Know Your Printing Paper

A Guide to Purchasing Recycled Content Paper for Corporate Stationery & Promotional Materials

Department of
Environment and Conservation (NSW)

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and the State of New South Wales.

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The Department of Environment and Conservation (NSW)
Level 2, 1 Fitzwilliam Street, Parramatta NSW 2150
PO Box 644, Parramatta NSW 2124
Phone: (02) 8837 6000
Fax: (02) 8837 6099
Email: info@resource.nsw.gov.au
Website: http://www.environment.nsw.gov.au

Introduction

The success of paper recycling and the environmental benefits that flow from it are partly dependant on strong demand for recycled content products. Purchasing paper and paper products made from recycled paper "closes the loop" on the flow of that material, conserving the resources needed to make it and avoiding the environmental impacts of waste disposal to our landfills.

The *Know Your Printing Paper* guide has been produced to make choosing and using recycled printing papers easier. It contains information about the characteristics, use and availability of all recycled content papers that would be used for the most common business printing jobs. It also provides details of suppliers of all the papers.

The quality of recycled papers has improved greatly in recent years and those being made now can look as good and perform as well as those made from virgin resources. The hard copy version of this Guide includes sample pages of all the papers described so that their whiteness, finish and opacity can be compared and considered along with the other factors described when making the decision to select one.

The Guide has been produced by the Department of Environment and Conservation (NSW) with the assistance of paper manufacturers, distributors, designers and printers as well as business and government consumers of commercially printed material. The NSW Regional Office of the Printing Industries Association of Australia has contributed many suggestions and assisted with its distribution and promotion. We greatly appreciate the contributions of all the interested parties and hope that you find the Guide a valuable tool for making environmentally responsible business decisions about your choices of printing paper.

Message from the Printing Industries Association of Australia

To all readers,

Fortunately today most of us are very keen to adopt a recycling mentality.

We have been encouraged to recycle by our local Councils who have made it easier for us by providing coloured coded 'wheelie bins' which have been so successful; the largest bin provided is never big enough!

Newsprint, catalogues and even our favourite Christmas cards all end up being recycled these days and we all feel that we are contributing to a 'green friendly' society.

'Closing the loop' by choosing recycled paper and understanding the purpose it is best suited for, is the intent of *"KNOW YOUR PRINTING PAPER – A Guide to Purchasing Recycled Content Paper for Corporate Stationery and Promotional Materials"*

The aim of this useful Guide is to provide information to assist anyone thinking about switching to recycled content paper to print corporate stationery and promotional materials, such as: business cards, company letterheads, annual reports, corporate brochures and promotional fliers etc.

The Guide is designed to assist both the printing industry and its customers to consider selecting and better understanding the uses of recycled content paper.

Not only is it good for our environment, it can provide your clients economical savings, which assists in your client relationships.

Achieving a reduction in waste generation and turning waste into recoverable resources is a priority for New South Wales and *Printing Industries* is proud to be part of this very worthwhile initiative.

We commend it and encourage the Printing Industry to examine alternative, 'recycled' paper as an option where and when possible.

We do hope you find this publication helpful.

Tim Abrams Acting NSW Manager,

Printing Industries Association of Australia

Scott Telfer NSW President

Purpose and Content

"KNOW YOUR PRINTING PAPER – A Guide to Purchasing Recycled Content Paper for Corporate Stationery and Promotional Materials" builds upon the information about recycled content office papers collated in the "Know Your Paper – A Guide to Recycled Content Office Papers" released in 2000, and subsequently updated in 2002.

This Guide is to assist both the printing industry and its customers to select and use recycled content paper to print corporate stationery and promotional materials.

Research[1] has shown that "community (especially corporate) attitudes towards environmental awareness, particularly the use of recycled paper" are a factor affecting demand.

This Guide attempts to influence those attitudes through the provision of information and education, contributing to a greater acceptance and broader use of recycled content papers.

The aim of this Guide is to provide information to assist anyone thinking about switching to recycled content paper to print corporate stationery and promotional materials, such as:

- business cards
- company letterhead
- annual reports
- "with compliments" slips
- corporate brochures
- promotional fliers

The "Know Your Printing Paper Guide" provides:

- A comprehensive listing of recycled content papers suitable for corporate stationery and promotional materials, readily available in New South Wales.
- Contact details for companies that supply the papers.
- Cohesive tabulated information about the available recycled content printing papers, their characteristics and functionality.
- Answers to some commonly asked questions about recycled content printing papers.
- An overview of other environmental considerations – beyond just recycled content – when buying paper products.
- General information about recycled content papers and broader sustainability issues.

Much of the information detailed in this Guide is based on data and information obtained from manufacturers and suppliers of the papers. It should be noted that the information is subject to change as existing products are improved or discontinued and new products become available in the Australian market place. The Guide is therefore unlikely to represent *ALL* grades of recycled content printing paper available at a given time and print customers are encouraged to talk to their suppliers about the availability of new grades.

It is designed to provide an overview and straightforward information about what recycled content printing papers are available, what they are made of, where they come from, what they are suitable for and how to get them.

1. IBISWorld (2003) 2341 Paper Stationery

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Why "buy recycled" corporate stationery and promotional materials?

Despite the rapid development of electronic communication systems, the continued growth of the economy is increasing the demand for paper products, with printing and writing papers showing the strongest growth[2].

In the 2001-2002 financial year, Australians used 1.23 million tonnes of printing and writing paper[3]. This consumption is equivalent to approximately 30 million trees, based on the estimate that the manufacture of 1 tonne of virgin printing paper consumes the equivalent of around 24 trees[4].

Printing corporate stationery and promotional materials provides a reliable and diverse market for the printing industry; for example, the banking and finance sector's corporate printing needs comprises 20% of the total market for printers[5]. Because of this, changing to recycled content papers for these corporate uses could make a substantial impact on the growth in the manufacture and availability of these products.

Richard Birch

2. http:// www.nafi.com.au/faq
3. http://www.apic.asn.au
4. http://www.dolphinblue.com/whybuy.html
5. IBISWorld "2412 Printing in Australia", 2003

Buying recycled makes good business sense

In an era of increased corporate transparency, and greater public and government expectations about reduced "environmental impacts" of the corporate sector, purchasing recycled content stationery and promotional materials provides an opportunity to:

- **Implement sustainability** in the workplace. Businesses are under increasing pressure to change their day to day practices through pollution prevention, product and service redesign, and waste reduction and recycling. Purchasing recycled content products is an easy, measurable change that all businesses can make to contribute to waste reduction while maximising the use of our precious resources.
- **Market a "green" image** to customers, stakeholders and/or regulators. The use of recycled content papers is a tangible way to publicly demonstrate your company's environmental and social responsibility. This makes good business sense, as demonstrated in the US, where consumers who value the environment, health, and sustainable living are generating a $US226.8 billion marketplace for "green" goods and services[6]. Furthermore, international polls have demonstrated that good environmental performance can positively impact customer retention[7].
- Encourage a **culture of innovation** by making business-focused environmental improvements.
- **Support National Packaging Covenant objectives**. The National Packaging Covenant aims to reduce the quantity of packaging, as well as to increase the use of recovered materials as raw material input into new products. If relevant to your business, the use of recycled content papers could be included in your National Packaging Covenant "Action Plan".
- **Reinforce in-house recycling** systems by "buying back" some of the materials that are sent away for recycling as new products.
- Place more emphasis on the environment through business **accountability**.

... good environmental performance can positively impact customer retention ...

6. http://www.lohasjournal.com
7. Millennium Poll (1999) and Environmental Research Associates Survey (1998)

Buying recycled is good for the environment....

There are sound ecological reasons for recycling paper and buying products that are manufactured from recovered fibres. When you are considering "environmental attributes" of paper stock for your company or advising a client on the different options for their business, consider "buying recycled" for the following reasons:

Buying Recycled ...

... reduces the consumption of natural resources

Using recycled content paper helps to reduce pressure on our forest resources as the recycled fibres provide an alternative feedstock for the production of new paper.

In Australia there are now 20 billion fewer trees than when Europeans first settled here in 1788[8]. They have been felled to provide timber and to make way for development. Forests are vital for supporting biodiversity, regulating temperature and maintaining air quality.

Trees used for papermaking are sourced from native forests and, increasingly, softwood and eucalyptus plantations. Using recycled paper minimises the environmental impacts of harvesting, manufacturing and transportation associated with the production of paper from virgin materials.

