

## Steps on the Carbon Ladder

Eco-warriors just love the printing industry: all those dead trees, all those stinking solvents. And because of the high volumes and the fleeting value of their content, newspapers are an especially popular target. After all, newspapers are printed on polluting paper, on massive high-speed, energy-hungry presses. Their distribution relies on extensive heavy duty road and air transport. And because time is of the essence, everyone involved must rely on a maelstrom of electronics.

It should all add up to an environmental nightmare. So, with that in mind we recently visited two newspapers, and discovered that it's not that simple. There's a good

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deal more to understanding the carbon footprint of a newspaper than just measuring a newspaper's individual footprint.

A carbon footprint is the sum of all greenhouse gas emissions an entity generates. The calculation includes electricity used to produce and support the entity, plus direct and indirect emissions. If we want to work out how to measure a newspaper's carbon footprint, we need to know much more. We need to start gathering lots of objective data.

Newsprinters, in Broxbourne, UK and La Presse de la Manche in Cherbourg, France operate at the very opposite extremes of newspaper production, yet both are striving to reduce their business's carbon footprint. Newsprinters is the newspaper printing division of News International, the main UK subsidiary of one of the world's great media companies, News Corporation, which has annual revenues of \$48.7 billion. Its Broxbourne site produces 22 million newspaper copies per week for an average daily national readership of over 20m. La Presse de la Manche

is a subsidiary of Ouest-France, a privately owned French regional newspaper capitalised to the tune of €300,000. La Presse de la Manche serves a region of some 200,000 people and has a daily circulation of 36,000 copies.

### Newspapers Reinvented

The nature of newspaper production makes it one of the publishing industry's most resource-intensive producers and over the last few years the sector has been struggling. It has had to compete with alternative advertising channels and newspaper owners have had to invest in reinventing



*Allan Wain, group manufacturing director for News International*

themselves as crossmedia content publishers. Collapsed ad revenue models and related economic pressures have forced traditional newspaper publishers to cut costs to the bone.

They've had to maximise resource effectiveness without compromising the basic premise of a newspaper, which is to gather, produce and deliver content as fast as possible to readers. However the same economics that forced the newspaper industry's back to the wall, have also helped it to substantially improve its carbon footprint with investment in energy efficiency and modern production technology help cut costs.

The development of News International's 40 acre site at Broxbourne has been well publicised. The Broxbourne site houses the world's largest newspaper press and is the largest of Newsprinters' three new facilities in the UK.

According to Allan Wain, group manufacturing director, the objective of this one billion dollar project, which was completed in just over three years, is “to be the best newspaper manufacturer in the world”.

The plants at Broxbourne, Glasgow and Liverpool are all now up and running. All Newsprinters’ sites are carbon neutral, using energy from renewable sources and offsetting the rest, currently some 46,567 tonnes. The balance is offset with a direct investment into a wind power project in India. At Broxbourne carbon trading is a dedicated function and all sites have regular auditing of staff transport, providing free staff shuttle buses from local stations according to traffic needs.



*News International gets through 38,500 N-92-V plates per week in Broxbourne where it pays Agfa for all plate and workflow related facilities management.*

The Broxbourne plant has been fully operational since the end of April, and News International’s previous facility at Wapping is now closed. Broxbourne employs a handful of Wapping’s 550 people, where 460 preferred to take redundancy. The Wapping site was opened in 1986 and is to be redeveloped. By 2012 it will be News International’s hub for all of its UK businesses, including the newspapers, plus Harper Collins, MySpace, Dow Jones and Fox. Newsprinters is a great fan of outsourcing and of the 400 people employed at Broxbourne, 200 are subcontractors, a proportion that applies for all Newsprinters’ sites.

At Broxbourne newsprint trailers have direct access to the plant for paper delivery and waste paper removal, minimising the number of empty trucks leaving the

plant and maximising all loads. Apart from basics such as sensor-driven lighting in all areas and insulation, the company has soundproofed its press halls and has built an acoustic tunnel to reduce noise pollution. Lorries use this tunnel late at night when they collect newspapers for transport to 100 distribution depots, the furthest being Bodmin and Redruth in Cornwall, which serve 55,000 sales outlets throughout Britain.

For Broxbourne, Newsprinters has invested in 12 triple width, Manroland Colorman presses with two presslines. These presses are 50% more efficient than standard presses and can print colour on all pages, with up to six sections per press, so no inserting machinery is required. They produce 86,000 copies per hour running straight, printing two editions a night starting at 22:45 and finishing by 04:00 at the latest. Newsprinters has the world’s biggest folder, handling everything from 12-page tabloids to 144-page broadsheets, without slowing down the presses.

