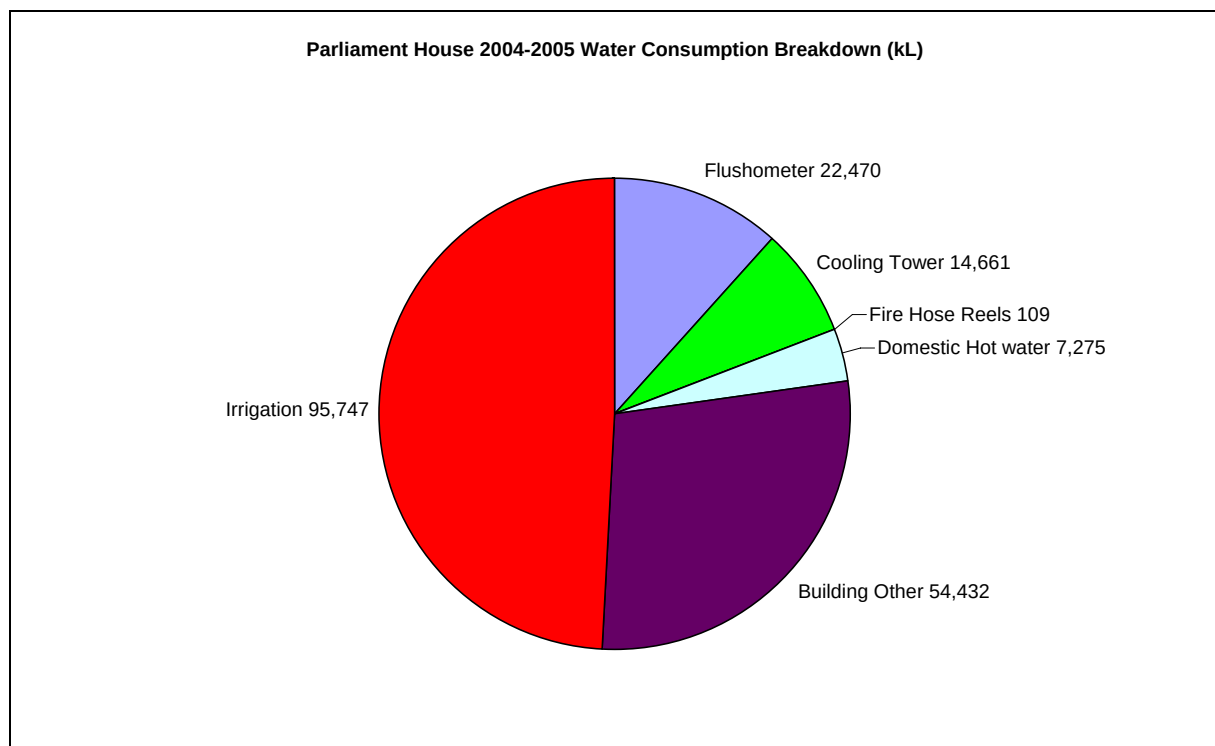
Water

EN 5 Total water use

17 In 2004-2005 Parliament House consumed 195 ML of water. This is the lowest water consumption for Parliament House since the building opened in 1988. This record has been achieved due to:

