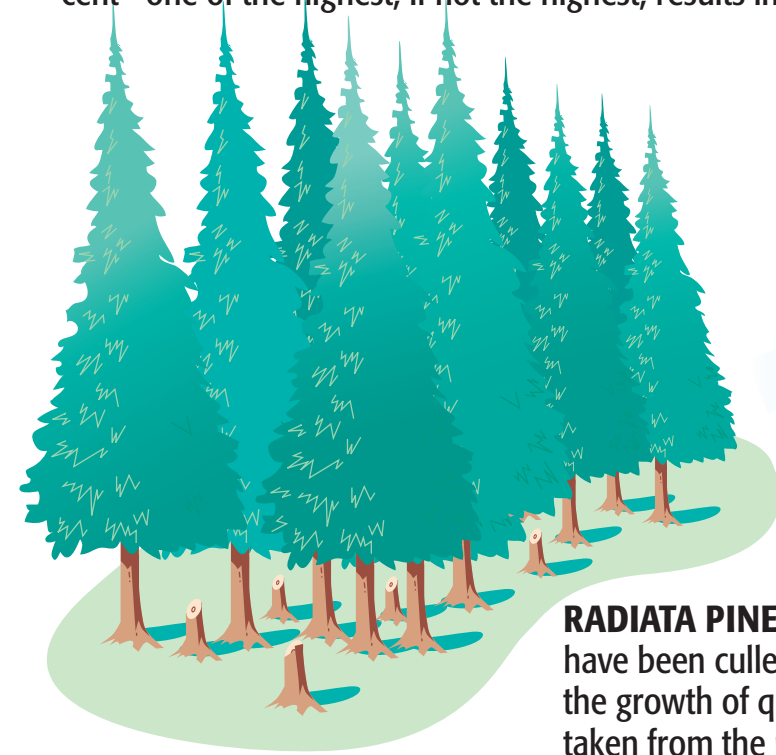


# OLD PAPERS are NEW AGAIN

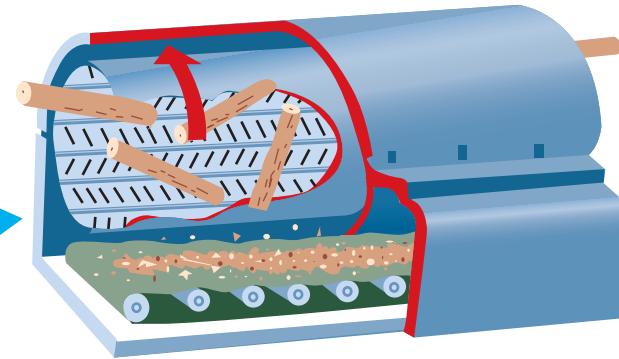
## A recycling success story

At the start of 1990, Australia was sending 72 per cent of its newspapers to garbage dumps and recycling 28 per cent. By the end of 2001, through the efforts of the Publishers National Environment Bureau, publishing companies, Australia's newsprint manufacturer, Norske Skog and Local Councils' kerbside systems, Australia was recycling 72.4 per cent - one of the highest, if not the highest, results in the world.

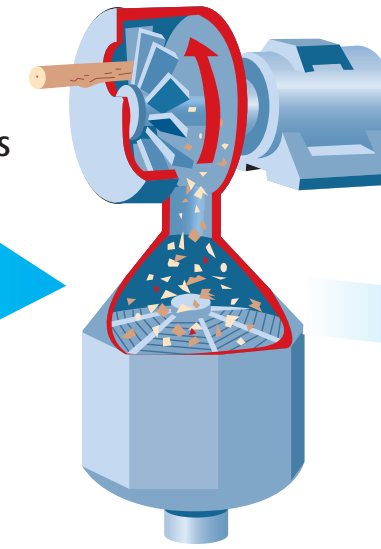


**RADIATA PINE THINNINGS** which have been culled to make room for the growth of quality timber are taken from the plantations for use at the newsprint mill.

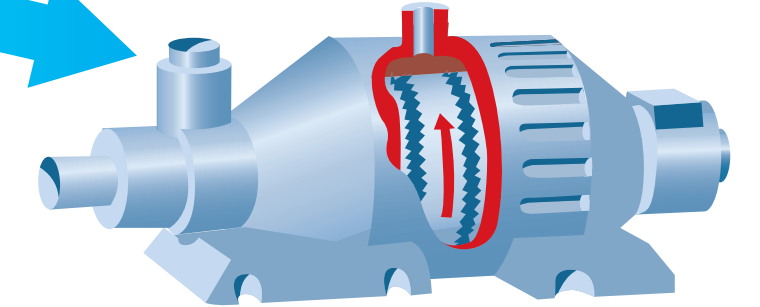
**THE DE-BARKING DRUM** at the mill strips the logs of bark. The bark is used as fuel to produce steam for paper drying.