The site produces all of News International’s titles and since August prints 600,000 copies of the Daily Telegraph and Sunday Telegraph. It also prints 140,000 copies of the London paper, Rupert Murdoch’s answer to Associated Newspapers’ London Evening Standard. Newsprinters will print all 500,000 copies of the London paper once the road outside, with News International funds, has been widened to carry more traffic and reduce congestion.

## **Paper and production**

Broxbourne chews through 3500 reels of paper every week (300,000 tonnes a year), and because of the 2.21 metre size of each press, Newsprinters has had to build special fully automated reel handling systems. As much as possible the company uses a mix of virgin and recycled papers sourced primarily from Aylesford Newsprint, Norske Skog and Stora Enso. However the Newsprinters site in Knowsley uses 100% recycled paper and the Eurocentral site, at Motherwell near Glasgow, prints 50% recycled. At peak times reels are delivered every 15 minutes with up to one week’s worth of paper reels automatically unloaded and moved to store in a high bay. They are moved automatically for preparation, which involves automatic removal of their end caps and

wrappers, and adding the splice tape before moving them to a low bay ready for delivery to a press's reelstand when needed.

The editorial departments at the various titles are responsible for page pairing and sending RIP'ed files ready for output at Newsprinters's various sites. Newsprinters has outsourced plate imaging to Agfa Graphics, so instead of investing in platesetters and consumables themselves, Newsprinters purchases imaged Lithostar N91-V plates from Agfa, an industry first. The company pays Agfa to



*At peak times reels are delivered every 15 minutes with up to one week's worth of paper reels automatically unloaded and moved to store in this high bay.*

produce around 38,500 imaged N-92-V plates per week in Broxbourne where Agfa is responsible for all plate and workflow related facilities management. It has installed four Polaris XCV-3 violet imaging platesetters there and provides all consumables, as well as the Arkitex workflow technology. Agfa and Manroland work together so that Agfa Arkitex and Manroland's Printnet production workflow and monitoring system together manage all aspects of production.

Given the number of plates involved and Newsprinters' commitment to minimising its carbon footprinting, processless plates would seem a logical step. Processless or chemistry-free plates do away with the chemicals, equipment and time required for plate processing. Sadly the current generation of N-92VCF plates cannot yet be imaged fast enough for the required 200 plates per hour output, nor are these plates robust enough for the number of page impressions required, even though some can image up to 200,000 copies. Newsprinters is happy to

use processless or chemistry-free plates, if they can do the job and is relying on Agfa to make this transition when its processless plate technology can meet Newsprinters' production demands. The two companies have a 15 year contract which includes five-yearly reviews, so at some point a transition to processless is likely.

### **Does it Pay?**

We asked Allan Wain if this massive investment in print has managed to halt the decline in the company's printed newspaper circulation. It isn't yet clear that it has, but it has yielded other benefits. For example printing in full colour gives scope for higher ad income and editors greater scope for newspaper design. Wain explains: "It gives the editorial and commercial people the opportunity to maintain circulation. These presses give us the opportunity to use colour on every page and to give readers more colour and better layouts". Substantial savings in staff costs and quality assurance systems being put in place across all three sites are expected to further protect and enhance News Corporation's print revenues.

### **Au Contraire**

La Presse de la Manche has not invested one billion dollars to improve its competitiveness and carbon footprint. But this far smaller newspaper in Normandy is perhaps more typical of the wider industry. Absent the Murdoch fortune, it is perhaps taking even bolder steps.

La Presse de la Manche was first published in 1944. It is now part of the Ouest-France group, a private company with an undisclosed turnover, which includes four other regional newspapers, a multimedia company, various local magazines and a leading publisher of freesheets as well as a bookshop, ad agency and local television and radio interests. The Ouest-France title mostly serves Brittany and has a daily circulation of 762,400, higher than any French national. Unlike many other dailies, the Ouest-France readership, like that of La Presse de la Manche, has held steady over the last few years.

La Presse de la Manche serves a population of some 200,000 people in Normandy and has a daily circulation of 36,000. It is a tabloid newspaper published in a single edition with an average pagination of 32 requiring

approximately 70 broadsheet plates per night. The newspaper employs 127 people and La Presse de la Manche is the first newspaper publisher in France to go processless.

