RANK XEROX

# Vision

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The house magazine of Rank Xerox Mitcheldean

*Graham Hoyle (right) presents the Investor in People award to Gerry Lane.*

# Investor in People – an RX first

"WELL DONE, all of you!" said Graham Hoyle, chief executive of Gloucestershire Training & Enterprise Council.

He had come to the plant to present the Investor in People award to Rank Xerox Mitcheldean, and representatives of all business areas and buildings were invited to attend the informal celebration in the hospitality suite on Tuesday, 2 March.

Investors in People is one year old and thriving, particularly in Gloucestershire where companies are taking to it in a big way, Graham told them.

"That is very good for the whole county and its eventual prosperity."

We are the largest of 11 companies to have gained recognition in Gloucestershire (other companies in the Business Park are going for it, too).

"All the companies who have won the award have been critically assessed. It is not easily achieved and all had to be very, very good."

As he pointed out, Investors in People fits in with the Rank Xerox philosophy of focussing on the needs of the customer.

Receiving the award on behalf of the plant, site director Gerry Lane said: "We are proud to be in the vanguard of companies to have gained Investors in People status – a national benchmark for companies against which to measure their progress towards placing people at the heart of the business strategy.

"Mitcheldean employees are seen as a primary source of competitive advantage and their contribution to our business will determine our success.

"Don't have any doubts about it – to compete as a business in the '90s demands flexibility and innovation – two ingredients that only people can deliver.

"As a corporation we place employee satisfaction and motivation second only to the satisfaction of customers."

He spoke of some important and challenging 'people goals' for 1993: self-directed work groups; a performance feedback and development structure to include all

*Continued overleaf*

## About the scheme


*The inscription on the plaque, now on display in main reception, building 8/1, reads: 'Presented to Rank Xerox Mitcheldean in recognition of meeting the national standard December 1992.'*

LAUNCHED BY the Department of Employment and operated through the Training & Enterprise Councils, Investors in People is a national accreditation scheme to encourage companies to focus on the importance of their employees.

Certification is based on assessment against 24 performance criteria – the 'national standard' – and any size of organisation can qualify.

The national target is for 50 per cent of medium (200-plus employees) and large organisations to be Investors in People by 1996.

At the time of the announcement of our success in January, we were the ninth largest workforce to be accredited out of a total of 115 nation-wide recognitions (including companies like Dowty Group, Lucas Aerospace, Nissan, Siemens and Unilever).

The demands made on a company aiming to be recognised are considerable, starting with a public commitment from the top to develop all employees to achieve its business goals.

The company must also regularly review the training and development needs of all its employees; train and develop individuals from recruitment onwards; and, finally, evaluate the investment in training and development to determine achievement and improve future effectiveness.

employees; introducing National Vocational Qualifications on a pilot basis in all business areas, and certification systems to enhance the training and development of employees; improving communication processes; and developing further our equal opportunities practices.

"In May we shall be conducting our employee satisfaction survey to establish our new areas for improvement in the year ahead," he said.

Achieving the recognition status is not the finish line. In three years' time there will be a renewal of our assessment – "but it has confirmed that we are on the right path to excellence," Gerry added.

# Good progress towards world class status

AL DUGAN, senior vice president, corporate strategic services, had a busy agenda when he paid a visit to the plant on Wednesday, 24 February, accompanied by Shrawan Singh, director and vice president, Rank Xerox Manufacturing & Supply Chain.

It included presentations from the site management team covering reprographics overview and Big Wave, the convenience copier and work group focussed factories, materials, human resources, 'Managing for Results' and customer focus, and the AdeltaT project in building 1 (see centre pages).

As on-site readers were informed by 'Pronto', these presentations were well received, and demonstrated our ability to be in the forefront of waste elimination within the corporation.

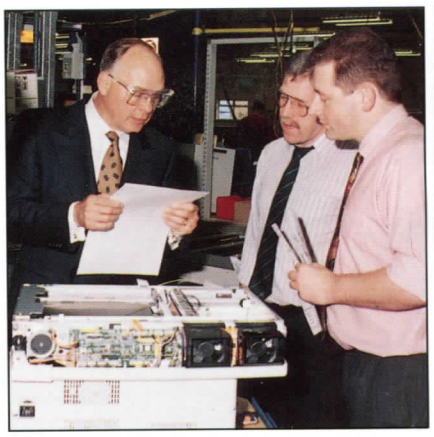

*Al Dugan asks Steve Batcock about the SPC charts for the inertia welder in the fuser rolls centre. With them are (from left) parts manufacturing manager Larry Sterrett, Shrawan Singh and Keith Grant, materials manager.*

A factory tour, undertaken during the morning, took in buildings 3/1, 5, 3/2, 4 and 1. Al Dugan said he felt that, since his first visit to Mitcheldean some three years ago, significant progress had been made towards achieving world class manufacturing status.

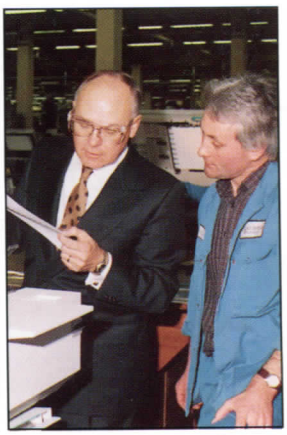
He commented on the knowledge and enthusiasm demonstrated by all the people he spoke to (our pictures show some of them), and he was impressed with the recent improvements to our facilities and work processes in various areas.

He said he felt that, all in all, we had moved a long way forward; but further rapid progress must be achieved in order to catch up and keep pace with the best manufacturing companies, particularly in the area of productivity improvement through waste elimination.

During the afternoon, Al also held a communications meeting with a group of 50 managers on site, during which he gave an overview of Xerox financial performance, the status of the new organisation and progress of the Business Divisions.



*Discussing the new Xerox 5312/14 model with engineer Keith Johnson and (right) section manager Matt Jackson.*



*Phil Taylor in 5047 recycling talks with Al about copy quality checks.*

*In harness assembly, Al chats with Dave Witts who operates the Molex AM81 machine. On the right is manager Des Halliday.*

IIP AWARD

## How we were assessed

THE METHODOLOGY of the certification process is similar to that for the corporate Business Excellence Certificate, which we gained in 1992. It's an external assessment of a very important aspect of BEC – so the human resources function was well prepared.

We gained our commitment certificate in September last year and then applied for formal recognition when we believed we met the standard.

The assessment process came in two phases. First we had to produce documentation to show we were at an appropriate stage to go for the award.

The 'evidence' was a weighty portfolio of some 80 documents on training and development, reviews of people's training and development needs, action taken to communicate with and train/develop people, and evaluation of our investment in people.

The second phase involved visits to the site by a team of assessors. At an initial meeting they were given a briefing by the human resources function on our communications, training and development activities – and after studying our organisation chart the assessors decided on an audit trail.