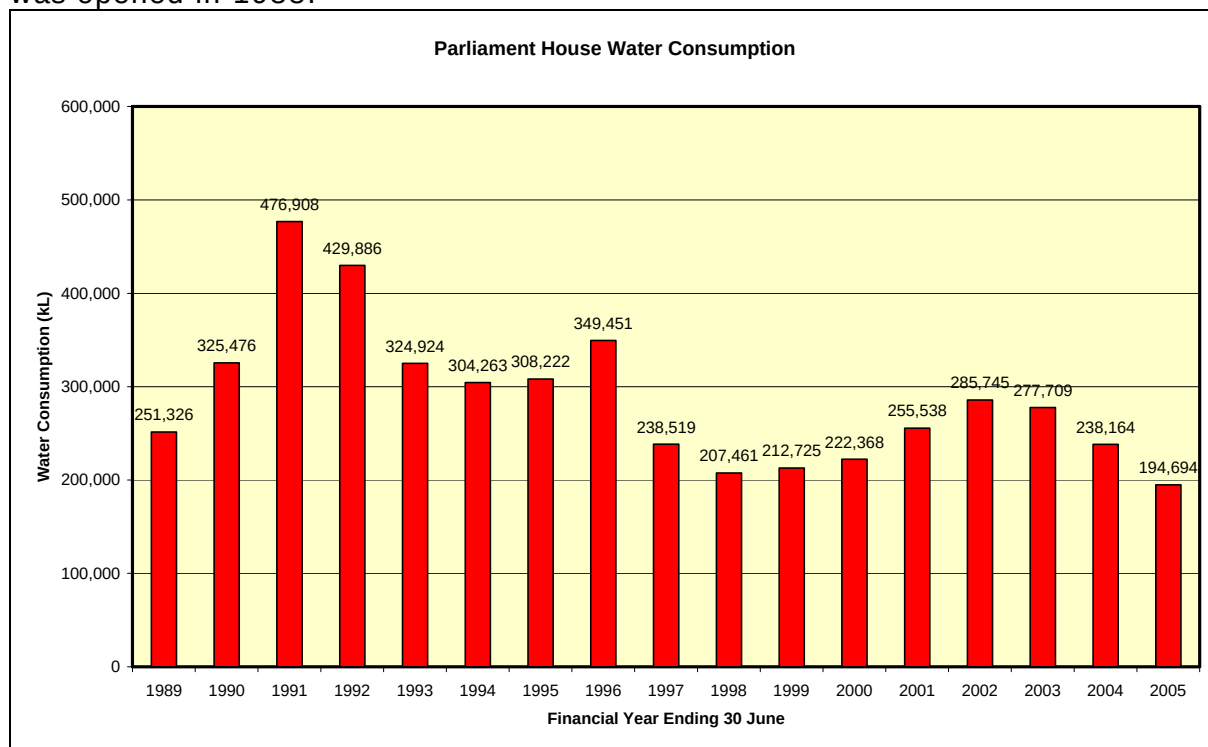
- (a) compliance with ACT water restrictions which involved:
 - (i) reducing irrigation water consumption as a percentage of net evaporation from 60% to 34.6% (a 42% reduction)
 - (ii) turning off water features; and
 - (iii) ceasing building façade cleaning activities.
- (b) implementation of water conservation measures including:
 - (i) installation of AAA shower heads in Senators suites; and
 - (ii) installation of dual flush toilets and waterless urinals in the Public Carpark toilets.
- (c) Closure of the swimming pool and spa due to refurbishment; and
- (d) A reduction in the number of sitting days due to the 2004 Federal election.

18 The consumption of water can be broken down into the following categories.



19 Landscape water consumption has reduced to 34.6% of net evaporation in line with the ACT Government's Stage Three water restrictions. This has resulted in increased plant morbidity, especially of some native species in the external periphery (6,000 plants and three hectares of lawn).

20 The following graph shows the consumption of water since the building was opened in 1988.



Biodiversity

EN 6 Location and size of land owned, leased, or managed in biodiversity-rich habitats

21 In 2004-2005 DPS did not own or lease any land in biodiversity rich habitats.

EN 7 Description of the major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments

22 In 2004-2005 there were no major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments

Emissions, Effluents and Waste

EN 8 Greenhouse gas emissions

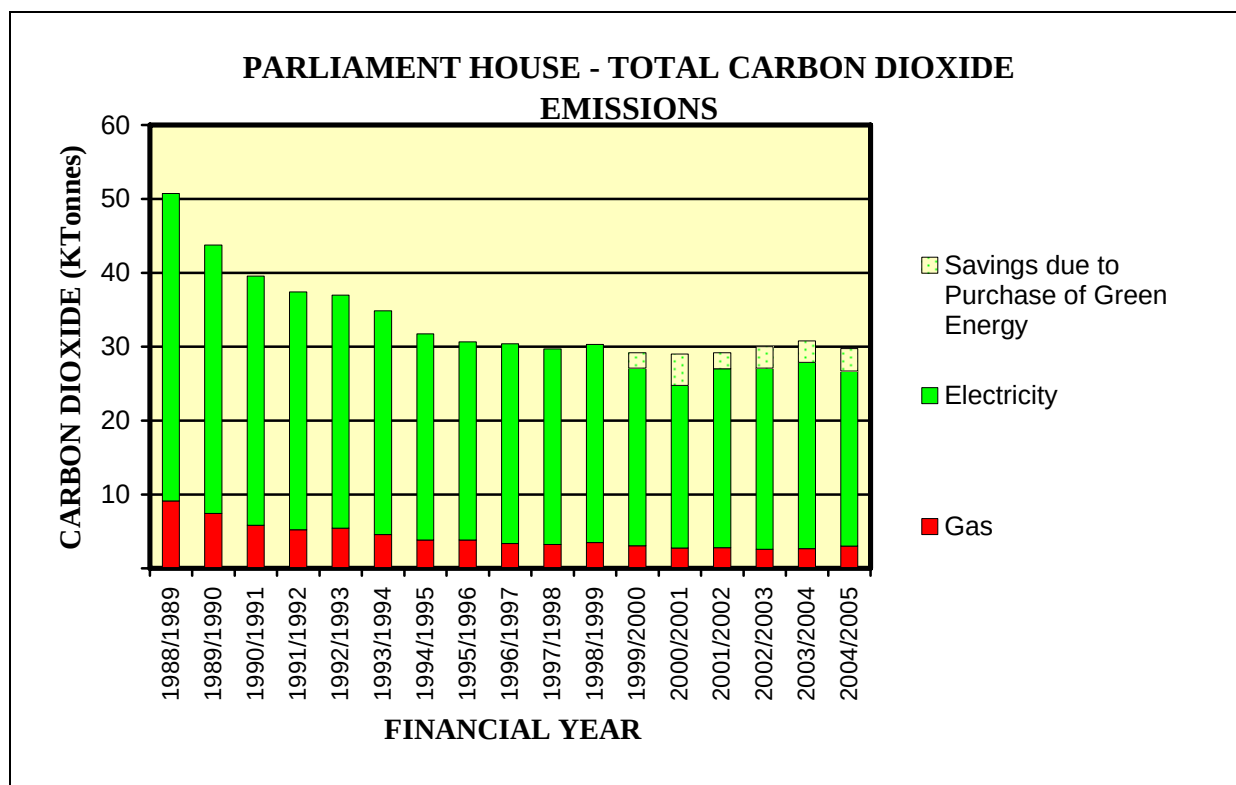
23 DPS is a member of the Greenhouse Challenge Program and has been reporting on greenhouse gas emissions from Parliament House since 1997.



24 The following is an extract from the 2004-2005 Greenhouse Challenge report.

	Consumption (Units)	Conversion factor	CO ₂ -e (Tonnes)
Fuel / process			
Electricity	25,339,491 kWh	1.054 kg CO ₂ -e/kWh	26,708
Natural Gas (non-transport)	42,306 GJ	71.3 kg CO ₂ -e/GJ	3,016
LPG- (non transport)	5 t	2.9 tCO ₂ /t	16
Petroleum Products			
Petrol/Gasoline	93 kL	2.5 t CO ₂ /kL	232
Automotive Diesel Oil	9 kL	2.7 t CO ₂ /kL	26
LPG - transport	3 kL	1.6 t CO ₂ /kL	5
Marine/Industrial diesel fuel	10 kL	2.8 t CO ₂ /kL	29
Waste			
Co-mingled	451 t	1.2 t CO ₂ -e/t	541
TOTAL GROSS EMISSIONS			30,573
Offset			
Green Electricity(kWh)			-3,008
NET EMISSIONS			27,565

25 The following graph shows annual greenhouse gas emissions from the Parliament House electricity and gas consumption since the building was opened in 1988.