Clearfelling of Tasmanian forests *Rob Blakers*

8. http://www.landcareaustralia.com.au

... diverts materials from landfill

About 600,000 tonnes of paper and cardboard are sent to landfill in NSW every year[9].

Recycling paper and buying recycled ensures that valuable resources are not disposed of to landfill, where they break down and emit greenhouse gases such as methane, and have the potential to release toxic leachate into the soil and groundwater.

Every time you buy recycled content paper you are reducing our reliance on landfills.

... saves energy

Producing paper from recovered fibres consumes 60-70% less energy than manufacturing paper from virgin pulp, therefore decreasing the generation of greenhouse gases[10].

... conserves water

Papermaking is the most water-intensive manufacturing industry per tonne of finished product. Producing paper from recovered fibres consumes 55% less water than manufacturing paper from virgin pulp[10].

Given the water shortages and restrictions we currently face in Sydney and throughout New South Wales, buying and using recycled paper will contribute to conserving our limited water resources.

... offers greenhouse gas benefits

Buying recycled helps to minimise greenhouse gases such as methane and carbon dioxide:

- Paper disposed to landfill is a significant contributor to methane gas, which has a global warming potential that is 21 times more damaging than carbon dioxide[11].
- Using recycled fibres means that trees are preserved as a carbon sink, meaning that carbon dioxide is locked up and oxygen is emitted.

Australia has a commitment to reduce greenhouse gas emissions[12]. Overall, there is approximately a 2.5 tonne carbon dioxide equivalent saving for every tonne of recycled content printing paper manufactured.

Buying Recycled also ...

... improves our collection and processing infrastructure

When you buy recycled content paper you are helping to create demand for these products, which in turn supports companies to improve paper collection and processing infrastructure.

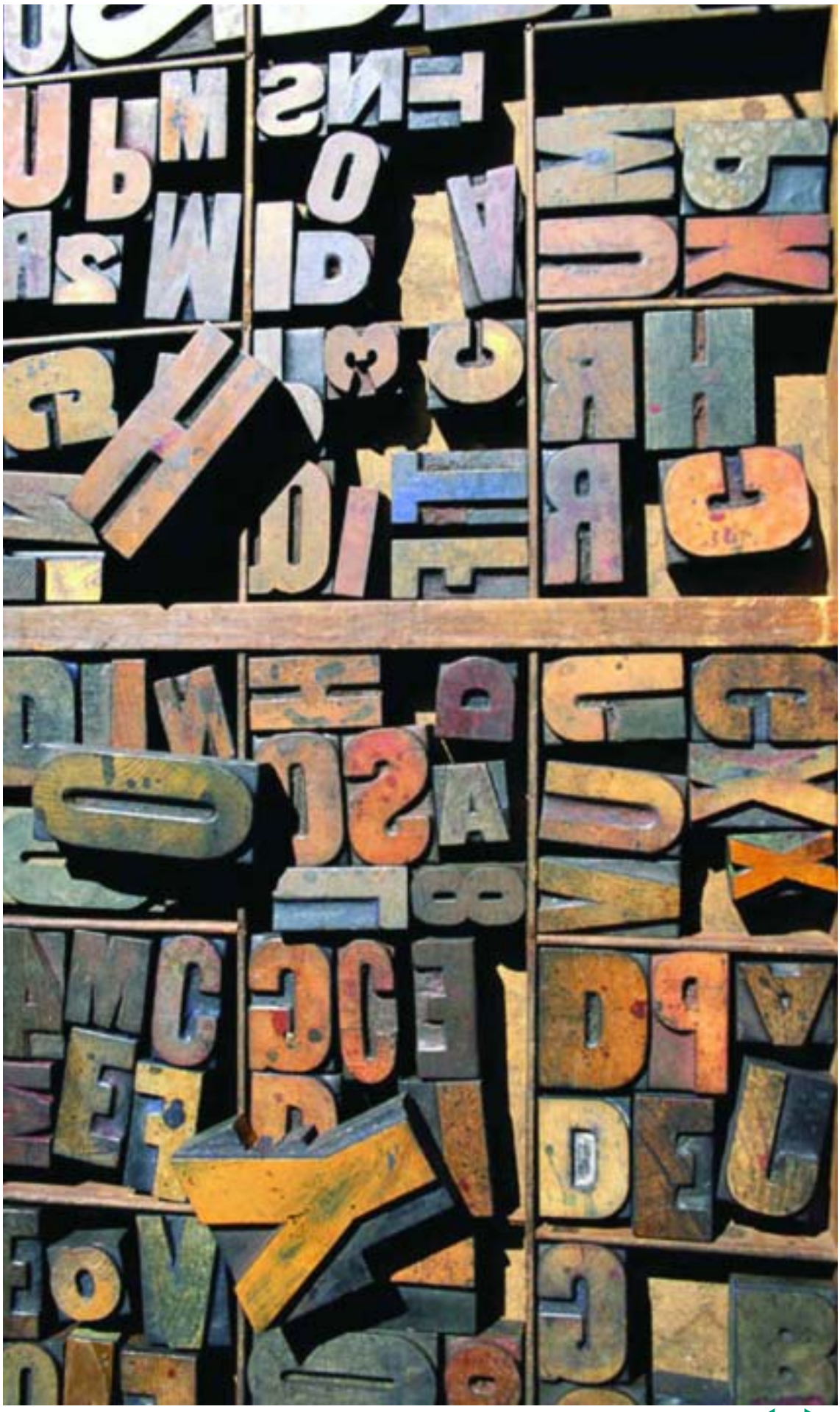
The paper manufacturing industry in Australia is installing increased paper recycling capacity and providing a strong market for clean recycled paper.

Moves are also being made to improve sorting, which will help to increase the value of recycled content papers in the manufacture of new paper products, particularly high quality printing paper[13].

... supports secondary markets for recovered materials

By *purchasing* and using recycled content printing papers you are filling a crucial role in the recycling process by providing viable end use markets for a range of recycled content paper products.

9. http://www.wrapp.nsw.gov.au/material/paper.htm
10. http://www.treecycle.com/info.html
11. Metz M. (2000) A Load of Rubbish. Waste Management and the Environment, Vol 11 (5) p35-37).
12. Grant T. et al (2001) Report for Life Cycle Assessment of Packaging Waste Management in Victoria. RMIT, Melbourne.
13. http://www.environment.nsw.gov.au



A note for print managers and graphic designers

Print managers and graphic designers are in a unique position to influence the demand for recycled content printing papers. As in many other industries, graphic designers are facing the challenge of considering the lifelong impact of the products they create. Increasingly, producers need to consider their responsibility beyond the time their product is used, and for graphic designers in particular, this includes among other issues, whether materials such as paper are made with recycled content.

... Kinko's International in Australia use 50% recycled content papers as standard practice in their self serve machines ...

A recent poll by Icograda ("International Association of Graphic Designers", a voluntary organisation of graphic designers concerned with design and visual communication, also representing designers role in society and the economy) found that 63% of graphic designers believed that they could influence positive change in the world by encouraging clients to implement sustainable solutions[14]. Encouraging the use of recycled content products is one such positive demonstration of sustainability.

Greater consumer awareness about environmental issues is influencing purchasing decisions. Increasingly, companies need to demonstrate that they have sound environmental credentials. The franchise printers "Kinko's International" in Australia use 50% recycled content papers as standard practice in their self serve machines, as specified in their Environment Policy[15]. Other Australian franchise based printers such as Kwik Copy, Snap Printing and Pink Panther will provide recycled content paper when requested by the customer[16].

Furthermore, in the United States, Kinko's Inc. is responding to the changing market place and recently upgraded seven of its paper lines from 30% to 100% post-consumer recycled content paper stock. They have also added the first Forestry Stewardship Council-certified paper to their product line. This is supported by Kinko's new Forest-Based Product Procurement Policy, which incorporates a strict set of vendor requirements and establishes a central set of recycled content standards[17].

14. Past Opinion Poll Results, http://www. icograda.org, September 2003
15. pers comm, Brendan Gibbs, Managing Director, Kinko's International
16. pers comm, Head Office of Snap, Pink Panther and Kwik Copy
17. http://www.greenbiz.com/news/news_third.cfm?NewsID=25321

Richard Birch

What can you do as a Print Manager, Printer or Graphic Designer?

