

NEWS INTERNATIONAL EXCLUSIVE

Full speed ahead for NI

Having announced an investment of over £600 million in its printing operations over the next four to five years, the largest single investment to be announced for the newspaper industry in the UK and probably in the world, **GARY CULLUM** and **CARYL HOLLAND** pay an exclusive visit to News International's Wapping headquarters to hear about the concepts behind the project and how the money is to be spent.

IT WAS back in 1997 that News International, which publishes over 30 million copies a week of *The Sun*, the *News of the World*, *The Times*, *The Sunday Times* and the TSL Education supplements, first started thinking about the future of its printing operations. At that time, the demand for colour was beginning to increase and presses which had originally been built to run straight were starting to be run collect on the larger paginations. In addition, even by then, the presses were only eight years old but with limited colour capabilities. It was therefore obvious that something would have to be done in the not too distant future.

However, as is explained by Ian McDonald, managing director of operations at News International Newspapers: "The project wasn't just about needing new presses. We started off by looking at what kind of plant would we want in the future. In other words, we worked from the bottom up.

"We gathered all the senior production people together from all the sites. They all had the chance to say how they would like to work in the future, from a manufacturing point of view and based on what we envisaged the publishers would require.

"We are fortunate to have a great team of highly qualified and long serving newspaper and commercial print people who are specialist in their areas. They have worked very well together. Everyone has had their input; some concentrated on certain elements more than others".

McDonald continues: "We set our own goals of wanting to be the lowest cost and most efficient producer of newspa-

pers since there is a big downside to being large: anything you want to do costs a lot more. So it was up to us to invest the money in the most sensible way.

"The other part of the strategy was to envisage a plant that was going to be resilient and flexible for 25 years since it would take the best part of five years to build and then we would hope to run it for 20 years. In fact, the hardest thing to do was to bring in that forward thinking and not base everything on past experience.

"So it was from this 'vision' that we started off. We then began to dig into the reality, discussing our ideas with all the equipment suppliers.

"After that, we looked at how we were going to house the equipment. We spent a lot of time looking at buildings and everyone tapped into their previous experience.

"Overall, it was a big exercise carried out over a long period and involving many hours of visiting other plants. However, we do believe that what we are going to do will change British newspaper production. I also think it will be the most efficient and will probably turn out more newsprint per hour than any other plant in the western world".

As McDonald admits, the process has taken somewhat longer than originally anticipated. However, he believes that, in retrospect, the delay was of benefit.

"The best thing that ever happened to us was not getting permission two years ago. If we had built the plant with the equipment we were thinking about then, it would have been outdated by now. It also enabled us to rethink the press-

es and allowed Brian McGee to put his own spin on the project.

"I would not say the delay has been comfortable since there is a whole world out there waiting for 100 per cent colour but it has been very worthwhile and we have maximised the time"

Press choice

A significant proportion of the £600 million investment is naturally being spent on presses. In fact, NI will order 22 full colour Colorman XXL triple-wide machines from MAN Roland.

Five of these will be installed in an extension to its plant at Knowsley in Liverpool, while two will be installed at a greenfield site at the Eurocentral Business Park outside Glasgow. A further three are expected to be housed in a new building at Kells in Ireland, and the remaining 12 will be installed at Broxbourne in Hertfordshire, or to be more precise on a 15.5 hectare greenfield site at the junction of the A10 and the M25.

As is explained by Brian McGee, NI's group director of manufacturing, who is heading the project's central manufacturing team: "In most cases,

equipped with eight printing couples, plus a folder. It will be configured in pairs with five units on each side of the two folders.

They will be able to be run as five units into one folder or ten units into either folder. Thus, they will be able to print a maximum of 240 tabloid or

up to expectations. In fact, McGee seems pretty comfortable about the fact that so far only one triple-width press-line is in operation and that was manufactured by KBA.

"If you look at the technology, triple-width presses may have been bit of a 'witchcraft' two to three years ago. In fact, we were one of the companies which was driving the main suppliers to produce such a press.

"However, the leap of faith in terms of going to triple width is not a massive one. Originally, there were lots of concern about deflection on the cylinders, the level of vibration and so on, but the latest gravure presses are over 4.3 metres wide which is getting close to the width of a paper machine.

"In fact, the web width for our new presses is 2.21 metres which is, when you think about it, not that huge. If you look at some of the old Fleet Street presses, they were not far off that".