A week later, on 18/19 November, they returned to carry out a series of interviews and informal chats with a cross-section of the workforce.

They were given freedom of movement – they talked with people of their choice at all levels, including site director Gerry Lane; they talked with the joint bargaining units; they covered all business areas, including the EMC back shift.

In all, they spoke to over 150 people, spending a total of 40 assessment hours with us.

Employees were simply made aware that assessors would be coming to the site and were given some idea of the type of questions they might be asked – it was left entirely to them to give factual answers based on their personal experience.

The good news that we had measured up to the national standard made an encouraging start to 1993.

As human resources manager Robin Fyffe points out, "Public recognition as an Investor in People gives a strong message to customers, suppliers and employees.

"We are a company which believes in upgrading the skills of our workforce, linking what people can do to organisational needs in order to improve effectiveness."

Jerry Hatch and Mark Stewart tell how we're

# Selling CTM to suppliers

AS WE all went through the 1980s our main focus was quality – utilising the Leadership Through Quality strategy.

Now in the 1990s, quality is a 'given', an automatic expectation from a customer.

Today's challenge is time-related productivity through cycle time reduction by elimination of waste. By waste, we mean anything other than the absolute minimum resources of material, machines and people required to add value to the product.

The tool chosen to achieve this throughout RX internally and externally, through suppliers, is based on AdeltaT and is called cycle time management (CTM), with the objective being improvement in parts manufacturing productivity.

As 80 per cent of the cost of a business machine comes from purchased components it is imperative that all suppliers use this process as an enabler to provide year-over-year cost reductions. This can help us regain market share both by being more cost competitive and reducing time to market.

Following the success of pilot projects with suppliers in the USA it was decided to implement this strategy with key suppliers worldwide.

For the UK roll-out a two-day training course was held on 11 and 12 January at RXMP, with 17 people attending from SQA and CCM. As the training came to a close Keith Grant, materials manager, laid down a challenge – to conduct a cycle time management study in the harness area (bld. 3/2) and 4235 customisation (bld. 12) and to present the findings to the MOC on the following Monday.

*Some members of the teams carrying out a cycle time management (CTM) study in the harness and 4235 customisation areas – from left (standing) Tony Knight, Janie Phelps, Colin Lees, Keith Burry; (seated) Terry Cooling, Bob Parsons, Mark Stewart and Richard Ford.*

Two teams were formed (cancelling all engagements for the rest of the week!) and CTM was launched at RXMP.

They started off by flow-charting the actual processes from works order issue to despatch. This involved talking the process through with the operators from start to finish (and thanks go to all who helped).

Once the flow-charted activities and related times were established (real times) they were then segregated into two groups, theoretical and delta.

'Theoretical' represents those processes that add value to the output ('value added' is defined as a process step that changes the nature of the material on the production floor).

"Delta' represents those process steps that do not add value (i.e. waste such as parts handling/ moving, awaiting next operation, inventory, expediting, inspection and so on).

It is evident that the actual process time represents the sum of 'theoretical' and 'delta', the goal being to drive the deltas to the ideal state of zero and then challenge the 'theoretical'.

The next step was to highlight the largest deltas by pareto and, using the problem-solving process, identify recommendations for reducing cycle time – which equates to productivity and cost.

*From left: Jerry Hatch talks the process through with 4235 customisation staff Sean Mills, Stuart Boseley and Barry Thomas.*

The projects are still ongoing as the respective area managers are now developing plans and have implemented many process-improvement ideas.

SQA and CCM are now establishing the CTM process at 15 key UK suppliers to obtain cost reductions by June. RX Venray and RX Lille have similar plans in hand.

We need to succeed.

## Progress report

AS WE went to press, calls by CCM managers on ten of the 15 companies (covering seven commodities) had taken place and their CEOs had promised support.

In three cases an initial study is being undertaken on a high value part by cycle time engineer Janie Phelps, the CCM buyer and the SQA engineer responsible (a cost-down engineer also being on call) with a half day training course for the supplier.

An action plan will then be prepared, indicating improvements to eliminate waste and, on agreement, the process will be changed and cost savings captured on the contracts.

# Dave brings back the bronze

*Dave Paull with his medal*

FOR THE second year running an RXMP employee, studying at the Royal Forest of Dean College, has won the bronze medal, the highest award at the 'intermediate' stages of a City & Guilds scheme.

Last year it was John Gwilt of PQA who won the award, which goes to the student achieving the best overall result in exams in the first year City & Guilds general engineering course.

This time it's Dave Paull (interconnects assembly) who has walked away with the honours. But while John's course was electrical, Dave's was a mechanical engineering one.

He achieved the highest grade possible in seven modules ranging from basic engineering to mechanical production processes; he also gained a certificate in workshop mathematics, covering subjects like mechanical production technology and technical drawing.

A former mechanic with welding skills, Dave joined us five years ago. From shop marshaller and forklift driver he progressed to a machine setter operator, first in the fuser roll centre and more recently in the interconnects assembly wiring centre.

Here he is responsible for setting up the Molex AM81 (which creates multiple assemblies of wires), repairing it when necessary and carrying out preventive maintenance.

Keen to acquire qualifications, he applied to carry out an engineering course and was given day release by the company for his studies (which included the carrying out and writing up of various projects).

Dave is currently involved with a project within the wiring centre, working together with section managers Pat Brown and Glan Jones on the elimination of scrap. "I hope this will serve me in good stead in the NEBSS course I've now embarked on," he says.

His wife Rose works in another part of the EIBC – the EMC building 4. She's one of the Gardner Merchant catering team who recharge staff energies with refreshments!

Dave and Rose have two children, Katie aged 7 and Tony (4), so studying at home is not without problems. But Dave has acquired a PC to help him, and an electronic keyboard provides both relaxation and a different kind of challenge.

**Two quality improvement teams vied with 'Console Cost Savings' for Mitcheldean's Top Team status. Last issue we featured the winners, who became an RXM&SC candidate for a Xerox Corporate Team Excellence award; this time it's the turn of the runners-up.**


*In the stores area – people who worked on the asset recovery project. From left: Martin Brooks, Andy Goulding, Phil Harris, Jo Hosier, Andy Cosgrove, Keith Chiddle, Ken Bundy, Dave Hatton, Phil Wheeldon, Guy Rainforth and Adrian Tawney.*

# Asset recovery in EMC

IT WAS a long-term problem, as well as a matter of a process taking too long.

When manufacturing plants had PWBAs that required repairing, these were stacked on a pallet and, when full, the pallets would be sent to EMC in building 4 who put them into stores.

In due time these line returns would be 'planned in' for the work to be carried out – a process which called for checking, diagnosis, repair and testing.

However, new build work was being given priority and the boards had to be left in stores until there was sufficient spare test capacity and the opportunity arose to tackle them. In time, they built up to an unmanageable amount.