- Review the different grades of recycled content printing papers readily available in the Australian market place (as outlined in this Guide in the next section).
- Talk to your customers about their paper and board specifications.
- Determine whether recycled content stock is suitable for their needs in terms of cost, quality and availability of different grades.
- Draw up a list of suppliers of recycled papers and boards and find out what is available from your local merchant.
- If recycled papers suit the needs of your clients, spread the word!

Recycled content printing papers ~ how do they compare?

The term "recycled content paper" covers a multitude of grades, which have different characteristics and qualities. There are now high quality grades that enable first-class, clean finish and colour.

Tables 1 and 2 on following pages have been prepared to help users of this Guide to source paper that meets both environmental preferences and performance needs. The tables enable easy comparison of the characteristics and recommended use of different brands of paper. Table 1 provides the general characteristics of recycled content printing papers and Table 2 provides manufacture details of the recycled content and printing suitability. The various column headings of the two tables are explained below.

... recycled content printing papers are available in a range of different colours and textures ...

General characteristics of recycled content printing paper

Grammage (GSM)

This is the weight of paper or paperboard expressed in grams per square metre.

Coated or uncoated

Coated paper is any paper that is covered with a smooth, glossy surface which retains ink gloss that can otherwise be absorbed by uncoated papers. The term "coated paper" covers a wide range of qualities, basis weights and end uses. Coating formulations can be complex and include pigments such as titanium dioxide, adhesives (eg. polymer emulsions) and additives such as polyphosphates and dyes.

Colours/textures

Recycled content printing papers are available in a range of the different colours and textures, which may be suitable for different purposes.

Paper size

Paper size describes the sheet size and/or form of the available stock for different brands and different grammages.

Finish

Printing papers are available in a number of finishes, including dull or matt, gloss or semi-gloss, satin or silk.

CIE Whiteness

CIE Whiteness is an internationally recognised standard of paper brightness developed in Europe by the Centre Internationale d'Eclairage (CIE). The higher the score the whiter the paper will be. This can often be important for "clarity" of printed colour images. The relative whiteness of many brands of recycled paper has improved over recent years due to technological advances in the manufacture of recycled paper.

Whiteness may be a purchasing factor but it is important to remember that it is an aesthetic consideration and not an indicator of performance. Further, note that whiteness is not always applicable for printing papers, which are available in a range of colours and textures.

Archival properties

Many recycled papers are not recommended for archival purposes because the history of the recycled fibre that has gone into the manufacture of the paper is unknown. Manufacturers will not guarantee paper as of archival quality unless they know the quality of the fibre used to manufacture the paper.

Paper used for archiving must be acid free (have a pH of no less than 7.0) and be lignin free (made with less than 1% lignin, which is an organic substance that, with cellulose, forms the chief part of woody tissue and is the bonding element which holds wood fibres together).

Acid free (or alkaline) and lignin free papers are preferable to acidic papers as they maintain quality over a long timeframe and are suitable for long-term storage. Acid papers tend to "yellow" with age and the presence of lignin causes paper to change colour and become brittle.

Printing Suitability

Printing suitability lists the applications in which the paper is recommended by the manufacturer, ie. either laser, offset or digital printing.

Manufacture details of recycled content printing paper

... paper used for archiving must be acid free and be lignin free. Adid free and lignin free papers are preferable to acidic papers as they maintain quality over a long time frame ...

Country of manufacture

The country of manufacture refers to the area where the paper was manufactured, and not necessarily where the fibre was sourced.

Fibre composition

The term "recycled content" refers to paper with a certain proportion of recycled fibre, and does not necessarily mean that the paper is 100% recycled fibre.

All the papers listed in this guide contain a proportion of fibre that has been recovered from pre- or post-consumer waste streams for recycling. The higher the percentage, the greater the amount of recycled fibre.

Fibre source

Printing paper can be manufactured from fibres sourced from native or plantation forests, pre- and post-consumer waste streams, recovered fibre, alternative fibres such as hemp, bagasse (sugarcane), cotton or a blend of the different fibres. Details on fibre source in this guide have been provided, where available, in terms of pre- and post-consumer waste stream and/or forest type.

It is particularly important to understand the true source of fibres used because the definitions of pre- and post-consumer waste in Australia and New Zealand can differ to those used overseas.

Origin of fibre source

This refers to the country that the recovered or new fibre has been sourced from.

Bleaching agent

Bleaching agents are used during the pulping of virgin wood fibres and the whitening of recovered paper. The type of bleaching agent used in paper manufacturing is an important factor. The use of chlorine as a bleaching agent is being discouraged due to health and environmental concerns associated with the production of organochlorines and other potentially harmful substances. As a result of this, some office papers are now manufactured and described as:

- Totally Chlorine Free (TCF) or Elemental Chlorine Free (ECF) ~ made without chlorine gas and using less harmful chlorine derivatives; or
- Processed Chlorine Free (PCF) ~ recycled paper not re-bleached with chlorine.

The last section in this Guide provides websites which contain more information about other environmental aspects of recycled content papers.

Independent verification of fibre source

To avoid claims that companies are making false statements about the environmental attributes of products, many companies are seeking second or third party verification of claims to independently confirm that statements about product attributes are true.

The Department of Environment and Conservation (NSW) does not endorse the products or suppliers listed in the following tables. The information has been supplied by the paper suppliers.

... the use of chlorine as a bleaching agent is being discouraged due to health and environmental concerns ...

Table 1 – General Characteristics of Recycled Content Printing Papers

Paper name	GSM	Coated	Colours Available	Stock Available *(mm)*	Finish	CIE Whiteness	Archival Properties	Printing Suitability
Banksia	90	No	White birch (white), wild cotton (Felt)	910 x 625 650 x 910	Laid, wove	135	Acid free, 100 years	Offset, letterpress, screen printing, thermography, laser, inkjet
	100, 125	No	White birch (white), wild cotton (Felt)	650 x 910	Smooth, felt	135	Acid free, 100 years	Offset, letterpress, screen printing, thermography, laser, inkjet
	260	No	White birch (white), wild cotton (Felt)	1000 x 700	Felt	135	Acid free, 100 years	Offset, letterpress, screen printing, thermography, laser, inkjet
Cambric Linen (Beckett)	90	No	14 colours available	450 x 640	Linen	N/A	Acid free	Copiers, laser, inkjet, digital, offset
	104	No	14 colours available	645 x 965	Linen	N/A	Acid free	Copiers, laser, inkjet, digital, offset
	216, 270	No	14 colours available	660 x 1016	Linen	N/A	Acid free	Copiers, laser, inkjet, digital, offset
Cardex	210	No	Ivory, orange, black, canary, red	1020 x 640	Vellum	Information not available	Acid free	Laser, offset
Concept Vellum	90, 104, 216, 271	No	Sand, sandstone, desert haze, sea spray, glacier mist	450 x 640 635 x 965 660 x 1016	N/A	N/A	Acid free	Laser, inkjet, offset
Conqueror Recycled	100	No	Fresh white	A4 430 x 610	Smooth, wove	Information not available	Acid free	Laser, inkjet, offset
	220	No	Fresh white	700 x 1000	Wove, laid	Information not available	Acid free	Laser, inkjet, offset
Conservation Recycled	100, 250, 280	No	Bright white, ivory	450 x 640	Laid, wove	Information not available	Acid free	Laser, digital, offset
Courier (AP)	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available
Curious Particles	100, 250	No	Moonlight, snow, aqua, sand	450 x 640 700 x 1000	N/A	N/A	Acid free	Laser, inkjet, offset

Table 1 – General Characteristics of Recycled Content Printing Papers *(continued)*

Paper name	GSM	Coated	Colours Available	Stock Available *(mm)*	Finish	CIE Whiteness	Archival Properties	Printing Suitability
Cyclus	80, 100	No	White	455 x 650 650 x 910 720 x 1020	Matt	105 +/-3	Acid free, 100 years	Offset letterpress, screen printing, laser, inkjet
	140	No	White	650 x 910 720 x 1020	Matt	105 +/-3	Acid free, 100 years	Offset letterpress, screen printing
	250	No	White	650 x 910	Matt	105 +/-3	Acid free, 100 years	Offset letterpress, screen printing
Encore	150, 170, 200	Yes	White	650 x 910	Super Gloss	N/A	ISO9072	Offset
	250, 300, 350	Yes	White	650 x 910 760 x 1020	Super Gloss	N/A	ISO9072	Offset
Evolve Business	80,90,100	No	White	Cut & folio sizes, reels	N/A	160	ISO 9706 >150yrs	Laser, digital, inkjet, offset
Envirocare 100% Recycled	70, 80, 90, 100, 115, 135, 150, 250	No	White	455 x 650 650 x 910	N/A	Information not available	Acid free	Offset Laser (80, 90, 100 gsm only)
Expression	90, 104, 216	No	Alabaster, grain	450 x 640 650 x 910 660 x 1016	N/A	N/A	Acid free	Laser, inkjet, offset
Freelife	100, 120, 140	No	White, cream	650 x 910	Smooth, vellum, felt	N/A	Acid free	Offset Laser (80, 90, 100 gsm only)
	215, 320	No	White, cream	650 x 910 700 x 1000	Smooth, vellum, felt	N/A	Acid free	Offset
Green Wrap	80, 90	No	White	870 x 615	Matt	125	Acid free	Laser, digital, inkjet, offset
	150, 200	No	White	680 x 910	Matt	125	Acid free	Laser, digital, inkjet, offset