He adds: "The first KBA triple-width machine which has been installed in Zurich was commissioned in April and has been running since the summer, while the MAN Colorman XXL which has been installed at Pinneburg is starting printing in November this year. There will then be two companies running these presses in anger and certainly by the time we get to print copy from our presses there are going to be quite a number of triple widths around the world in operation".

Of course, having a triple

"We are not planning for failure. We are going to set the gauntlet down for the suppliers to deliver reliability"

– Brian McGee, group director of manufacturing, News International Newspapers

our existing sites are not really suitable to accommodate the new presses which are considerably larger and wider than the current ones. However, we have a significant amount of land at Knowsley so on balance we decided to stay where we are, particularly given the location. Also, we will be able to share some of the services with the existing building".

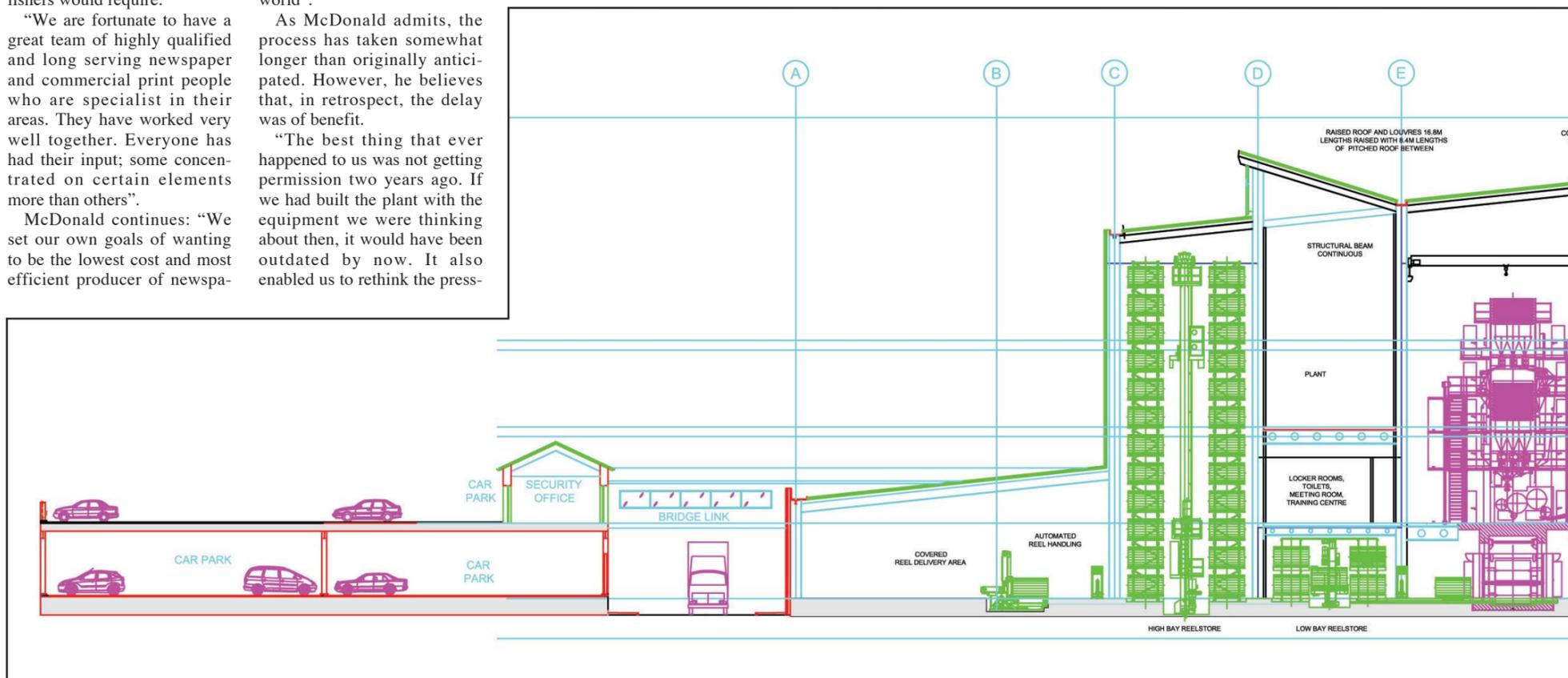
The first press to be installed will be operational towards the end of 2006 and the whole programme should be complete by the early part of 2008.

