

Recycled paper shows potential for use in consumer magazines



New Woman is a glossy monthly magazine typical of many high-volume titles aimed at the consumer market. It is published by Emap Ltd, the UK's second-largest consumer magazine publisher; Emap also produces a range of business-to-business publications. Containing a high proportion of full-colour advertising, New Woman has a portrait format (28.5cm x 21cm) and each issue is usually around 120 pages long, plus four-page ultra-violet (UV) varnished cover.

Printing of the magazine is subcontracted to St Ives Peterborough Ltd, part of the St Ives Group. (Sections of New Woman are sometimes printed elsewhere within the group.) Printing involves a heat-set web offset (HSWO) process, normally on 60gsm gloss UPM (Caledonian) Cote – a lightweight coated (LWC) mechanical paper. The print run is typically 170,000.

“In terms of quality, the recycled and virgin papers were hard to differentiate”

Key Facts

- The publisher of New Woman magazine carried out a trial print run using paper incorporating 32% recovered fibre.
- No significant problems arose during printing and the print contractor was pleased with the outcome
- A consumer panel presented with sample copies found it very hard to tell the recycled paper from the virgin paper normally used
- In the publisher's view, although advertisers' requirements meant the recycled paper was not appropriate for New Woman, it would be well-suited to some consumer publications.

Motivation to 'go recycled'

Emap had already used recycled paper to produce a special 'eco' edition of New Woman, with satisfactory results. Overall, though, Emap judged that this particular paper was not of high enough quality to warrant its use on standard editions of the magazine. Specifically, it was not sufficiently bright or white, while it also lacked gloss and opacity and contained occasional specks of debris, which can degrade some types of advertising image.

Since the 'eco' edition was produced a range of new papers with lower proportions of recovered fibre and good-quality coatings have come onto the market. Recognising their potential suitability for magazine production, Emap decided to carry out another print trial to explore the scope for switching New Woman to recycled-content paper. Cost-neutrality was a key criterion that would need to be met for such a switch to go ahead.

“The print operation went without a hitch – we were very impressed with the paper”

Colin Cox, St Ives Peterborough Ltd

The process involved

The paper selected for the trial was 60gsm Norcote Super. This contains 32% recovered fibre, plus 41% mechanical pulp and 27% chemical pulp. Its key characteristics include 84% ISO brightness, 57% TAPPI gloss and 89% ISO opacity.

Conducted as a run-on to the magazine’s main production run, the print trial used a Harris 850c HSWO press with 126cm cut-off. Equipped with no special control systems (e.g. closed-loop colour control), this machine delivers 64-page sections at a rate of 22,000 per hour. The press and finishing conditions for the trial were as follows:

Inks:	Flint 2000 series;
Ink sequence (densities measured on a Gretag Macbeth D19C densitometer)	- Black (1.95-1.99); - Cyan (1.30-1.35); - Magenta (1.30-1.35); - Yellow (0.95-1.00);
Fount:	Bousfield 2002;
Plates:	Kodak Sword, exposed on a Creo Trendsetter VLF computer-to-plate (CTP) system;
Binder:	Kolbus perfect binder;
Adhesive:	Henkel (Safe Melt Q3131);
Binding speed:	10,000-15,000 per hour.

To complement the twin web-press configuration, two reels of Norcote Super paper were used, with two 32-page sections delivered from the press as a single 64-page section. By repeating this section the required number of times, the run produced enough printed samples to create 12 finished copies of the bound magazine.

Issues arising

St Ives Peterborough, which employs around 200 people, have had limited experience of using paper with recycled content. Currently, recycled paper accounts for less than 5% of the company’s overall throughput. Despite this, they encountered no technical difficulties when carrying out the print trial for New Woman magazine.