Table 1 – General Characteristics of Recycled Content Printing Papers *(continued)*

Paper name	GSM	Coated	Colours Available	Stock Available *(mm)*	Finish	CIE Whiteness	Archival Properties	Printing Suitability
Impressions Keaykolour Recycled	100, 250	No	May, honey, chaff, chalk, limestone, shale	450 x 640 700 x 1000	N/A	N/A	Acid free	Laser, inkjet, offset
Monza	90, 100, 115, 130, 150, 170, 200, 220, 250, 300, 350	Yes	White	Folio sizes	Gloss, satin	Information not available	Acid free	Offset
Navajo	90 — 486	No	Brilliant white	650 x 910 635 x 965, 660 x 1016	Smooth	98	Acid free	Offset, digital, laser
Neenah Columns	90, 118	No	Various	900 x 640	N/A	N/A	Acid free	Laser, offset
	216	No	Various	700 x 1000	N/A	N/A	Acid free	Offset
	324	No	Various	600 x 1016	N/A	N/A	Acid free	Offset
Onyx	80, 100, 120, 135, 170, 220, 280,	No	Natural, ivory, ultra white, stone, sea	650 x 910	Vellum, smooth, felt embossed, embossed	N/A	Acid free, lignin free	Laser, offset, digital, waterless
Origin	110, 220	No	Avocado, white, sand, iceberg	650 x 910	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless
Outback	110, 230	No	Ayres rock, desert gold, ghost gum, black, nullarbor	650 x 910	Vellum, smooth	N/A	Acid free, lignin free	Laser, offset, digital, waterless
Plantation	70, 80, 90, 100, 110, 140, 230	No	White	640 x 900 650 x 910	Vellum	118	Acid free	Laser, offset
Prologue	80, 90, 100, 110, 135, 230	No	White	455 x 650 650 x 910	Vellum	122	Acid free	Laser, offset
Recycled 100	110, 220	No	Cream, white, grey	650 x 910	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless

Table 1 – General Characteristics of Recycled Content Printing Papers *(continued)*

Paper name	GSM	Coated	Colours Available	Stock Available *(mm)*	Finish	CIE Whiteness	Archival Properties	Printing Suitability
Speckletone	104 — 270	No	White & tints	635 x 965 660 x 1016	Flecked	N/A	Acid free	Laser and offset
Steinbeis Signaset	60, 80, 90, 115, 170	No	17 different colours	A4, A3 Folio sizes & reels	Matt	N/A	Acid free, 100 years	Laser and offset
Suits	100, 120, 220, 300	No	White, warm white	650 x 910 920 x 660	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless
Sundance	118, 176, 216	No	Ultra white, natural white, country cream and adobe tan	Folio sizes	Felt finish	N/A	Acid free	Offset
Tudor RP	80, 100	No	White	455 x 650 650 x 910	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless
	115, 140, 300	No	White	650 x 910	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless
Tuscany	118, 216	No	Alabaster, flax, fresco, pebble	650 x 910 450 x 640	Vellum	N/A	Acid free, lignin free	Laser, offset, digital, waterless

Table 2 – Manufacturing Details of Recycled Content Printing Papers and Printing Suitability

Paper name	Country of Manufacture	Fibre Composition	Recycled Fibre Source		Bleaching Agent	Are the claims made for the paper independently verified?	Does the mill have an EMS[18] currently accredited or recognised by a third party?
			Waste Stream	*Country of Origin*			
Banksia	Australia	25% recycled content – pre- and post-consumer 25% cotton fibre 50% new fibre	Printers waste, converter offcuts, LPB[19] containers	Australia	ECF	No	Maintains certification to ISO 14001
Cambric Linen (Beckett)	USA	20% recycled content 80% new fibre	Information not available	Information not available	ECF	Information not available	Information not available
Cardex	Australia	100% recycled content – pre- and post-consumer	LPB containers, printers & converters waste, office computer papers	Australia/New Zealand	ECF	No	Maintains certification to ISO 14001
Concept Vellum	USA	30% recycled content – post- consumer 70% new fibre	Information not available	USA	Information not available	No	Information not available
Conqueror Recycled	UK	75% recycled content - 65% pre- and 10% post-consumer 25% new fibre	Recycled papers, (some mill broke)	UK	ECF	No	Information not available
Conservation Recycled	Scotland	100% recycled content 80% pre- and 20% post-consumer	Office waste, converter offcuts	Scotland	Process ECF	Yes	EU Eco-Management & Audit Scheme (EMAS) & ISO 14001
Courier	Information not available	Information not available	Information not available	Information not available	ECF	Information not available	Maintains certification to ISO 14001
Curious Particles	UK	75% recycled content – 35% pre- and 40% post-consumer 25% plantation fibre	Office waste (some mill broke)	UK	ECF	No	Information not available
Cyclus	Denmark	100% recycled content – post- consumer	Printed waste from offices, print houses, consumers & converters	Scandinavia & Germany	TCF	Carries the Blue Angel and Nordic Swan labels	EU Eco-Management & Audit Scheme (EMAS) & ISO 14001
Encore	Italy	50% recycled content – 35% pre- and 15% post-consumer 50% new fibre	Office waste, offcuts, LPB cartons	Italy	ECF	No	Maintains certification to ISO 14001
Envirocare 100% Recycled	Austria	100% recycled content – 35% pre- and 65% post-consumer	Carbonless & thermal papers (some mill broke)	Austria	ECF	Carries the Blue Angel, Nordic Swan and Eugropa labels	Maintains certification to ISO 14001
Evolve Business	UK	100 % recycled content – post-consumer	Office waste	UK	ECF/TCF	Yes. Paper Profile.	Maintains certification to ISO 14001

18. EMS – Environmental Management System
19. LPB - Liquidpaperboard – cardboard/paperboard with a liquid-proof polyethylene coating on both sides, sometimes with an additional layer of aluminium foil. Includes milk, juice and long-life cartons – (http://www.alc.asn.au)

Table 2 – Manufacturing Details of Recycled Content Printing Papers and Printing Suitability *(continued)*

Paper name	Country of Manufacture	Fibre Composition	Recycled Fibre Source		Bleaching Agent	Are the claims made for the paper independently verified?	Does the mill have an EMS[19] currently accredited or recognised by a third party?
			Waste Stream	*Country of Origin*			
Expression	USA	20-30% recycled content – post- consumer 70% plantation fibre	Post consumer sources are not available (some mill broke)	USA	ECF	No	Information not available
Freelife	Italy	80% recycled content – pre- consumer 5% cotton, 15% new fibre	Office waste, offcuts, LPB cartons	Italy	ECF	No	Maintains certification to ISO 14001
Green Wrap	Australia	60% recycled content – pre- and post-consumer 40% new fibre from accredited pulp mills	Office waste, offcuts, LPB cartons	Australia	ECF	No	Maintains certification to ISO 14001
Impressions Keaykolour Recycled	UK	75% recycled content – 35% pre- and 40% post-consumer 25% new fibre	Post-consumer sources are not available (some mill broke)	UK	ECF	No	Information not available
Monza	Italy	50% recycled content - 35% pre- and 15% post-consumer 50% plantation fibre	Office waste, printers waste	Italy, France & Canada	ECF	No	Maintains certification to ISO 14001
Navajo	USA	20% recycled content – pre- and post-consumer 80% new fibre	Office waste, converters	USA	ECF	No	Mill works to their established EMS
Neenah Columns	USA	60% recycled content – 30% pre- and 30% post-consumer 40% new fibre	Office waste, offcuts, LPB cartons	USA	TCF	No	Information not available
Onyx	Australia	100% recycled content – pre- and post-consumer	Office waste, LPB containers	Australia	ECF	No	Maintains certification to ISO 14001
Origin	Australia	100% recycled content – pre- and post-consumer	LPB containers, printers & converters offcuts, office computer papers	Australia &New Zealand	ECF	No	Maintains certification to ISO 14001
Outback	Australia	Mixture of pre- and post-consumer waste (actual percentage varies with the supply of waste)	Coloured inclusions from coloured waste from the laminating industry	Australia	ECF	No	Maintains certification to ISO 14001
Plantation	Australia	65% recycled content – pre- and post-consumer 35% cotton waste	Converters waste, office waste, LPB containers (some mill broke)	Paper: Australia & New Zealand Cotton : Australia	ECF	No	Maintains certification to ISO 14001
Prologue	Australia	100% recycled content - at least 25% post-consumer	LPB containers, printers waste, other manufacturer offcuts	Australia & New Zealand	ECF	No	Maintains certification to ISO 14001