Says operations manager Guy Rainforth: "We had up to 40 pallets of such boards in stock and we had to overspill into a building on the ridge. In total, this took up 400 square feet of space."

With the amount of double handling, increased transit damage was incurred, not to mention the waste of time and staffing involved in the transfer.

Not only that; during storage, which could be for three or four months, the boards would become out of date – the part numbers would be wrong because of reconfiguration of machines.

Sometimes they could be re-worked but, if not, they had to be scrapped.

With such waste occurring, the situation was ripe for AdeltaT treatment, and Guy got together a team of people from each area involved: Dave Hatton (stores), Martin Brooks (stores systems), Keith Chiddle (test), Andy Cosgrove (planning) and Jo Hosier (QC). Brian Long (training) also came along to give training on the use of AdeltaT.

Realising that the asset recovery process needed to be re-written, each member assessed what their aspect of the job involved and how long it took – unloading boards, checking and locating, entering on to the system, planning, plus all the waiting in between each step until the board was ready for the production line.

It became abundantly clear that this 'waiting' was a big delta – in fact, the 'awaiting planning' step alone accounted for 38,400 minutes of the total actual time of 45,272.5 minutes.

Changing what had been routine for years, the team slimmed down the process, cutting out much of the planning and other non-value added steps. This reduced the ratio of actual to theoretical from 5,659 to 276.37.

The first objective was to get those 40 pallets shifted. This was achieved by the stores team in building 4 at a time when EMC were asked to move their stores out of building 12, and an opportunity occurred to take on the extra work of repairs.

"We worked closely with Keith Chiddle to resolve the configuration problems and burn off what was in stock, and over a few months we achieved our objective," says Guy.

The project has effectively cut inventory, saved space and time and staffing, reduced reconfiguration and scrap, with better utilisation of assets. The MED process, too, has been reviewed and cut.

The thing about projects like this is that they open up further avenues for eliminating waste. Says Guy: "Now we have another idea for reducing the ratio. When Mitcheldean production have line returns, instead of their sending them back to us straight away, we source-verify them – working with DMC. This way we can sort out any queries arising with configuration before taking delivery in building 4 and then finding there is a problem.

"We've identified other opportunities too," says Guy – but he wasn't saying any more at this stage!

## New products – new training

THREE NEW low volume products to be brought into production in 1992, plus the taking on of extra staffing – it was a challenge that called for a new training strategy in view of the limited training resources available.

A 'New products – new training' project, led by manager of training Colin Court and Andrew De La Haye, assembly manager for the 5317 (the first of the new products), was set up to tackle the problem.

Product training manager Dave Higman and officers Dennis Duke and Bill Smith joined forces with Andrew's section managers Brian Whittington and Richard Wood and end-of-line operators Steve Foxwell and Dave Williams as team members.

The objectives were to provide a long-term training capability that would be independent of the training centre, would ensure launch and quality targets were met, and improve the learning curve.

The strategy the team developed was to train people to train others, and they started the ball rolling with Brian, Richard, Steve and Dave being taught to build the first machine by Bill Smith.

They in turn trained two inspectors, two stand-ins and an electrician, making up a total product training team of nine, who then delivered the training to the 5317 line operators.

To fully equip these workplace trainers for their role, they were given a three-day course which significantly enhanced their individual training skills.

In addition to learning about the product itself and how to build it, operators received training in many good things, including ESD, SPC, AdeltaT, JIT, CCA, the material pull system and housekeeping.

Said Andrew: "As a result we have launched on time, shortened the learning curve and bettered PET targets. The strategy has also given us greater flexibility; if we have quality problems we are able to refer back to the workplace trainers."

Dave was pleased to report that "the other new products in building 1 have seen similar success, and a new programme survey showed that employee satisfaction with job training has improved from 51 per cent to 75 per cent in one year.

"Workplace training continues, necessitated by staff changes and new developments. We now have a team of over 100 workplace trainers across the site."

The approach has also provided a building block for certification of operators which will focus not just on building ability but also on competencies in safety, housekeeping, materials handling and corrective action.

This will help to identify any additional training needs of the individual and any shortcomings in various operational aspects so that these can then be corrected.

*The spacious new bench area. Discussing a job in the mechanical section are John Lewis (centre left) and Brian Malpass.*

# Benchmark facility for maintenance teams

"WOW! I'VE never seen a workshop like this before – you've certainly set the standard." That was the comment made by a Xerox visitor to the plant & production services department of works engineering.

Having operated in a traditional environment for many years, the department has now moved – into the Mitcheldean 2000 era.

The original facility has been cleared away to make room for a new robotic weld cell, being installed by parts manufacturing for the welding of frames for a forthcoming product.

The maintenance teams' new home in an adjoining area is all open plan, and it couldn't be more different from their previous cramped quarters.

"In fact, it's been a bit of a culture shock!" says John Lewis, manager of the mechanical section.

"What we aim for is a benchmark operation," and Tony Murrell (facilities), in accordance with customer requirements, drew up plans for a facility reflecting the professional job carried out by the department.

Time is of the essence in this kind of work – "People usually want our services straight away," says electrical section manager Phil Townsend – and the open plan bench area, with the mechanical and electrical teams on either side of a central gangway, has had the effect of speeding up communication.

"You can now see at once who is around and we can give an even more prompt response to our customers," Phil pointed out.

It all looks brand new, yet much has been refurbished and repainted in the blue and grey co-ordinated colour scheme.

*Gordon Evans and (right) Phil Townsend check on a unique part for a Duap machine in the stores.*

*Barry Barton receives a call regarding a breakdown.*

Full use has been made of space beneath the benches for storage and all units are lockable. Power socket panels run the length of the working surfaces and air services are neatly tucked away.

Benchwork was in full progress when we called (it varies widely, from fitting plugs to repairing air tools or circuit boards). "But," said electrician Wilf Jenkins, "just look at the benches – they're clean, and everything is tidy.

"We get the feeling we have much more space," yet the facility occupies the same square footage as before.

This is due not only to the improved storage, but also to the provision of an abeyance area where items awaiting repair can be kept instead of causing congestion in the workplace.

Another customer requirement was for a refreshment area – a cheerful arrangement of orange and grey chairs and tables, plus litter-bin, which is now standard throughout the whole floor of building 5/1.

Even the equipment in the adjoining machining area adds colour – the lathes, milling machines, guillotine and folder for sheet metal work, all have been painted bright blue and look like new. It's amazing what a coat of paint will do!

Close by is a bay of additional lockers where the teams keep protective gear and measurement tools. In short, there's a place for everything and everything is kept in its place.

Facing the rows of benches are John's and Phil's offices, and strategically located between them is that of Barry Barton who runs the maintenance request service.

This middle office gives access to the now segregated works engineering stores which have also been upgraded, following a major stock check to clear out unwanted items.