All the presses will be identical apart from the fact that there will be an extra colour tower per press in Glasgow since the Scottish market tends to require more pagination. A typical press will have five, four-colour towers each

120 broadsheet pages straight with full colour on every page at 86,000 copies an hour. There will also be five stitching positions per press.

As McGee explains: "The triple width economics work well for us, especially in terms of our goals. Currently we pre-print sections all week for *The Times* and *Sunday Times* and insert. In the future we will consolidate the printing into mainly 'live news' press runs. So, typically, we will be able to deliver six different sections from a press line in a combination of broadsheet, tabloid or compact, stitched or unstitched".

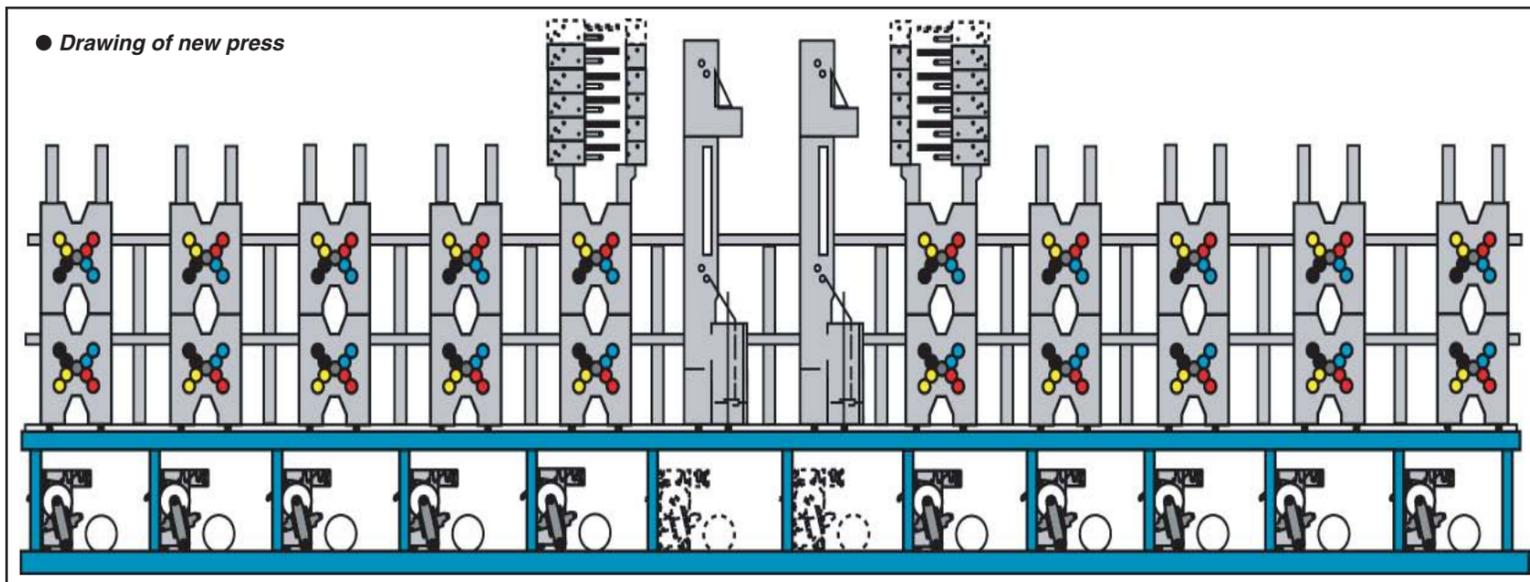
Interestingly, unlike the Telegraph Mainstream press order, NI is not installing and running one press ahead of the others to ensure that it comes



● Schematic showing how the manufacturing process will function in the new Broxbourne printing plant in Hertfordshire

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● Drawing of new press



width press means that the paper reels are that much larger and heavier. Will this not cause delivery and handling problems?

"I went through this when at Polestar when we put in a 3.5 metre press at Pershore," replies McGee. "In the gravure industry, people have been dealing with reels going up to in excess of three metres for many years so in terms of the logistics it should not be a problem. We have been in discussion with the paper suppliers and we are pretty relaxed about it".

Interestingly though, NI has also gone for a 4:7:7 folder which currently does not exist. However, again McGee is not particularly worried.