Table 2 – Manufacturing Details of Recycled Content Printing Papers and Printing Suitability *(continued)*

Paper name	Country of Manufacture	Fibre Composition	Recycled Fibre Source		Bleaching Agent	Are the claims made for the paper independently verified?	Does the mill have an EMS[18] currently accredited or recognised by a third party?
			Waste Stream	*Country of Origin*			
Recycled 100	Australia	100% recycled fibre – pre- and post-consumer	LPB containers, printers & converters waste, office computer papers.	Australia & New Zealand	ECF	No	Maintains certification to ISO 14001
Speckletone	USA	100% recycled – pre- and post- consumer	Information not available	USA	N/A	No	Mill works to their established EMS
Steinbeis Signaset	Germany	100% recycled content – pre- and post-consumer	Household & commercial waste, office paper, newspaper	Germany	TCF	Carries the Blue Angel Nordic Swan label	Maintains certification to ISO 14001
Suits	Australia	70% recycled fibre – pre- and post-consumer 30% new fibre	LPB containers, printers & converters waste, office computer papers.	Australia and New Zealand	ECF	No	Maintains certification to ISO 14001
Sundance	USA	50% recycled content - 35% pre- and 15% post-consumer 50% new fibre	Office waste	United States	ECF	No	Maintains certification to ISO 14001
Tudor RP	Australia	100% recycled content – pre- and post-consumer	LPB containers, printers & converters waste, office computer papers.	Australia and New Zealand	ECF	No	Maintains certification to ISO 14001
Tuscany	Australia	Information not available	Information not available	Information not available	ECF	No	Maintains certification to ISO 14001

Suppliers of recycled content printing papers

The following companies can either supply or direct you to the nearest outlet to obtain the printing paper of your choice.
If you require stock samples, mock ups, printed samples or technical advice please contact the appropriate paper merchant.

Company Name	Location	Contact	E-mail /Internet	Paper
CPI Group	Nationally	02 8787 6555	Banksia	Cyclus
Dalton Fine Papers	Sydney, Melbourne, Brisbane, Adelaide, Perth	02 8746 8200	www.dalton.com.au	Courier Dalton Ultrawhite Impress Origin Prologue Recycled 100 Suits
Edwards Dunlop	Sydney, Melbourne, Brisbane, Perth, Adelaide	02 8746 8746	www.edpaper.com.au	Onyx Sundance
Fuji Xerox Australia	Nationally – metropolitan and non-metropolitan	131 411	www.xeroxsupplies.com.au	Green Wrap
Genesis Australia	Sydney	02 9584 2555	sales@genesisaust.com.au	Evolve Business (Only available in A3/A4)
K.W. Doggett Fine Papers	Melbourne, Brisbane (associates in Sydney)	03 8470 2222	vicsamples@kwdoggett.com.au www.kwdoggett.com.au	Concept Vellum Conqueror Recycled Curious Particles Envirocare 100% Recycled Expression Impressions Keaykolour Recycled
Longbottom Papers	Brisbane, Canberra, Melbourne, Sydney	02 9533 5911	sales@longbottom.com.au	Courier Curious Particles Freelife Monza Recycled 100 Tuscany
Moirs Paper	Sydney, Canberra, Newcastle	02 8595 1111	www.moirs.com.au	Cambric Linen (Beckett) Concept Vellum Conqueror Recycled Curious Particles Expression
Raleigh Paper Co	Brisbane, Canberra, Melbourne, Sydney	02 8746 8600	www.raleighpaper.com.au	Conservation Recycled Navajo Outback Plantation Speckletone
Spicers Paper	Melbourne, Sydney, Adelaide, Brisbane, Perth, Hobart, Canberra, Wodonga, Townsville, Darwin	02 9534 5544	www.spicerspaper.com.au	Conqueror Recycled Curious Particles Encore Freelife Green Wrap Monza Neenah Columns Tudor RP Tuscany
Tredex Pty Ltd	Sydney	02 9997 3366	www.tredex.com.au	Steinbeis Signaset Evolve Business (Only available in A3/A4)

Myths and realities about recyled content paper and paper recycling

Myth: ***"Using recycled content paper will void product warranties."***

Reality: ***"Recycled content printing papers do not automatically void product warranties."***

The quality of recycled content printing paper has improved dramatically in the past few years but there is still a lingering perception that recycled content paper is of a lesser quality and has the potential to negatively affect printing machinery or equipment.

When consulted about this issue, printing equipment manufacturers were outwardly positive and supportive of the use of good quality recycled content paper, provided the paper meets the specifications for the machinery. Companies understand that like all paper products, there is variation in the quality of different brands of recycled paper and each brand should be treated on a case by case basis. Many company representatives see the importance of implementing sound environmental practices and the need to make a commitment to sustainability.

Trade Practices Act 1974

Claims that the use of recycled office paper will increase the cost of service agreements and violate product warranties or that only a company specific brand of paper can be used in their equipment, can both actually be violations under the Trade Practices Act 1974.

Under the Trade Practices Act 1974, it is an offence to mislead the public about the characteristics or suitability for purpose of any goods. It is also an offence to make a false or misleading representation about the exclusion or effect of any condition, warranty or guarantee.

If a competitor's recycled paper is identical or equivalent in performance to their own, equipment manufacturers or suppliers cannot legally discriminate against the competing products. This applies to both misleading claims about competing products and also attempts to establish bias through conditions in service contracts and warranties.

As a result an office equipment manufacturer cannot legally discourage the use of recycled paper if it meets the specifications for the machine in which it will be used. The Competition and Consumer Commission can also be contacted by anyone wishing to seek further information.

Myth: "Paper that is supposedly collected for recycling doesn't get recycled."

Reality: "Sorted, uncontaminated paper gets recycled into new products."

Community surveys commonly report that there are still some "recycling atheists" who maintain the belief that "materials collected for recycling just go to landfill, so why bother[20]".
This is an incorrect perception. In recent years there has been considerable investment in the recycling industry and associated technologies. Paper does in fact get recycled into a number of products, one of which is printing paper.

Buying and using recycled content paper is just one step in the recycling process. On the flip side to "buying recycled" content products is **sorting** and collecting high quality paper to provide stock for recycling.

The recycling process itself can however, impact the recyclability of paper – and this includes your commitment to recycling, ie. if paper becomes contaminated during the collection process it may not be able to be recycled. Table 3 describes the recycling process, ie. the "paper trail" through the phases of purchase, use, sorting, collection, re-manufacture and re-purchase.

Generally, the recycling process runs smoothly as described by the "best case scenario". However, things can go wrong in the different stages of the recycling process as described in the "worst case scenario". This highlights the important role that the "end user" plays in the collection, separation and purchase phases of the recycling process.

Table 3 - The Paper Trail

Recycling Process	Best Case	Worst Case
1. Sorting – end users	Paper is placed in a separate bin for recycling. Attachments such as staples, sticky tape, glue, plastic and metal clips are removed from the paper.	Paper is put in a general waste bin and goes to landfill with other materials. Contamination (ie. food scraps, broken glass, plastics) enters the paper recycling bin.
2. Collection	Contractor collects the paper for transfer to a sorting facility for recyclables.	Contamination that has entered the paper bin has further contaminated a whole load in the collection process rendering it useless for recycling.
3. Sorting – materials recovery facility	Paper is inspected either by hand or by machine to separate the paper into different material streams for different market applications (ie. newspaper, office paper, cardboard).	Contaminated papers are not suitable for recycling and need to go to landfill (for example, people have been known to put motor oil and even carcasses in paper recycling bins!).
4. Recycled product manufacture	Sorted material streams are transferred to secondary markets to be manufactured into new products. There is diversity in the product range.	Weak local markets for recycled products will not support new and/or existing business ventures.
5. Buying	Good quality recycled content products are purchased by consumers. There is a general regard for a products recyclability when making purchasing decisions.	Poor quality recycled content products influence consumer perceptions that all recycled content products are poor quality. Limited availability of good quality, price competitive recycled content products.
6. Sorting Process – end users	Recycled content paper is placed in a separate bin to re-enter the recycling loop.	Recycled content paper is put in general waste bin and goes to landfill with other materials.