Gordon Evans, who has joined the department as their dedicated storeman, has introduced an improved system of storage with machine spares consolidated in family groups.

"You can see what is where at a glance, and the benefits are invaluable," says John.

## Best in county

IT WAS on behalf of this year's IP students involved in the engineering projects at Heywood School, Cinderford (featured in our last issue), that I, along with Brian Fowler (training) and Rosemary Steer of the Forest Education Business Partnership, attended the SWEIG (South West Education Industry Group) conference in Bournemouth on 3/4 March.

There were school, industry and TEC representatives from Avon, Cornwall, Dorset and Gloucestershire – all there to attend seminars and workshops relating to the furthering of links between schools and industry.

It was also the occasion for the recognition of special work or projects undertaken by industries to develop their own partnerships with education.

These had been judged by a panel of industrialists who looked at the methodology used and the outcomes of the project as well as the aim.

An award went to the winning project of each county, and these awards were presented at the conference dinner.

Michael Heron, chairman of the Post Office, presented Rank Xerox Mitcheldean with the 1993 SWEIG Award for Gloucestershire for the work carried out with Heywood School by our team of eight – Michele Lawlor, David Callaghan, Martin Brett, Iain Deakin, Steve Oram, Mathew Hinton, Paul Griffin and myself.

The school, too, benefited from a monetary award, in addition to a grant already won from Toyota for the project, so it's been a worth-while exercise all round.

**Siobhan O'Hagan**

# Our smallest model zooms to new level

*Julie Humphries works on an upper frame.*

*Section manager Matt James and Bernie Gibbs (QA) discuss DPHM results at end-of-line inspection.*

*FR&T operator Ivan Blow and (r quality matter. On the left are Juli*

IN THE beginning there was the Xerox 1012 – the smallest in our range of 10 series copiers and a 'little champion'.

Two years later, in 1989, we announced the Xerox 5012/14, developed from that 'little champion', with a number of new features.

Now we feature the Xerox 5312/14, launched in the UK on 27 January after a limited launch in Spain, Switzerland and Australia.

Of Fuji Xerox design, it's our third new low volume copier within 12 months.

Although it is still the smallest of our range, and appears no bigger than its predecessor, the curved covers of the 5312/14 give it that 'new generation' look.

Another difference you will notice is that it has front-loading paper trays which save space and allow the user to have two different sizes of paper available, each tray holding 250 sheets; you can load one tray while the machine is using paper from the other. There's a 50-sheet bypass tray, too.

"We are also producing an optional tray which can be fitted to either model and this is being assembled off-line," MRT manager Keith Marfell told us. The optional stand is bought in.

Those are not the only notable changes, however.

Both versions print 12 A4 copies per minute; but whereas the 5312 is a B4 one-to-one version, the 5314 has an A3 input and a B4 output and has zoom features.

It zooms from 50 to 200 per cent of the original size in one per cent steps, and there are four pre-set ratios (64, 78, 129 and 154 per cent).

The new product is quicker to respond, taking only 25 seconds to warm up compared with the 5012/14's 30 seconds, has a very low noise level, and – another environmental consideration – can be put on standby, thus saving power.

All the other advantages, such as the customer-replaceable copy cartridge (with improved packaging so as to simplify its return for remanufacture), automatic exposure control, photo mode and three-year warranty, add to the attractions plus Xerox quality and reliability.

As with the recently introduced 5320/22, Martin Stock, launch manager, office document products, and Dave Williams, customer service operations, held a series of quality launch meetings, some of which took place at Mitcheldean.

"Quality has been better than plan since production started, and we have already placed over 200 machines with no significant problems recorded," reported Keith.

Incidentally, Neil Jones was MRT manager for an interim period and he took the 5312/14 into production. Then last February he joined the asset management focussed factory and handed over his responsibilities as product assembly manager to Norman Rudge.

"Though there are some similarities to the 5012/14," said Norman, "we are building a totally new machine; every part is new, not inherited, and the content is over 50 per cent European-sourced by value."

As we went to press, production was nearing the end of the learning curve and Norman told us that few problems had been experienced.

"We have met our target dates and satisfied all the demands placed on us."

*From left: buyers Steve Jackson, Cathy Upton and Andrea Brashko with European Integration engineer Krimo Benalia.*

## Engineering links

ONE OF the Fuji Xerox engineers from Ebina who assisted in bringing the 5312/14 to production, Yamane-san (left) is now back here on secondment for three years, helping to forge a better link between FX and ourselves. Another engineer, here on secondment until July, is Praveen Soneja (right) from Modi Xerox who is working with the 5317 technical team studying our processes. Our picture shows them with John Overbury, low volume product engineering manager.

## Delta de down wa

*The QuickJIT team in space – which th Ian Smith, team leader Steve Cooper, C*

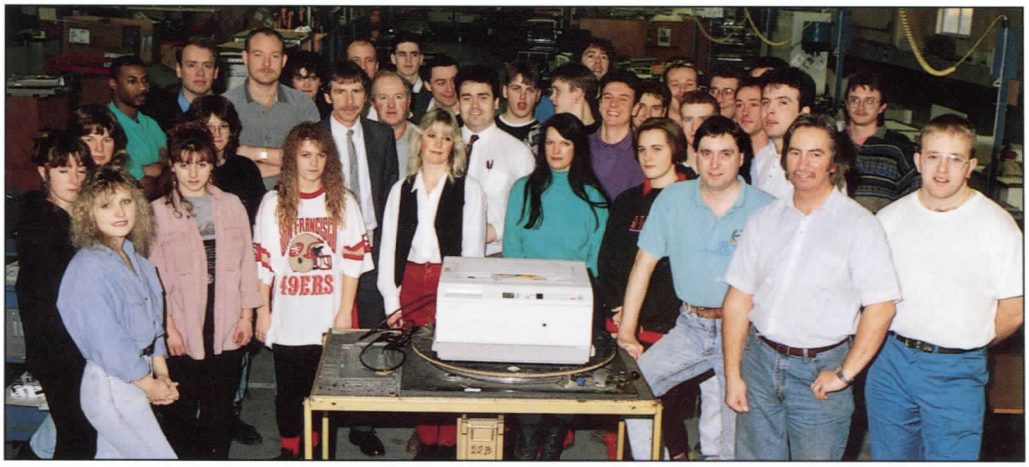
TO KEEP our products competitively priced, we have to introduce changes – and there are plenty taking place in the building 1 focussed factory.

There's the relocation of the warehouse from Gloucester as well as the operations from the ridge.

Then the Big Wave is rolling in with the layout conversion of the production lines to mini flow lines – the 5317 and 5320/22 being converted during Easter with the 5312/14 following suit later.

This is presenting a golden opportunity to take a close look at every aspect of activities on

) engineer Bob Davies sort out a copy
homas and Harold England.