"The 2:7:7 folder has been around for a long time particularly in the gravure industry so the concept is not new. By going for a 4:7:7 folder, you can slow things down by virtue of having a larger diameter. What you are actually doing is putting it all into slow motion".

However, when it comes to press accessories, NI is likely

to take a more traditional route.

"MAN Roland will be supplying the press control systems and we will have conventional inking systems. We are not going for digital," reports McGee. "So far as dampening is concerned, we have been trialling different bits of kit for the last two years but we have yet to finalise our decision.

"Every press will have blanket and roller washers since we want to maximise their ability to minimise the amount of manual input and to turn-around things as quickly as possible. So certainly in terms of the press itself, it will have all the normal accessories. However, by going for a nine-cylinder common impression cylinder configuration along with shaftless drive technology, we will not need additional four-colour register controls".

On the other hand, NI is installing MAN's semi-automatic Powerplate system on its presses.

"Since we have gone to a narrower plate lock-up, 5 mm rather than 13 mm, we can put six plates on in a straight line,

spin the cylinder and then put the next six plates on," explains McGee. "The Powerplate system automatically locks the trailing edge making plating up a lot easier and faster".

The same is true with edition changes since the system can automatically release the plates that need changing. McGee continues: "So far, we have not decided whether to have a densitometry system on the press or not. We have been looking at such systems closely and personally I think it is the one component that everyone in web-offset has been chasing for a long time, particularly on multi-web presses. It is the one bit of kit which would give us a total closed loop capability."

Automation all the way

Even if NI does eventually decide not to have densitometry control, the amount of automation in the new plants is going to be considerable especially the reel handling which is going to be virtually a 'lights out' operation. In other words,

at Broxbourne and Knowsley where the two press lines will be facing each other rather than having a conventional one line material flow as will occur at Glasgow and Ireland, the reels will be unloaded from the trucks, identified, weighed, reconciled, inspected for wrapper damage and taken into a high bay storage system, all automatically.

Then, at all the plants, when required, the reel will be taken from the storage area and transferred to the prep station where the end cap and wrapper will be removed and a paste pattern applied before it is transferred to a low bay storage system which will sit in front of the press hall. Again, this will all be done automatically. Finally, under the direction of the press control system, the reel will be automatically transferred to the appropriate reel stand.

"So, in theory, this is a complete lights off area," says McGee. "This is what we are working on. It is part of our specification for the suppliers and they are telling us that they can meet our vision".

When it comes to the mailroom, though, things will be much more simple. McGee again: "You can find lots of situations where people spend a fortune on a press and then spend another fortune slowing it down because of the mailroom. Part of our rationale is that the presses can and will run at full speed. We want to take the obstacles out of the way so that we can maximise these assets and get the most up-to-date printed product to the market in the shortest space of time.

"To do that we need to streamline the process as much as possible. Insertion has played a great part for us over the last 15 years. However, if you utilise triple-width press technology, you can add to the number of pages that can be printed on the run and so the need for us to go into inserting is reduced".

Consequently, the mailroom will fundamentally consist of multi-stackers and palletisers.

"We have had a Ferag and a Muller Martini high speed multi-stacker on trial at Knowsley for the last 12

months. We envisage having three such stackers per press. There will also be palletisation, one per line, the specification being around 90 bundles a minute".

He adds: "People in mailrooms today are generally there for when the equipment goes wrong and it is something again that I want to try and get us to be ambitious about. Obviously, a major obstacle is the fact that we will be running at 86,000 copies an hour with the big book straight into the mailroom and there is probably no one in the world doing that right now since most big paginations are built up in the mailroom and not on the press.

"However, one of the things we asked ourselves originally was, "What were newspapers about in this country?" It is not like the continental model: we do not require a big mailroom operation as we are into high speed bulk production and distribution to the wholesalers. Reliability is therefore the main priority in everything we do.

"We are not planning for failure. We are going to set the gauntlet down for the suppliers to deliver reliability. OK, we will keep our machines in good order and ensure preventative maintenance is carried out to the manufacturers specification, but in future our operation will be like a grand prix race. We will have all this kit prepared to run for around five or six hours a night and during that time we are going to be Schumacher".

Ian Macdonald concludes: "I think the solutions that the guys have come up with such as the triple-width presses with their reel handling and all the automation and the thought that has gone into this project will make it a print plant of the future. I think there is going to be nothing like it anywhere else in the world when it is completed. P1