20. Macarthur Waste Board (2001) Community Survey

Myth: ***"It's only recycled if it's 100% recycled fibre."***

Reality: ***"Recycled papers containing less than 100% recycled content still have environmental benefits."***

It is sometimes suggested that using a paper that is 50% or 80% recycled is "not truly" supporting recycled products because the product is not manufactured from 100% recycled fibre. There are physical limits to the extent to which paper can be recycled. Paper fibres can only be recycled five or six times, as they become damaged during the recycling process, shrink and break, so eventually they are not strong enough to form paper. Hence there is often a need for some recycled content paper to contain a percentage of new fibre. When wastepaper is used to make recycled products, it is generally not possible to determine how many times the paper has previously been recycled, which can impede the ability to guarantee paper quality from batch to batch.

Selecting a printing paper that contains any percentage of recycled fibre is environmentally beneficial. Using a high quality paper with an appropriate mix of new and recycled fibres will enable both the desired finish quality and support for recycling systems.

Overall, it is necessary to ensure a balance between purchasing a paper that meets both your environmental preferences and performance requirements in terms of both reliability and quality of the final print. What is important is that you choose the highest recycled content that is fit for your purpose.

Myth: ***"It is only recycled if it's manufactured from post-consumer waste."***

Reality: ***"Both pre- and post-consumer wastes are valuable resources that should be diverted from landfill."***

The reality is, any wasted paper resources recovered for recycling, whether pre- or post-consumer, reduce the need for virgin material (trees) to produce new paper and cardboard products.

However, the rationale for purchasing products manufactured from fibres recovered from the post-consumer waste stream is that it creates markets for materials recovered from recycling programs and diverts materials disposed of further down the supply chain. In simple terms, utilising the post-consumer waste stream helps to maximise the reuse of resources.

A point to remember, however, is that whether the source of recycled fibre is from printers' offcuts, office waste or sourced from kerbside collections, it is all a reusable resource that should be diverted from landfill. Pre-consumer paper wastes are often better quality and of higher value than post-consumer materials but if not recycled will still end up as waste going to landfill.

What is pre and post-consumer waste?[21]

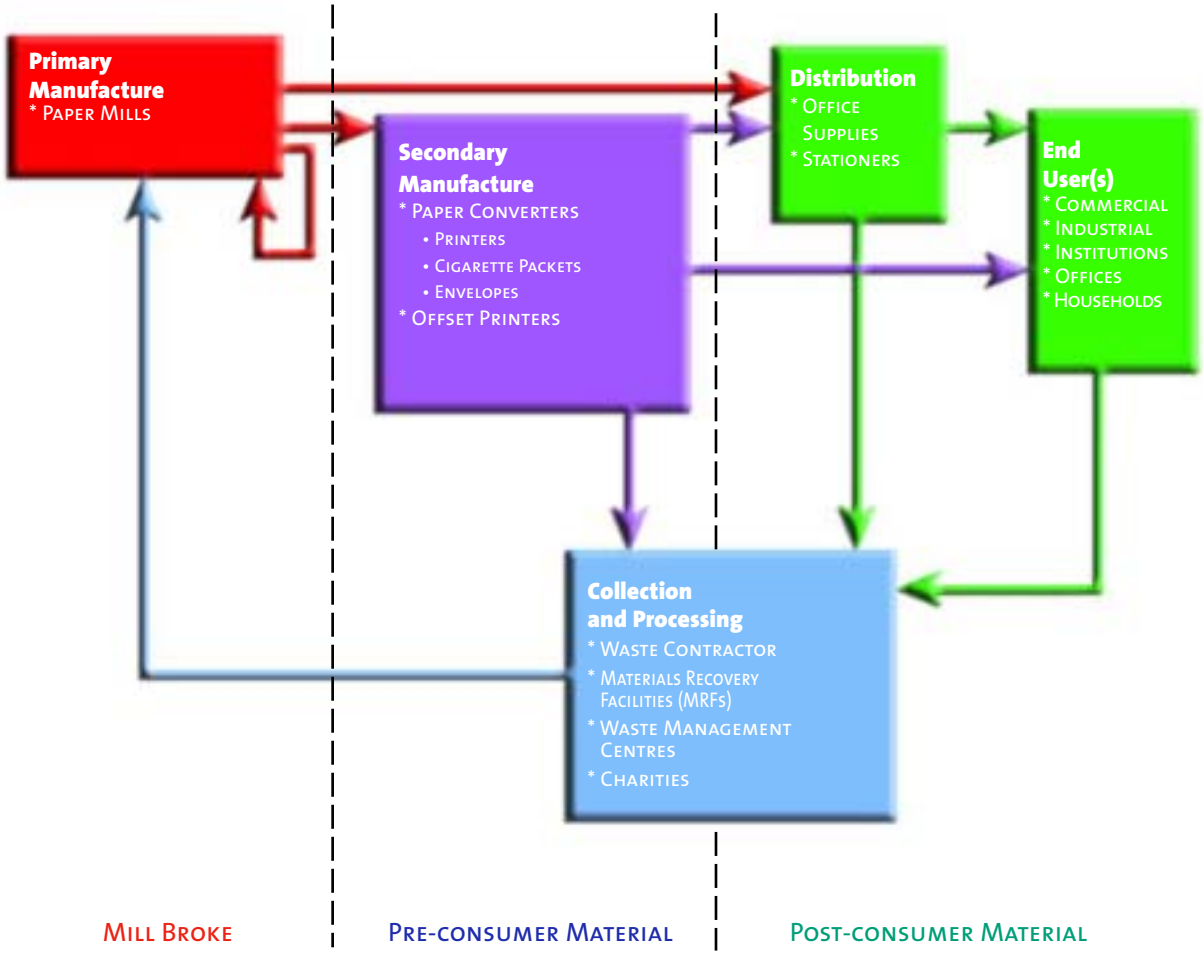
Pre-consumer material
Material diverted from the waste stream during a manufacturing process. Excluded is re-utilisation of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Post-consumer material
Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Figure 1 provides a visual representation of these waste streams, and the movement of wastepaper through distribution back to the mill.

21. The Australian/New Zealand Standard AS/NZS ISO14021:2000 Environmental Labels and Declarations – self declared claims (Type II environmental labelling).

Figure 1: Movement of recovered wastepaper through distribution back to the mill



A POINT TO NOTE: Mill broke is paper discarded at any stage during the paper manufacturing process. Mill broke is not classed as recycled content according to Australian Standards as it is the "re-utilisation of scrap that is generated in the paper making process which is capable of reclaiming the material for the same process that generated it". However, mill broke is referred to as pre-consumer waste in some overseas countries and some of their papers imported into Australia are sold as recycled content. Papers marketed as recycled content that ONLY contain mill broke have not been included in this Guide however it should be noted that some of the papers listed include mill broke as a component of the pre-consumer fibre. Where relevant this is noted in Table 2.