## The 5012/14 bows out

*The day shift gather for a formal farewell to the Xerox 5012/14 which finished production at the end of January, giving way to its successor, the Xerox 5312/14.*

# ectives track
# ste in building 1

*fforts released in 5320/22 pre-assembly. From the left are Bernie Marshall, Andy Holder, n Jones, Louise Murray, Norman Hesketh and John Lewis.*

these three production lines and introduce 'small waves' of improvements.

In a productivity study, led by Steve Cooper, AdeltaT is being applied to every stage of the production process – from the receipt of material at the warehouse to the removal of the finished product by trailer to the supply centre – in order to see how waste can be eliminated, and so reduce unit machine cost.

The study is significant in that it is involving so many at all levels. It has stimulated employee involvement, and enthusiasm, on a big scale. People are enjoying being 'delta detectives'.

Steve is a member of a steering committee, chaired by reprographics business centre manager Kevin Horrobin, with team leaders appointed for each of the ten areas/processes identified.

Bob Harris is covering materials receipt, warehouse and JIT buffer plus loading. Andrew De La Haye leads the pre-assembly team; Simon Davies – direct feed; Norman Rudge – subs build and, together with Clive Harrop, flash test & pack; Steve Cooper – main line; and Brian Reeves – FR&T.

Steve measured the areas/processes to establish the actual and theoretical time taken and came up with surprising results.

They showed that from receipt of materials to loading the finished product took some 21 days; theoretically it could be done in 9.6 hours.

"This demonstrated that 98 per cent of our throughput time is non-value added!" said Steve. "It also showed there was a tremendous opportunity to eliminate waste."

A Quick JIT approach is being adopted to deal with each area and is proving very successful. This is a four to five-day workshop involving the shop floor employees with practical experience in the area concerned, plus representatives of other functions.

They identify the root causes of the deltas, come up with ideas or options, try them out and implement them if effective. The emphasis is on doing, not talking.

The steering committee review their findings, see that cost benefits are captured and authorise any necessary resources.

Employee satisfaction and dollar savings were the yardsticks used to prioritise the main areas where most improvement was needed, and pre-assembly and subs build emerged as the two top priorities.

The pre-assembly of the 5320/22 line was selected for initial attention since this product involves a far greater amount of material than any of the other models.

A Quick JIT team was set up and assembly operator Ian Smith, who was invited to be a member, told us: "It was nice to be asked to take part and put forward ideas rather than just be told what was going to happen."

Some of the members had never done any AdeltaT projects before. "So right at the start we made sure that all were brought up to the same level of understanding, both of AdeltaT and of the pre-assembly operation," said team leader Steve, and in this they had the assistance of Xerox Corporation AdeltaT specialist Scott Lippa.

They identified two major areas of waste. The first concerned quantities of material in racks or on the floor.

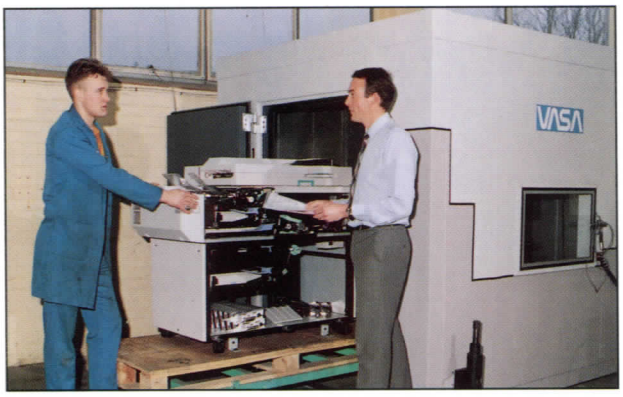
"We found the issue ready unit and box quantities did not match line usage. By correcting these, and switching items to direct feed, we practically halved the amount of stock held in pre-assembly which released space for value-added activity and saved on equipment," Steve told us.

The second problem area – identification of shortage of parts – called for a visual control.

The aim was to reduce the length of time spent by the pre-assembly operator in walking up and down the line to check on shortages, since line operators had no means of signalling pre-assembly.

An initial trial solution involved the use of red flags – a

*Continued page 8*




*Craig Leighton wheels a 5046 into the noise reduction chamber watched by section manager Andrew MacArthur.*

*Craig connects up the machine; note the mike by the console.*


*Mathew Hinton shows Craig how to interpret the readings on the frequency analyser screen.*

# VASA checks machines are OK for sound

NOISE IS said to be one of the major pollutants of our age. The trouble is, it is all a question of subjectivity. What sets one person's teeth on edge is a source of pleasure to another.

It is also a question of subjectivity when considering the operational sound from one of our machines. We have to rely on the hearing of individuals to check whether a sound is acceptable.

But PQA staff do not have calibrated ears and there is a need for a standard measurement to be set which all manufacturing plants can agree upon.

Signature analysis is a technique of defining specific characteristics for each model, against which we can test our outgoing production units.

Having identified the need for vibration and acoustic signature analysis (VASA), the multinational Xerox Technology Council asked Mitcheldean to lead the development of signature technology to measure the sound characteristics of our machines.

As new technologies manager Keith Jones explained: "We use microphones to measure the noise from known good machines, set a threshold and then test other machines with respect to their standard signature."

With the assistance of Bristol and Southampton Universities (the latter, incidentally, is a world leader in acoustics), plus the services of a consultant, experiments were carried out and a generic software system has been developed, day to day activities being co-ordinated by Mathew Hinton, one of our IP students.

So far, so good. "But we also found we needed a noise reduction chamber in order to eliminate noise from the shop floor," said Keith. This is why a specially constructed box, about 7 feet square and mounted on castors, made its appearance in a corner of the 5046 recycling floor in building 3/1, where the system is being piloted.

Mathew designed an appropriate colour scheme to enable it to blend with the environment and witty shop-floor workers nicknamed it the Wendy House!

Step inside and shut the door, and you'll find that it effectively blankets out all sound – thanks to the acoustic panelling.

To carry out a test, electrician Craig Leighton (who has been trained on the system) wheels in a 5046 and connects it up. Some 20 copies are run off and two microphones, one either side of the machine, pick up the noise and relay it to the frequency analyser located just outside.

The first stage of the project was to assess whether machines pass or fail the test. The next step is to establish whether faults can be identified by the frequency with which they occur.

As Derek Shuttleworth, the team's production engineer, explained: "Almost any moving part can cause noise – gears, motors and so on. We need to identify noises associated with faults and recognise them before 'telling' a computer how to recognise and pinpoint them."

The ultimate aim is to establish process capability – to achieve zero PET defects, obviate problems in FR&T and ensure our customers have no cause for complaint.

The newly devised system not only takes away the subjectivity, it also gives results which can be documented. This enables trends to be recognised or statistical process control data to be obtained.

Another application for the VASA system is now being investigated. Said Keith: "It has potential as a tool for checking the reusability of components in asset management and we are working flat out to produce a PC-based version."

