



Position statement: Paper production, recycling & procurement

- ◆ Making paper
- ◆ Pulp
- ◆ Recycled paper
- ◆ Does recycling make sense?
- ◆ The Woodland Trust view

Introduction

Making paper

The raw material of paper-making is pulp, which comprises vegetable, mineral and man-made fibres. Nearly all the vegetable fibres derive from trees, with a small amount coming from fibres such as flax, cotton, jute, and hemp.

The most suitable and widely used trees for the production of wood pulp are softwoods, such as spruce and fir, grown in the northern coniferous forests of North America, Scandinavia and Russia. Hard woods in general, including wood from the tropical rain forests, are not suitable for paper manufacture. Worldwide it is possible to achieve independent certification of sustainable forest management against a strict code of good practice through the Forest Stewardship Council; the 'chain of custody' process can provide evidence and consumer reassurance that products such as wood pulp from certified forests come from sustainable sources.ⁱ

Pulp

Virgin wood pulp produced directly from forests or from waste products of sawmills is produced by two types of processes:

- 1) Mechanical The entire log except for the bark is mechanically ground to separate the fibres and although chemicals are not used, the energy requirements are very high. The resulting paper tends to discolour with age, and become brittle in light.
- 2) Chemical Sulphates are used to soften the wood and remove lignin from the cellulose which is then cooked in sulphur dioxide under pressure. This process uses less energy than mechanical means but leaves a liquid effluent that must be treated. To get a paper that retains its strength and doesn't discolour the pulp has to be bleached using chlorine. Over the years reductions in the quantity and toxicity of chemical by-products produced by the bleaching process have been achieved.

Recycled paper

Paper produced from fibres that have been through a paper mill at least twice is known as **recycled paper**. These fibres can be salvaged from either **post-consumer waste paper** (used paper from packaging, newsprint, tissues and office stationery or **pre-consumer waste paper** (unused paper from off cuts, unprinted paper or damaged paper from mills).

Making recycled paper uses 30 to 70% less energy than making new paper, and uses far less water too. In 2002, 66% of fibres used in UK paper making came from waste paper, 27% from imported wood pulp and 7% from home-grown wood pulp.ⁱⁱ

The basic recycling process is similar to the paper making process. Sorted wastepaper is cleaned by de-inking and then broken down in large quantities to form "porridge". The fibres are then refined and additives included giving particular qualities to the end paper. Virgin pulp is added at the end of the pulp making process.

Most waste paper has to be sorted, graded and baled before going to the paper mills. The quality of the waste determines the end quality of the recycled paper. Any type of paper and board can be recycled but the range of products in which it can be used is restricted.

Does recycling make environmental sense?

Recycling makes environmental sense because it reduces pressure on landfill sites at home and reduces pressure on virgin natural forests overseas. Indeed one tonne of recycled paper saves approximately six mature trees and 2.5 cubic metres of rapidly diminishing landfill space (Source: Friends of the Earth).

Generally speaking the production of recycled paper has less overall environmental impact than producing paper using 100% virgin pulp especially produced by chemical means, when all production activities are taken into account. Recycled paper production uses less energy, less water and creates less pollution. However substantial upgrading of low quality waste can mean that the environmental advantages of recycling are reduced or lost.

The Woodland Trust view

As an environmentally responsible organisation, the Woodland Trust starts from the point of reducing its paper use wherever possible. Where we need to use paper, we use 100% recycled paper wherever possible. Occasionally, specific print requirements may affect our choice of stock; if use of 100% recycled paper is not a feasible option, then we use paper with a Forest Stewardship Council (FSC) accreditation. We also aim to persuade our partners to follow our lead.

To help us achieve this, the Woodland Trust has developed the following standards:

- ✓ We require our paper suppliers to comply with all applicable environmental laws and regulations
- ✓ We actively work with our paper suppliers to ensure that they comply with our Preferred Supplier criteria
- ✓ We are committed to only using 100% recycled or FSC certified paper within our UK offices, including home workers, (all photocopier, headed paper, business correspondence, fundraising material, information leaflets etc)
- ✓ We are working with our paper suppliers to ensure that the virgin fibre they purchase comes from FSC certified forests.

ⁱ www.fsc.org.uk

ⁱⁱ (Waste Watch, *Wasted*, Summer 2004)