EN 9 Use and emissions of ozone depleting substances

26 The ozone depleting substances used at Parliament House are refrigerants which are used in:

- (a) chillers which provide cooling for the building's air conditioning;
- (b) coolrooms;
- (c) freezers; and
- (d) refrigerators.

27 The table below shows the refrigerants that were purchased in 2004-2005 and the Ozone Depletion Potential for each of these of these refrigerants.

Refrigerant	Qty Purchased (kg)	Ozone Depletion Potention	CFC-11 equivalent (kg)
404A	10	0	0.0
R22	1620	0.055	89.1
R134a	260	0	0.0
Total			89.1

28 The amount of refrigerant purchased does not necessarily correlate to the amount of refrigerant used. A lot of the refrigerant purchased in 2004-2005 was purchased to build up stocks and was not actually consumed. DPS has developed systems for weighing and recording the amount of refrigerant used in each item of equipment. This system will be used to report on refrigerant used in the 2005-2006 financial year.

EN 10 NOx, SOx, and other significant air emissions by type

29 The combustion of natural gas for heating, hot water and cooking purposes generates quantities of NOx, SOx, and other air emissions from Parliament House. Each year Parliament House reports on these emissions to the National Pollution Inventory. The following table lists the emissions from Parliament House for 2004-2005.

Substance	Total Emissions (kg)
Carbon monoxide	1,500
Oxides of nitrogen	1,700
Particulate matter (PM10)	130
Total Volatile organic compounds	96
Sulfur dioxide	9.1
Polycyclic aromatic hydrocarbons	0.012

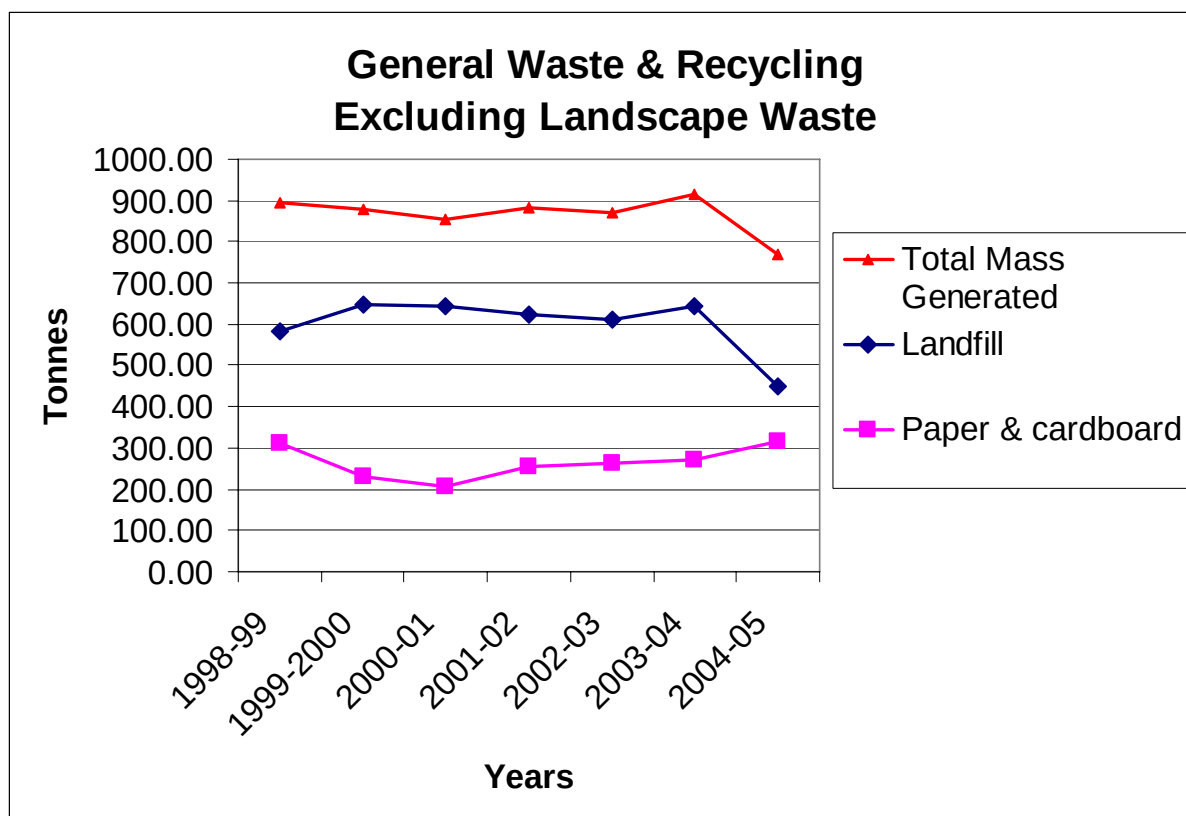
EN 11 Total amount of waste by type and destination