**Delta detectives**
*(continued)*

'Small Wave'! Then a better idea, which would avoid duplication of time and expense, occurred to the team.

Flashing lights were under trial for summoning snaggers (a Big Wave visual control team experiment) so it was decided to make the light fixture hold two coloured lights – one for snaggers, the other to signal shortages.

Another trial currently being carried out as we went to press was the fixing of coloured magnetic labels on to racks.

These give a 'trigger quantity' (*eg* a number of boxes) so that when supplies are down to that level, operators know they should pull material in.

There are also red and green labels showing whether or not material has already been pulled, whether it is coming or there is a shortage in stores – the whole purpose being to prevent excess material being pulled in.

*Members of the Big Wave visual controls team (l. to r.) Mike Walker, Ruth Patterson, Iain Deakin and Tania Hek discuss the prototype red and green warning lights.*

"The long-term objective is to make pre-assembly part of the material pull system," Steve told us.

"With Big Wave we need to apply AdeltaT improvements prior to new processes being introduced, and ensure there is no recurrence of problems. This we have started to do by talking to the kitting expert Brian Whittington."

The Quick JIT approach having proved its value, subs build and other areas/processes are scheduled to get the AdeltaT treatment in coming weeks, with FR&T and receipt being worked throughout the year.

"Continuous improvement through productivity projects will be crucial over the next few years in order to meet the competitive challenge," says Danny Haines, building 1 focussed factory manager.

"As management, we must show our commitment to AdeltaT projects by planning the time for employees to get involved, and implementing their waste elimination ideas promptly."

**Sharing experience**

AT THE beginning of March, Steve attended a EuroJIT meeting in Venray, along with business quality & strategy manager Phil King and John East, divisional quality training manager, to give a presentation on the productivity study so that other RXM&SC plants could share the AdeltaT experience and benefit from the findings.

They were very interested and Lille and Venray sent representatives to participate in a Quick JIT workshop on flash test & pack at Mitcheldean on 29 March to enable them to carry out a similar project on their own sites.

# Vernon focusses on the re-use of our assets

*Vernon Smith*

BEING APPOINTED to head up the asset management focussed factory at Mitcheldean gave Vernon Smith, now a member of MOC, a sense of déjà vu.

When in 1984 he returned from Venray to Welwyn Garden City to take up the post of manager of the pilot plant, he asked Bob Osborne, then chief engineer, where it was located.

"Oh, there isn't one," said Bob. "You're going to set it up."

Mitcheldean's asset management focussed factory, too, is at present more of a concept than an actuality.

"There are aspects of it existing in various parts of the site. My task is to bring them all together under one umbrella and grow the business so that we can maximise the use of company assets," Vernon told us.

Asked about the objectives of the focussed factory, he said: "A key one for 1993 is to establish asset management as a prime supplier of material, re-processed to required quality standards, to our other focussed factories. We want to become the first choice for the supply of parts, before any decision is made to buy new.

"We are also going to focus a great deal more on the environment, and asset management is the logical centre for this activity.

"For the first time we shall have an environmental manager and our activities will be co-ordinated with other UK locations and European manufacturing centres.

"We are adopting a teamwork approach, with nominated teams from each of the Mitcheldean focussed factories, so we stimulate rather than impose ideas, working within the legal framework.

"Legislation is getting tougher all the time, and one of the outcomes will be the rising cost of land-fill. It is going to become a very expensive business, and we must aim for zero land-fill by the end of 1994."

Heading the asset management function calls for a blend of engineering and materials experience, which Vernon's career has provided.

Having served an apprenticeship with a subsidiary of ITT in South Wales, his first job with them was as a planning engineer.

Venturing over the border, he spent four years with Smiths Industries, designing and developing barometric aircraft instruments, before joining our own design engineering function at Mitcheldean in June 1970.

Three years later he moved into the group manufacturing programme office ("It was exactly where my present office is – in building 2/2"), becoming responsible for the co-ordination of the new generation of CBA machines across European manufacturing sites.

"That was when I began to travel around, and I haven't stopped since."

Programme management of mid volume machines followed, and the late '70s found him in Webster, where he set up resident configuration control teams.

Back from Webster, he moved to Welwyn, where he held various posts in manufacturing and product planning until 1983, when he commuted weekly to Venray for "an interesting 12 months" as new products control manager.

He returned to Welwyn to manage the pilot plant – a facility set up for mid volume products – and renewed his contact with Mitcheldean during the manufacturing development of the 5046.

His globe-trotting then intensified with visits to Webster, Toronto and Brazil and he "spent a lot of time in the air."

Vernon well remembers that, on arriving at the Xerox do Brasil plant in Resende, a three-hour drive from Rio de Janeiro, one of the first questions he was asked when he walked in was: "Do you know Don Presdee?"

Long-servers will recall it was Don who assisted the Xerox subsidiary in setting up the assembly plant there in the early '70s.

Vernon joined Gerry Lane's logistics team at Welwyn in December 1989; then, a few months later, when electronic operations were transferred to Mitcheldean, he came too – to take up his most recent post as materials logistics manager.

"I've enjoyed meeting and working with so many people at different sites," he says.

"Looking back, I reckon I have had about 16 different jobs in 23 years – and we've moved seven times!" says Vernon.

Now he and his wife Barbara are settled near Gloucester; their 21-year-old son Geoffrey is following a seven-year RIBA course and is in his degree year, studying architecture at Portsmouth University.

Vernon is happy to be closer to his roots, but he's not typically Welsh. "I don't speak the language and I don't sing," he pointed out.

He's never played rugby either, but he's had to endure some leg-pulling about the fact that Wales has had a fairly disastrous two years.

We thought we detected a note of pride in his voice, however, when he told us that, just two weeks earlier, Wales had beaten England!

Sport, he admits, plays no part in his leisure-time interests; like Barbara, he focusses on pictures – she paints them in water colours, he takes them with his camera.

## GEM award

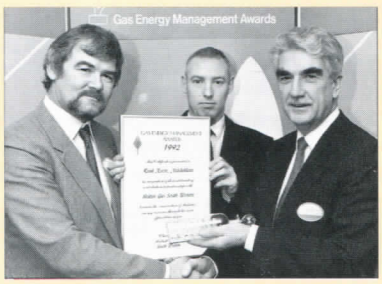
RXMP HAS been awarded a GEM – a Gas Energy Management – award, having been finalists in the regional competition for the second year running.

Works engineering's Mr Energy, Julian Shufflebotham, together with IP student Fred Johnson, went on 19 January to receive the award at a ceremony held in the Queen Elizabeth Hospital Theatre (not the operating sort!) in Bristol.

It was presented in recognition of our 'outstanding contribution in partnership with British Gas South Western, towards the conservation of Britain's energy resources through the more efficient use of gas.'