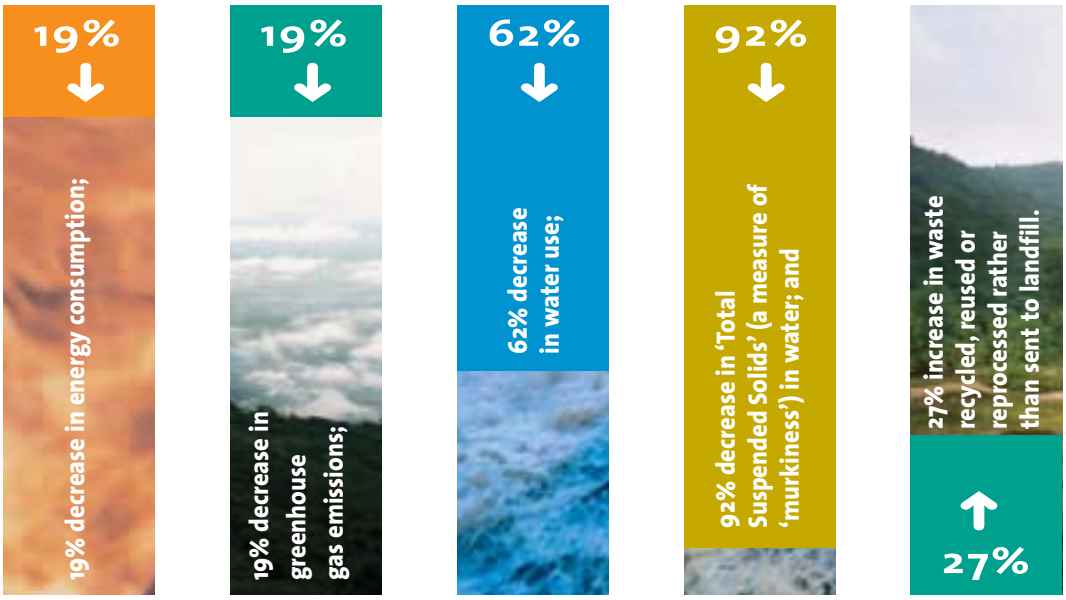
Beyond recycled content ~ other environmental aspects of paper

It is worthwhile considering other environmental impacts associated with the manufacturing processes in the pulp and paper industry and the use of the paper in the printing and design process.

Understanding the full environmental impacts of the paper you choose can be a complex matter and one that needs to be juggled with other procurement preferences for the paper you purchase.

Impacts of the pulp and paper industry

Environmentally responsible paper users generally seek a wide range of environmental attributes in paper stock, beyond recycled content. The pulp and paper industry has many environmental impacts. Historically the industry has been a significant source of pollution from effluent and air emissions. However, between 1990-2002 the Australian Paper Industry Council (APIC) reports that its members have improved their environmental performance as demonstrated by the following statistics[22]:



There are many environmental considerations in selecting and using recycled content paper. Unless we undertake a detailed life cycle analysis of paper manufacturing and the practices of different mills, we are left to make value judgements on the best papers to purchase. Some of the issues to consider include:

Resource Utilisation

Wood pulp is sourced by harvesting timber resources. The transition to more sustainable forestry practices and investment in plantations, as well as greater utilisation of recycled fibres are ways in which the impacts of wood harvesting can be reduced.

Liquid effluent

The pulp and paper industry's discharges to water contain many chemicals, especially organic compounds which deplete oxygen in receiving waters, harm aquatic life and reduce water quality. Biological treatment plants are now commonly used to treat effluent, with the sludge generated by the effluent treatment process usually landfilled, incinerated, applied to land, composted or used in the manufacture of cement. However, on-going efforts are needed to reduce the volume of wastewater and loads of sludge generated to further decrease environmental impacts from paper manufacturing.

22. http://www.apic.asn.au "2002 Environment Statistics Summary"

Manufacturing recycled paper consumes 50% less energy.

... the process reduces the overall level of bleaching chemicals and lowers the biochemical oxygen demand of the effluent ...

Bleaching

Traditionally, the chemical treatment of pulp fibres to reduce or remove colouring matter and improve whiteness or brightness involved the use of chlorine-containing chemicals (chlorine gas and hypochlorite) with sodium hydroxide. Alternative bleaching methods have been introduced in many mills, including elemental-chlorine free methods (using chlorine dioxide instead of chlorine gas) or totally chlorine free methods, which use hydrogen peroxide, ozone or enzymes.

Formamodine Alkaline Sulphuric Acid bleaching (FAS) has no chlorine and is an alternative bleaching method for recovered paper. Oxygen bleaching is a relatively modern bleaching process for wood and other pulps, involving the use of oxygen in an alkaline medium to reduce lignin and other dark-coloured components. The process reduces the overall level of bleaching chemicals and lowers the biochemical oxygen demand of the effluent.

Energy consumption

The paper industry is an energy-intensive sector, but is becoming more energy efficient. For example, using recycled fibre consumes 50% less energy than manufacturing paper from new fibre.

Solid waste

Solid wastes from the pulp and paper industry are coming under increasing scrutiny but are generally classified as non-hazardous. Mills re-use much of the paper waste (mill broke) in new paper manufacture. Fibres that are too small to be used to make paper end up in liquid effluent as sludge. Many mills have found secondary markets or applications for this material.

Air emissions

The main atmospheric emissions from the pulp and paper industry include sulphur compounds, carbon monoxide, sulphur dioxide, nitrogen oxides, Volatile Organic Compounds (VOCs) and particulates. Improved technology in gas cleaning equipment is reducing emissions.

Water consumption

The pulp and paper industry consumes large amounts of water, using an average of 28,660 litres of water per tonne of production in 2001-2002[23]. Large-scale efficiency gains have been made in recent years with on-site treatment and recycling of wastewater resulting in a 62% reduction in water use since 1990. However, as with all consumers, continual improvement is needed to reduce the volume of water consumed during paper manufacturing to contribute to demand management.

Transport

Transport is a major cost element in the production of pulp and paper and has an environmental impact. This includes transport of raw materials and shipments of finished product to the market place.

Reference: Much of the information in this summary was obtained from the Paper Information Sheet in Warmer Bulletin, November 2002, Residua Inc.

Picton River tall forest, Southern Forests, Tasmania. *Rob Blakers*

23. Australian Paper Industry Council (2003) Public Eco-Efficiency Report.

Potential impacts of printing and design

The environmental impacts of paper do not stop with its manufacture but extend into printing finishes and design processes.

Inks

Volatile Organic Compounds (VOCs), are present in many of the inks used by the printing industry. Many VOCs are toxic, and pose environmental risks (such as harm to the ozone layer) and health risks. When they react with sunlight they form smog at lower atmospheric levels. When emitted indoors, VOCs can cause eye, nose and throat irritation, headaches and loss of coordination[24].

The inks used in a standard printing run are petroleum-based with a VOC content in excess of 30%. These inks dry quickly, however the petroleum content requires stronger and more hazardous solvents to wash it off, thus contributing even more VOCs to the environment. The effects worsen when a greater number of colours are used.

Fluorescent and metallic colours are popular with advertisers because they are distinctive but they contain high levels of cadmium and other toxic metals. These inks are more difficult to remove than standard petroleum-based inks, intensifying the de-inking process[25]. Many bright inks such as orange and yellow contain high levels of heavy metals such as copper and chromium. If this paper is composted and applied to land at high rates there is the potential for these heavy metals to accumulate in the soil and impact on plant, animal or human health. Similarly, if this paper is disposed of in landfills, these heavy metals could leach to groundwater.

... many bright inks such as orange and yellow contain high levels of heavy metals such as copper and chromium ...

One possible solution to both environmental and health issues is the use of vegetable based inks that are renewable and emit less toxic VOCs. Furthermore, soy ink (a type of vegetable based ink) is better suited to recycled content paper as it does not 'wick' (spread) as much. Additionally, soy ink is removed more easily than petroleum based compounds in the de-inking process of recycling[26].

Inks and recycling

De-inking paper is a necessary step in the recycling process. It involves 'washing' the paper, by mixing it with water, a detergent and air to form a froth, which is skimmed off before the pulp can be dried and made into new paper[27]. This is an energy intensive process, made worse when heavily printed paper or board (print coverage of above 50%) is de-inked.

Printing finishes and pulping

A number of printing finishes, such as laminating, the use of synthetic glues and embellishments such as foil stampings are not conducive to the recycling process as they make the pulping process more difficult and cumbersome[28].

Graphic designers can also assist by avoiding 'bleeds' that are then trimmed. Ink extended beyond trim marks requires more intensive recycling than ink within trim marks. It is also possible to consider ways in which to use less intensive colours and inks that are less toxic.

24. http://www.epa.gov/iaq/voc.html
25. http://www.earthdesign.com.au
26. http://www.soyink.com
27. http://www.apic.asn.au
28. http://www.green.net.au/srd

Further Reading

Information about waste minimisation

Department of Environment and Conservation (NSW) — www.environment.nsw.gov.au

(Australia) The Department of Environment and Conservation's Sustainability Programs Division works in partnership with industry, governments and the community to implement statewide and local programs. The NSW Waste Avoidance and Resource Recovery Strategy 2003 provides the framework and targets for waste reduction and better use of resources. Its website provides access to directories, tools, reports and other information including the Buy Recycled Guide, the Office Products Guide and Waste Reduction Guides for Office Buildings.