The recycled paper proved more absorbent than the virgin stock normally used, requiring a minor increase in damp feed. The absorbed moisture caused the paper web to become wider as it travelled through the machine, and this in turn required a small adjustment to the ‘bustle’ setting. This, however, is a perfectly routine procedure in the printing process. (The bustle is a system of wheels and/or air jets which run in the gutters between pages. By causing a small, localised web deflection, the bustle pulls in the outer pages and ensures that image fit is achieved.)

Results and perceptions

The operators of the printing press were pleased with the result of the trial. In their view, the printed image displayed good ‘lift’, although the Norcote Super paper exhibited a little more show-through than standard paper.

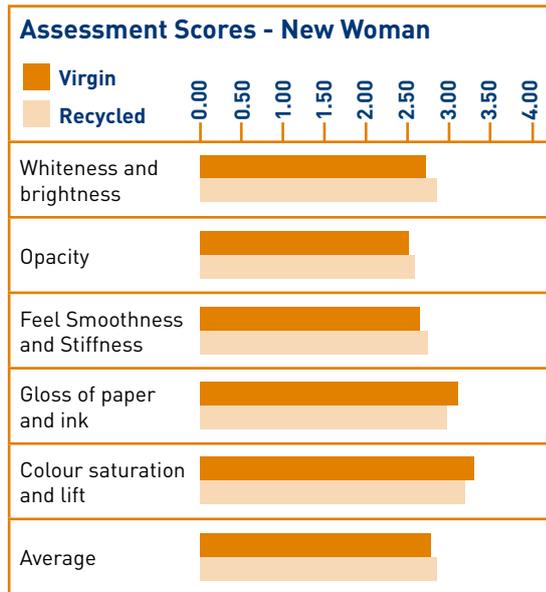
The publisher was concerned that the recycled paper samples produced might not meet advertisers’ exacting demands. In the publisher’s view, the samples were ‘flat’ and neither glossy nor smooth enough. In particular, they felt that blacks looked grey on the recycled paper and that show-through was worse than when using virgin paper.



“The paper could be suitable for a number of our weekly publications”

Jeremy Bull, EMap Ltd

A panel of consumers, comprised of active magazine purchasers and readers, assessed some of the samples alongside ‘regular’ samples printed on 100% virgin paper, without knowing which were which. They were asked to give a score out of four on both papers’ suitability for this type of publication, as well as on their respective overall merits and specific attributes (whiteness and brightness; opacity; feel, smoothness and stiffness; gloss of paper and ink; and colour saturation and lift).



Most of those taking part in the panel found it hard to distinguish between the virgin and recycled papers, although there was some feeling that neither was really of adequate quality for a magazine of this type (possibly due to the 60gsm weight of paper employed). As the following examples show, individual comments varied significantly – perhaps reflecting that there was little practical difference between the two types of paper:

- “no obvious difference”;
- “not easy to tell the difference”;
- “[the virgin paper] looks glossier”;
- “[the recycled paper] is glossier, smoother and whiter”.

The consumer panel were also asked to give a score out of ten for their overall impression of both the virgin and recycled content. A score of 7.4 was given for the recycled and 7.8 for the virgin paper. A score of 7.5 had been defined before the exercise as equivalent to a ‘good overall impression’.

Conclusions

Although passing the ‘consumer test’ and pleasantly surprising the print company, the 32% recycled-content paper used in this print trial did not convince Emap that a permanent switch to recycled paper would be justifiable for New Woman.

However, it is important to note that commercial publishers are (understandably) highly sensitive to potential criticisms from advertisers. A key issue here is that advertisers are generally used to seeing their adverts reproduced in magazines printed on heavier, higher-quality paper than New Woman. This inevitably produces superior results and so raises their expectations. Publishers are therefore naturally reluctant to make any changes to the production process which might risk – or might simply be perceived as risking – even a marginal decrease in print quality.

Summary

Emap concluded that the recycled paper used in the New Woman print trial could be suitable for a number of its weekly publications. This is clearly an option that other magazine publishers, too, could benefit from exploring.

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