With it came a model of the Brunel-designed iron steamship *Great Britain* – in a glass bottle, after which there was luncheon in the recently refurbished stateroom of the real thing.

*Julian Shufflebotham, Fred Johnson and (right) David Hider, chairman of British Gas South Western.*




## In the can

IT WAS a case of 'in the can' for Rank Xerox at the Worcester headquarters of Metal Box. A recently negotiated contract saw competitor Nashua's machines ousted by ten replacement machines – six 5047s, three 5034s and one 5028. Stephen Morgan (UK Co.) said that RX's green image and environmental practices fitted Metal Box's business approach and helped to clinch the order.

*Metal Box's Steve Berry with (right) Stephen Morgan.*

# Service awards

## 30 years

AS A machine tool fitter in works engineering, ex-craft apprentice **Pete Waugh** has been pretty busy with all the changes that have taken place recently in building 5/1, not to mention the rest of the plant.

Since we featured him five years ago he has also completed a NEBSS course. He once served on the industrial staff negotiating committee, and for the last ten or so years has been a member of the LSA committee. "We're now preparing for the 40th annual dinner, our biggest yet," he told us.

*Pete Waugh*

*John Didcote*

Outside work, he keeps pretty busy too. Having forsaken budgies for tropical fish, he's now started up again breeding budgies and competing all over the country, with marked success. In fact, he took every one of the budgie prizes at the last show of the Cinderford & District Cage Birds Society of which he is a member.

They need a lot of attention and training – and Pete has 200 of them! "I had no room for the fish as well, so I sold most and gave a few to my 12-year-old son Richard."

Pete and his wife Audrey also have a daughter, Emma, aged 5.

**John Didcote** is probably the longest serving 'finalist' on site.

Ex-miner, ex-machinist, he started a new career in 1963 working on 914 sub-assemblies.

Apart from a short time servicing in-house machines, he has remained in assembly activity and for the past 20 years has done final run and test of high, medium and low volume machines, mostly in new build and now in recycling operations on the ridge.

His work has taken him to Venray plant on two occasions, once when the 914 was being remodelled as the 720, and later as one of a team assisting with the installation of the 3100.

John and his wife Kath have a technician son, Philip, who works in the aviation construction business, like his father before him.

Photography has long been a hobby – "though it's lapsed recently," and John is interested in antiques, particularly tiles dating back to 1880.

## 25 years

Another more recent member of the LSA committee is **Ken Buffin**. "It's interesting, but it's hard work" he says.

In this he has the help of his wife Brenda, whether it's dealing with tickets, or hosting retired pensioners on summer outings.

A regular attender on these occasions is his father-in-law, Gerald Clayson, who was a joint designer of the LSA logo.

Ken was engaged in assembling subs of the early 914 and 813 machines, then the 4000 family, after which he says he "started to float round the factory, working in the flexibility pool."

*A 25-year service quartet – (from left) Bert Parsons, Pete Ball, Chris Cinderey and Ken Buffin (Derrick Burns didn't make the photocall).*

It was through this that he came into goods inwards at a time when the changeover from a manual to a computer system was taking place and he took up a permanent job in stock control where he has worked for the past 20 years.

Ken and his wife Brenda have two children – a son Michael (9) and daughter Jennifer (3) and, when family life permits, he enjoys some coarse fishing.

We found several other people in building 12 who completed their quarter century at around the same time.

Having previously worked on Bell & Howell assembly, **Pete Ball** joined us for the second time in 1967 to work on the 3600 sorter.

He moved to the Gloucester Trading Estate facility for a while, then spent the following 14 years in the machine shop before returning to work in assembly, both new build and recycling. For the past year he has been involved in customising the DocuTech.

Long-servers will remember his father, Norman, who worked in accounts department. Now one of his three daughters, Louise, is with us, working in the wiring section of harness assembly.

He and his wife Susan have two more daughters, Sarah (another former employee) and Kathryn, still at school.

Pete is a member of Cinderford Badminton Club which he joined, he says, "to keep myself agile."

**Bert Parsons** started out by remodelling the 813, our first small copier, as the 660, then moving on to the mid volume machines as a mechanical adjuster.

After a spell in harness assembly he joined small copier new build, becoming a member of the FR&T team. He came into low volume recycling some three years ago.

A skittler for many years, Bert is one of the Drifters – an aptly named team which has drifted from pub to pub and is now based at Ruardean Hill Club. Football is another interest – he's a supporter of Ruardean Hill FC.

His sister Peggy Grice and her husband Ray (another 25-year man) work on the opposite side of the site – Peggy in harness assembly, Ray on 5090 recycling, while their daughter, Cindy, is a section manager in asset management.

**Chris Cinderey** gave up his carpentry business to join us as an assembly worker, initially on 2400/3600 models. Later, while at our Lydney satellite plant, he carried out a scrap salvage project which brought him into the materials environment.

*Continued opposite*

## 20 years

*Twenty-year service people pictured here are (from left) Geoff Powell (transport), Brian Weyman (materials support), Mike Wood (spares packing), Nigel Coleman (5047 new build), Les Kilmister (MQA), Dave Newell (5047 new build), Bob Haste (developer housing), Julian Gwilliam (5047 new build) and Bob Harris (business quality). Two others who qualified about the same time were John Davies (small batch) and Dave Spencer (5320/22 assembly).*

## Obituary

WE REGRET to report the deaths of the following pensioners:

**Maurice Preece** on 17 February at the age of 74; he was with us for 12 years and was working in the paint shop when he retired in 1981.

**Mamie Lark** on 7 March aged 73. She joined us in 1953 and worked in the plating shop wiring section, retiring in 1975. Her husband Gene, who predeceased her, was also a long-server. He was employed in the machine shop and in assembly and was a member of the Sports & Social Club committee.

On his return to base, a new materials system for new build was set up and he became an assembly build administrator, involved with CBA materials.

Later he switched to recycling, progressing to supervisor, and he is now section manager for low volume copier materials in building 12.

Next August his wife Ann, who works in IM on the operations side, also reaches a milestone – her 20th year.

"We see little of each other during the week as she does shift work so we try to develop hobbies we can share, and we have just taken up scuba diving.

"We went to Egypt last Christmas to do a course and though we did all the theory and 75 per cent of the practical, bad colds prevented us from completing it."

Chris found plenty of opportunity for his other hobby, photography, and they plan to go again. He was particularly interested to see the fish he used to keep, swimming in their natural environment.

He still keeps Koi carp and is constructing a big pool; it's 6ft deep so he could dive into it, "but I prefer something warmer!"

**Derrick Burns'** career with us started in similar manner. From assembling 813, later 660, machines, he went to Gloucester, then returned to work in the machine shop.

Mid volume copier and sorter new build followed, after which he went "right through the series of small copiers" before switching to low volume recycling activities.