EcoRecycle Victoria — www.ecorecycle.vic.gov.au

(Australia) EcoRecycle Victoria was created to bring about significant changes in the way Victoria addresses resource recovery, recycling and waste management. Ecorecycle's website provides a range of resources, publications and links to related sites to assist anyone wishing to implement a 'buy recycled' program

Buy Recycled Business Alliance (BRBA) — www.brba.com.au

(Australia) The BRBA is a business based, non-profit organisation, which promotes the purchase and use of recycled content products and materials through leadership by example, education and information, research and development, and partnerships.

Information about environmental aspects of paper

Conservatree — www.conservatree.com

(USA) Conservatree is a non-profit organisation that provides extensive information resources on ecologically sustainable paper markets. The website includes information on standards for recycled content papers, labelling of products and information on environmentally preferable papers (beyond recycled content). It also addresses concerns and myths that create resistance to environmental papers.

Chlorine Free Products Association — www.chlorinefreeproducts.org

(USA) The Chlorine Free Products Association (CFPA) is a not-for-profit corporation. The primary purpose of the association is to promote 'Total Chlorine Free' policies, programs, and technologies throughout the world. The CFPA represents companies dedicated to implementing advanced technologies, and groups supporting products free of chlorine chemistry. Advances in totally chlorine free {TCF} pulp and paper making make it possible to eliminate releases of toxic chlorinated compounds to our air, water, and soil.

Reach for Unbleached Campaign — www.rfu.org

(USA) Reach for unbleached started as a campaign to encourage consumer acceptance of unbleached or oxygen-bleached paper for many routine uses. The campaign includes a broad focus on toxics in its work towards sustainability in the pulp and paper industry. Its on-line publication, *Mill-Watch*, features news, analysis, resources and contacts for pulp and paper issues and paper and pulp mill monitoring.

Treecycle Recycled Paper — www.treecycle.com

(USA) Provides information and education directed toward the general public about the importance of using the most environmentally sensitive recycled paper products. The site also provides access to a wide range of these products.

Industry Organisations

Printing Industries Association of Australia

www.printnet.com.au

(Australia) The Printing Industries Association of Australia (PIAA) is a members-based organisation offering business services and industry development to its members.

Australia Paper Industry Council

www.apic.asn.au

(Australia) The Australian Paper Industry Council (APIC) represents the views and interests of the six largest pulp and paper companies in Australia, which together make up 98% of the pulp and paper manufactured in Australia based on sales turnover figures.

American Forest and Paper Association

www.afandpa.org/

(USA) This website has a wide range of information about forest products and the industry in the United States. It includes information on the forestry industry, pulp and paper, environment and recycling, and information for educators and students.

International Paint and Printing Ink Council

www.ippic.org

(International) The IPPIC acts as a focal point for monitoring and communicating specified international issues; develops recommendations and analyses on selected issues of common interest to the participating organisations and attempts to derive a common position (in conjunction with the governing bodies of the respective participants); coordinates industry positions and communicates with other international organisations; and serves as a forum for open dialogue and exchange between the participating organisations on issues of common interest.

National Soy Ink Association

www.soyink.com

(USA) This site includes information about soy ink. It also maintains relationships with soy ink manufacturers, printers and buyers and advises on research needed for product developments.

Surface Coatings Association of Australia

www.scaa.asn.au

(Australia) The Surface Coatings Association Australia Inc. (SCAA) aims to further the understanding and development of surface coatings in Australia. Members are from such diverse fields as paint, printing ink, adhesives and cosmetics. Raw materials suppliers and end users of these industries are also represented.

Australian Graphic Industry Association

www.agda.asn.au

(Australia) AGDA is Australia's largest representative association of professional graphic designers and aims to facilitate the advancement of the graphic design profession in Australia.

Society for Responsible Design

www.green.net.au/srd/

(Australia) The Society for Responsible Design is a not-for-profit, volunteer run organisation. The aim of the SRD is to work towards a sustainable future through environmentally and socially responsible design practices.

Resources

Know Your Paper – A Guide to Purchasing Recycled Content Office Paper

www.environment.nsw.gov.au

(Australia) – "Know Your Paper - A Guide to Purchasing Recycled Content Office Paper". Provides information to assist anyone wishing to purchase 80gsm all-purpose office paper that contains recycled fibre. Follow the Resource NSW link to Programs – Commercial and Industrial – Waste Reduction in Office Buildings.

EcoDesign: A Promising Approach

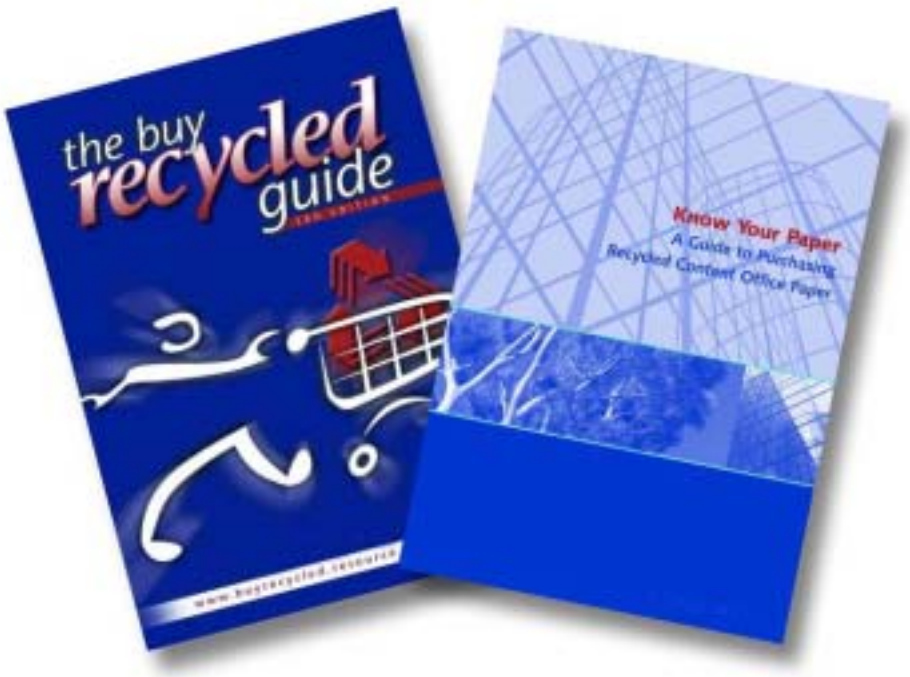
www.design.ntnu.no/fag/ecodesign

(Norway) Provides an interactive program based around improving product design by applying ecodesign principles, thereby preventing environmental problems at source and, hence, moving toward a more sustainable society.

Design for Sustainability Guide

www.edf.edu.au/DfSGuideWebsite/HomePage/Home.htm

(Australia) The DfS Guide helps designers gain insights into the 'cultural agency of design', that is, the ability of design to help shape the values, expectations, desires, habits and behaviours of people. Its main purpose is to develop your intuitive sense for sustainability and to encourage you to discover the potential of your design projects to contribute to more sustainable ways of living and working.



Invitation to submit additional information for future updates of the Guide

Given the dynamic nature of the paper production and printing industries, the Department of Environment and Conservation understands that the market is constantly evolving as new products become available and merchants adjust paper stocks.

We therefore welcome all feedback and information about new paper stocks and market trends to ensure the Guide is maintained as an up to date and useful resource.

Any information forwarded to the Department of Environment and Conservation may be used for inclusion in the next edition of the Guide. Respondents will be contacted to confirm the details.

NAME: _____

TITLE: _____

COMPANY: _____

ADDRESS: _____

PHONE: _____

FAX: _____

E-MAIL: _____

WEBSITE: _____

STAKEHOLDER GROUP: _____

ie. merchant, manufacturer, industry procurement, local or state government procurement, other

GENERAL DESCRIPTION OF THE INFORMATION YOU WOULD LIKE MODIFIED OR ADDED: _____

PLEASE RETURN A COPY OF THIS FORM TO:

Department of Environment and Conservation (NSW)
Sustainability Programs Division
Level 2, 1 Fitzwilliam Street, Parramatta NSW 2150
PO Box 644, Parramatta NSW 2124

Phone: (02) 8837 6000
Fax: (02) 8837 6099

Email: info@resource.nsw.gov.au
Website: http://www.environment.nsw.gov.au

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