30 In 2004-2005 Parliament House generated the following quantities of waste:

General Waste	Tonnes
Landfill	451
Recycled paper and cardboard	320
Total	771

31 In addition to the above waste, 391 tonnes of landscape waste was generated from maintenance activities in the Parliament House landscape. 98% of this landscape waste was recycled.

32 The following graph shows waste trends over time.



33 In 2004-2005 the volume of general waste going to landfill was reduced by 30% compared with 2003-2004, while the volume of paper and cardboard recycled increased by 18% over the 2003–2004 financial year

34 This result was achieved due to:

- (a) The introduction of a co-mingled recycling trial.
- (b) The number of works projects that have required the contractor to bear the responsibility for disposing of waste, in an environmentally sustainable manner.
- (c) The promotion of cartridge recycling to building occupants. This resulted in building occupants recovering and recycling over 1,317 kg of toner cartridges at Parliament House.
- (d) Recycling awareness campaigns.
- (e) Reduced sitting periods caused by the election. During the election period there were fewer occupants in the building. This resulted in less waste going to landfill. Following the election a considerable amount of waste paper was generated as politicians vacated their offices. This assisted the outcome because of an increase in the amount of paper recycled.

EN 12 Significant discharges to water by type

35 In a typical year approximately 62.8 ML is discharged into the sewerage system. The sewerage is essentially domestic strength. There are a number of

installed systems to prevent trade waste from entering the sewerage system. These include:

- (a) Grease traps on all of the kitchens (which are cleaned out every 3 months);
- (b) A coalescing plate filter on the vehicle washdown bay (to prevent oil from entering the sewer); and
- (c) A system to remove paint solids from paint brush washing facilities before they enter the sewer.

36 There was no measurable leachate runoff from the site into the surrounding waterways during the reporting period.

EN 13 Significant spills of chemicals, oils, and fuels in terms of total number and total volume

37 In 2004-2005 there were no significant spills of chemicals, oils and fuels from Parliament House.

38 Procedures are in place to minimise the risk of such incidents occurring and necessary materials are maintained in strategic areas throughout the parliamentary precincts to manage such an incident should it occur.

39 During the security upgrade project hydraulic lines on one piece of equipment failed twice. The contractor immediately arranged for the hydraulic fluid to be neutralised and the liquids recovered for treatment in an environmentally responsible manner. These line failures were dealt with in a manner that prevented any discharges from the Parliament House site.

Products and Services

EN 14 Significant environmental impacts of principal products and services

40 In 2004-2005 Parliament House did not produce any products or services that had significant environmental impacts.

EN 15 Percentage of the weight of products sold that is reclaimable at the end of the products' useful life and percentage that is actually reclaimed

41 In 2004-2005 Parliament House did not sell any products that are reclaimable at the end of the product's useful life.

Compliance

EN 16 Incidents of and fines for non-compliance with all applicable international declarations/conventions/treaties, and national, sub-national, regional, and local regulations associated with environmental issues.

42 In 2004-2005 there were no instances of fines for non compliance with any regulations associated with environmental issues.