The Burns family have been very much an RXMP family; Derrick's parents, his sister and all four brothers were employees at one time. "I'm the only one of them still here," he told us, "but I have a cousin, Shirley Coopey, in spares & export packing."

As for hobbies, he enjoys a bit of rough shooting.

## Silver wedding

Congratulations to Gerald Ward, manager, recycling materials, and his wife Sheila who celebrated their 25th wedding anniversary on 23 March. Their daughter Lisa, who works on the 5320/22 line, arranged a surprise party for them on the 26th in the Rank Xerox clubhouse.

### Any news for Vision?

*If you have, then please —*

*mail it to me in bld. 5/2,*

*or leave it at main reception for collection by me,*

*or post it to me at Tree Tops, Plump Hill, Mitcheldean GL17 0EU.*

*or ring me — ext. 566 or Dean 542415.*

***Myrtle Fowler, editor***

# PARTY FUN!

**Our candid camera catches some moments from the Christmas party for 8 to 10-year-olds held in the clubhouse on 30 December.**

# Terry finishes his run

*After 24 years' service, section manager Terry Randall, low volume copier assembly, took early retirement at the end of February. He started work in materials and was production stores supervisor when he became a late convert to new build assembly. Our picture shows Terry holding an original oil painting, one of the gifts from the shop floor, which was presented by Pete Griffiths (right). The management team gave him two sun-loungers which MOC manager Danny Haines handed over on their behalf. A runner, Terry still plays rugby for Drybrook. He's been a pigeon fancier for many years and he looks forward to devoting more time to this hobby.*

# They're a knock-out!

YOU MAY remember being hassled last summer to sponsor a team from the electronic/interconnects business centre who were competing in 'It's a Knock-out' in the annual Clearwell show.

Well, the good news is that the team won the Ivor Burford Challenge Cup for the highest team sponsorship of £638, thanks to all you kind givers.

This has been shared out between the Lydney and Dilke Hospitals and the Cheltenham Cobalt Scanner Appeal.

Although the show day was wet and cold, the team had a great fun time, competing against other teams from local companies, including SmithKline Beecham and Jenkins, the building contractors.

*The EIBC team of knock-outers – from left (seated) organiser Graham Parker, Mikela Hale, Amanda Peters, Anna Bata and Piers Shorthouse; (standing) Kean Gunton, Maggie Williams, James Woods and Rik Kucharski.*

Amanda Peters is now affectionately known as 'Dizzy' by the team following her performance in 'Mad as a brush' – an event where she had to run around a broom 20 times while keeping her head pivoted above the end of the handle, and then run towards a finishing line. Sounds easy? Try it!

A double sack race, an obstacle race, 'walking the plank' and various other events with a watery content were included in the contest.

The EIBC team also competed in the Donkey Derby with hilarious results. The donkeys were unco-operative and bucked some of their riders, while Graham's mount was too interested in the grass to even get over the starting line.

To show their appreciation of Graham's organising efforts, the team dunked him in a full butt of water, making an even wetter finish to a great day at the Lamb Inn.

Plans are afoot to enter the same people in this year's 'It's a Knock-out' and we hear that Anna Bata has already been volunteered as the 'chair person' in the obstacle race by the four male members who will carry her. They are keeping close watch on her diet, no doubt.

# Trophy time again

"MEMBERSHIP HAS remained stable and it has been an encouraging year for the RX Golf Society, in that we didn't see attendance on outings reduced despite the economic climate," reported chairman Mark Barnard at the annual general meeting held on Wednesday, January 27.

*At the end-of-season 'fore-gathering' of golfers.*

"If anything, it was marginally increased, thanks to the support of associate members. These, who include ex-RX employees, are a key part of the society. We also welcomed some new people in the plant who came on selected outings."

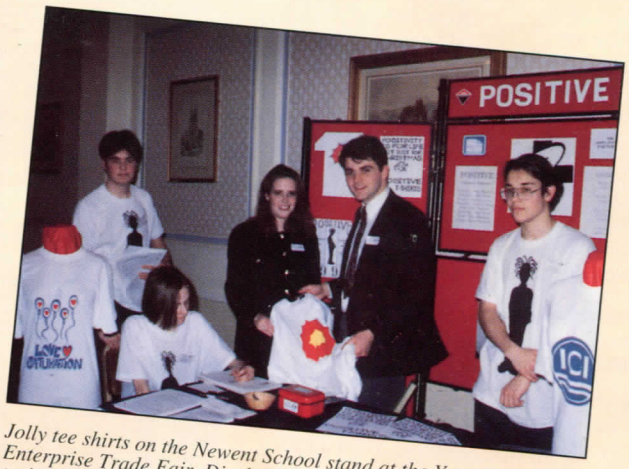
It was decided, however, to keep to the same number of outings for the 1993 season, and to consider whether or not to increase them next time round.

Dates and venues have been arranged as follows: 18 May at Hereford; 14 June at Lilley Brook, Cheltenham; 6 September at Rolls of Monmouth. The interplant event has been fixed for 16 August at Preston, Lancs.

Always a highlight – and the array of silverware certainly provided sparkle – was the presentation of trophies to the winners of the past season: *Spring Bowl* – Neil James and Roger Vine; *Denis Ede Vase and Scratch Cup* – Mark Barnard; *Powell Cup* – Neil James; *America Cup* – Andy Cosgrove; *Summer Cup* – Graham Beach; *Team Cup* – Brian Prosser, Steve Cooper and Graham Beach; *Round Robin* – Steve Cooper; *Order of Merit* – joint winners Mark Barnard and Neil James.

# A Positive success

A NEW company called Positive put its tee-shirts on display at the Young Enterprise Trade Fair, held at the Queen's Hotel, Cheltenham, on 3 February – and achieved second place out of 16 schools for presentation and product.




*Jolly tee shirts on the Newent School stand at the Young Enterprise Trade Fair. Displaying the shirt with the 'explosion tee' design are Michele Lawlor and Martin Brett.*

As we explained in our last issue, Young Enterprise is a Forest Education Business Partnership initiative which enables young people to form and run their own companies and so gain hands-on practical business experience.

Positive was formed by a group of sixth-formers from Newent Community School with capital raised by selling shares. Mitcheldean IPs Michele Lawlor and Martin Brett, who have given support as 'industrial advisers', helped to make the stand look professional.

Positive's designs were eye-catching and sales were brisk.

The company has now gone into pre-order, Martin tells us, customers ranging from ICI to Gloucester Rowing Club (who will be sporting their particular tee-shirts at Henley Regatta), and Positive has exhibited at the at the Three Counties Show at Malvern.

Martin and Michele are continuing to support the enterprise with weekly visits to the school, and they welcome enquiries from potential customers. Prices range from £5.50 to £8.50 and the service includes full design and screen printing, they tell us.

If you're interested, contact Martin (ext. 2394) or Michele (1270) and they will respond –with alacri-tee!