**THE CHIPPER** converts the logs into woodchips.

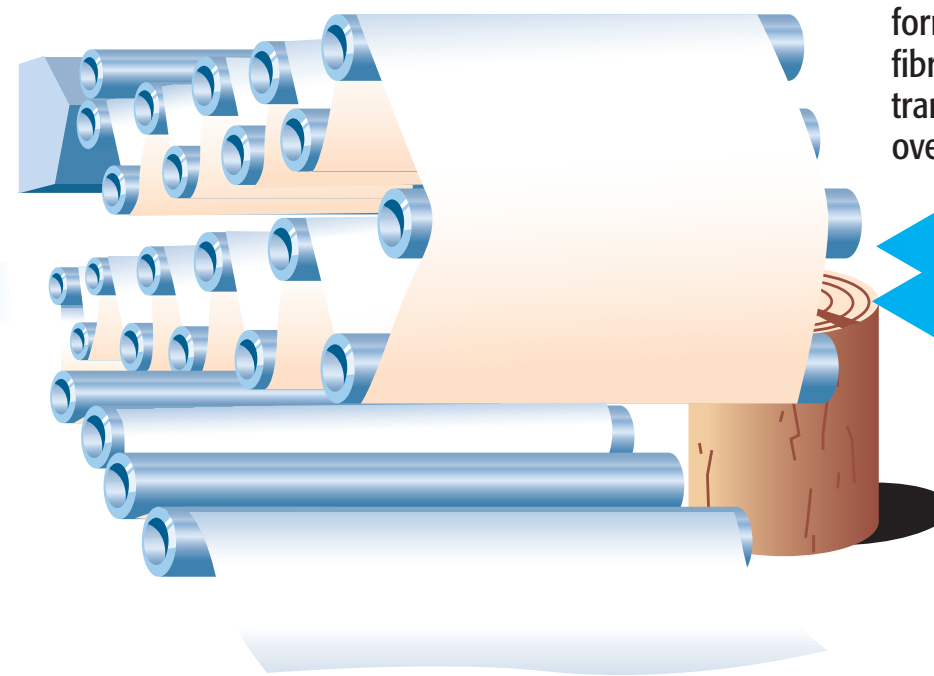


**THE THERMOMECHANICAL REFINE** Uses heat to soften the woodchips and rotating grooved steel plates, driven by powerful electric motors, mechanically separate the individual wood fibres to produce pulp.



## Plantation to paper...

**AT THE 'DRY END'** of the machine, the paper emerges and passes through smoothing rolls before being wound onto an 8.5m wide jumbo reel. An overhead crane transfers the jumbo reel to a winder which cuts and rewinds the newsprint into the widths required by customers.



**AT THE 'WET END'** of the paper making machine, the stock is carried through formers on a mesh belt. Much of the excess water is removed by vacuum and the fibres left behind bind together to form a web of wet paper. The wet paper sheet is transferred to a felt belt; it passes through presses to remove more water and then over a series of steam-heated cylinders in the dryer section.

Water is added to produce a stock comprising 99% water and 1% pulp fibre.

**NEWSPRINT** has to have the correct strength and printability to be used for our daily newspapers.



## ... paper to paper

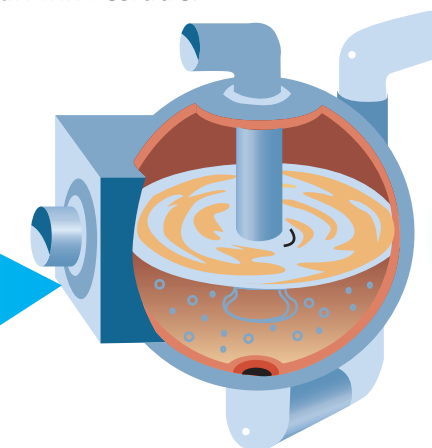
**KERBSIDE COLLECTION** with participation from local councils and communities, makes recycling old newspapers and magazines available proposition.



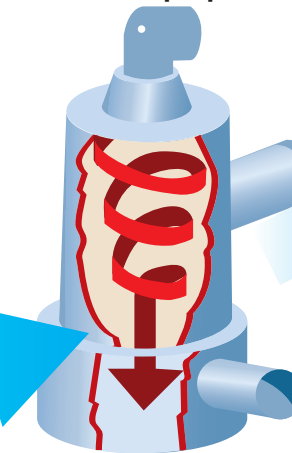
**OLD NEWSPAPERS AND MAGAZINES** are mixed with water and agitated in a pulping vat to make a slush. Small quantities of caustic soda, sodium silicate and hydrogen-peroxide help the repulping process. Impurities like staples and binding materials are removed by screens.



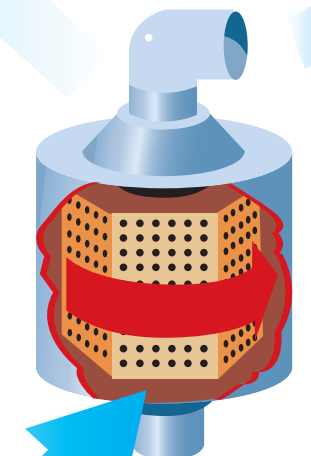
**DE-INKING** is achieved by mixing the slush with soap and blowing air through the mixture to create an ink residue.



**CLEANING AND FINESCREENING** remove any remaining impurities from the pulp.



**THE THERMO-MECHANICAL AND RECYCLED PULP** are mixed together. The stock is then screened and colour-corrected.



**THE INK RESIDUE** is removed and mixed with other mill waste (biosolids). It is used to produce soil conditioners that improve the texture and drainage properties of the soil. Process water undergoes three separate purifying treatments and is used to irrigate pine plantations which have been established on nearby company land.

As well as going into new newsprint manufacture in Australia, the recovered newspapers (and magazines) are exported to make newsprint overseas and used in Australia to make cardboard and other paper products, including kitty litter, housing insulation and egg cartons.



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