According to Hervé Pannier, technical director, La Presse de la Manche chose Agfa technology “because it offered the possibility to install the same chemistry-



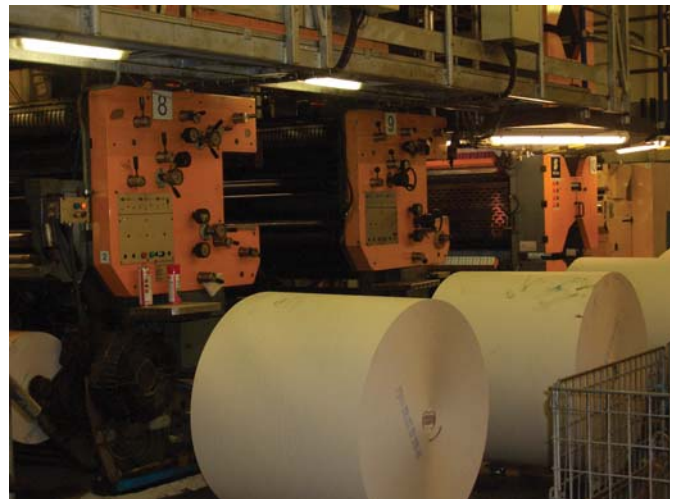
*Hervé Pannier, technical director, La Presse de la Manche.*

free and processed plate lines”. The system was installed within two hours and up and running the same evening. The newspaper ran parallel lines initially with two manual platelines using Advantage XS platesetters. The newspaper has now switched over entirely to chemistry-free platesetting. Apart from the green benefits, the primary driver was cost savings, as Pannier explains: “For ecological reasons and to lose a processing stage and for reduced waste. With the old processing system we cleaned it weekly and so had extra cost and less simplicity.” Agfa also supplies the newspaper with technology for colour management, plus Sublima screening and Arkitex output management.

La Presse de la Manche has nine aged Solna presses, printing two and three colours and one monochrome. The eight webs produce 32 pages. The newspaper plans to change to three new towers within the next six months and is considering presses from Goss, Solna, Tensor or DGM Manugraph. Price, energy, ink and consumables usage will be the deciding factors, as La Presse de la Manche continues to improve its carbon footprint.

Recycling is obviously a key part of the newspaper’s philosophy. Pannier says: “We try to say to people in manufacturing to be green for lights and office waste, which gets recycled. But it’s harder for other things, such as lights, because the newspaper is open all the time with 361 editions a year”. They do recover all waste ink, solvents and cleaners which are all sent off for recycling, and they shout to their readers about their investments in green production.

Rather than selling waste paper to paper recycling businesses, this newspaper passes it for free to Emmaüs. Emmaüs is a worldwide secular social organisation present on four continents and in 41 countries. Emmaüs is dedicated to countering social exclusion, providing services to the homeless. Emmaüs sells on La Presse de la Manche’s waste to raise revenue for its organisation.



*There's quite a contrast between these ancient Solna printing presses and the mess of reels and mechanics, and the clinical efficiency money has facilitated in Broxbourne!*

The newspaper is looking into ways of improving its internal energy usage, however, this will not be straightforward. The newspaper is located in the centre of Cherbourg and therefore subject to planning restrictions on solar and wind power installations. It is also subject to neighbour hostility, because of the damage such installations might do to Cherbourg’s very pretty skyline. France has committed to renewable energy with an approach based on feed-in tariffs and a tendering procedure for large energy intensive projects. It should be possible for the newspaper to buy green energy from

suppliers such as EDF, however it would have to be at a premium.

That renewable energy's price premium is justified, ought to be part of our thinking as an industry, however, it's not likely to be for some time. So La Presse de la Manche is trying to develop green awareness internally and within the larger Ouest-France group. The decision to go green was originally made because Pannier believes it is "interesting for the readers plus we want to be in the avant garde for green".

### **Where Are We Now?**

It is pretty much impossible to come up with metrics for measuring a newspaper's carbon footprint at the moment. Apart from the fact that no two newspapers are the same, there are still too many subjective variables involved, many of which, such as socio-political value, are intangible.

Both La Presse de la Manche and Newsprinters have started to quantify what can and should be measured. Taking it further depends on how much money the newspapers can save, and how willing they, their shareholders and their customers are to support more environmentally-friendly production models.

The Newsprinters project was designed to be as efficient and as environmentally benign as possible, because News International estimates that 1% waste in its newspaper production is the equivalent of \$1.8 million per annum. It doesn't really matter that money is the driving force for Newsprinters's energy efficiency. What matters is that these newspaper printing plants are striving to reduce their carbon footprints.

**Laurel Brunner** 