north wales

eprofile

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Bryn Terfel...

introduction to north wales profile

I was delighted to be asked to write the foreword for the North Wales Profile magazine.

As a proud North Walian, I need little excuse to sing the praises of this wonderful region. My work takes me all over the world but I have yet to find a better place.

It is undoubtedly a special and unique part of the country; the mountains and coastline and countless undiscovered gems are a joy to behold. Get off the beaten track and you can find yourself in countryside which is always magnificent, often magical.

If the walking, the castles, the mountains, the scenery, even the golf courses are not enough, then there's the culture - come to the Faenol Festival. We're celebrating our 10th anniversary in 2009.

I founded this festival for people to see and hear fabulous singers and musicians perform in the open air in a glorious venue between the Menai Straits and the mountains of Snowdonia.

It's a sight to behold, 12,000 people, with their candles, champagne and picnics, transfixed by the performances. This is certainly a living dream for the farmer's son from Pantglas, music and North Wales in perfect harmony.

That's the North Wales people know about, wonderful, beautiful and scenic but it's also a great place to work and do business.

It is a truly vibrant economic region, one that already provides a home for a host of international blue-chip companies and where the entrepreneurial spirit is celebrated and fostered.

There is effective business support available from local authorities and other sources in North Wales. It has enabled companies to develop and prosper, making the region an attractive and positive choice.

Another increasingly important facet of the North Wales economy is the growth of knowledge-based industries and this dynamic sector continues to benefit from a range of public and private sector initiatives with the aim of encouraging further investment by growth sector businesses.

And then there are our excellent transport links. By road, by rail, by air and by sea they have ensured that North Wales is linked into the UK economy so that companies, large and small, can thrive.

The A55 provides a swift route into the national motorway network and new air and rail links have made North Wales as accessible as anywhere in the country.

They will whisk you to the front door of your business in no time – and out the back there's that glorious outdoor playground.

But don't just take my word for it – come and see for yourself!

www.brynfest.com

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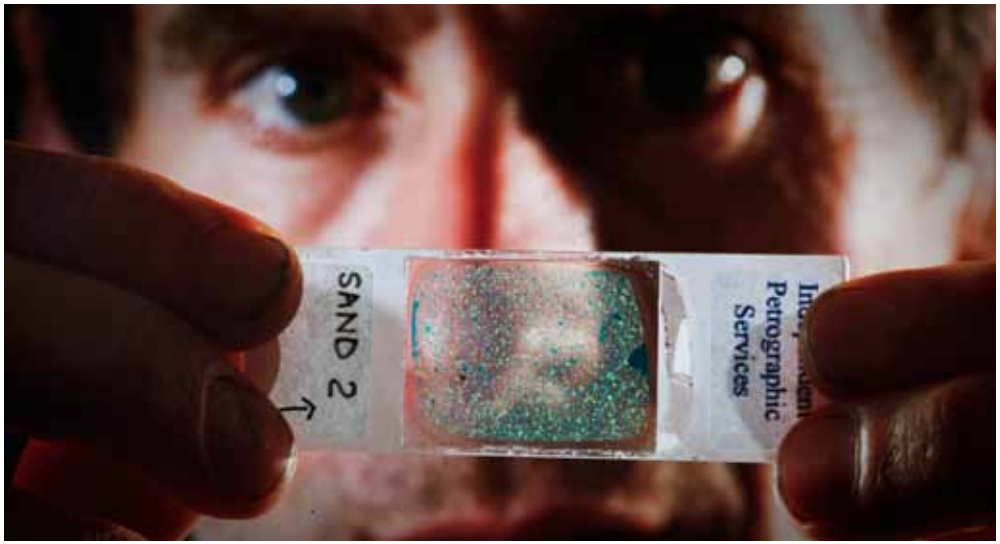

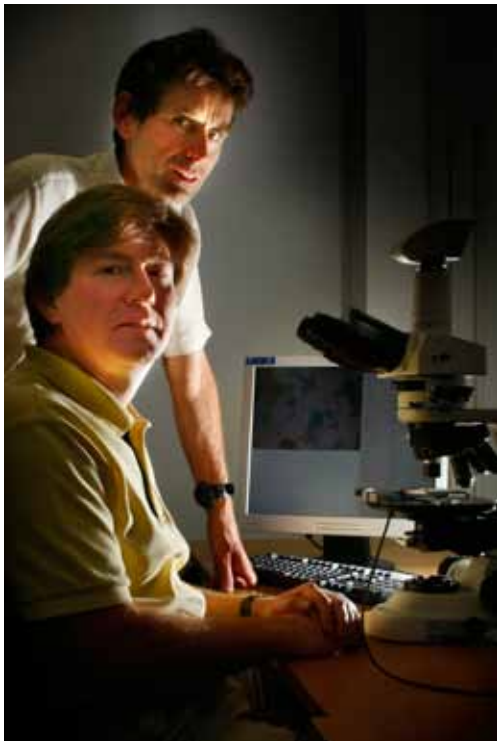

David Kitson, consultant petrographer, seated, and Dr Barrie Wells analyse samples at Conwy Valley Systems headquarters in Deganwy.

slide aces are rocking the world

There's little point talking to Conwy Valley Systems about their competition - they simply don't have any.

So specialised is Petrog, the software tool they've created for analysing rock samples for the oil industry, nothing like it exists anywhere else in the world.

Petrog enables geologists to accurately study, photograph and record the mineral content of minute, transparent slivers of rock.

It is currently used around the world by oil companies such as Shell and Total, to work out the best areas to drill for oil. Governments, universities and research bodies are also among the customers who beat a path to North Wales for it.

Petrog comprises a specially devised stepper that moves slide samples underneath high-powered microscopes, enabling the scientist to cover every grain. Specialist software records the results.

The device is the result of collaboration between computer analysts Dr Barrie Wells and Mark Gorst and geologist David Kitson who are based in Deganwy.

There they have been given technical and other support by Conwy Council whose Principal Development Officer Linda Ford says: "We see the geo-sciences as crucial to the area.

"A rural county like Conwy is probably not the place you might associate with this kind of hi-tech, cutting edge business operating in global markets but we do have a cluster of such operations here with people whose skills and expertise have made them world leaders in their field."

In the case of Conwy Valley Systems Ltd, the development of the stepper has put them well ahead of the game.

The £9,000 steppers are individually made at Bangor University electrical engineering department and the company sells around 30 each year while funding two PhD students at the university looking at other applications.

"It's not just oil industries, there's aggregates, coal, cement, all sorts of other people who could use it," says David Kitson.

In the meantime Petrog is helping the oil industry become more efficient at a time when the race to produce enough oil to satisfy world demand has never been tougher.

They can tell not only if there is oil there but whether they will be able to get it out. "It is so radical a departure from previous practice in petrography that it has no competition. On the contrary, we are in the position of creating a market which we can then sell into," says Barrie.

www.petrog.com

why size matters to our big bangers

The eyes of the world may have been on the re-creation of The Big Bang in Switzerland but here in North Wales it's happening every day.

Ok, not exactly the big bang … but some of the physics involved in scientific equipment made by Nu Instruments are the same.

The company is a world leader in the design and manufacture of mass spectrometers that assess the composition of everything from earth rocks to moon dust.

"Basically, everything is made of atoms and molecules each of which weighs a different amount," explains director Dr John Williams, right: "Using a mass spectrometer you can tell what is present and what isn't, they are very specific.

"They are used to establish the origins of rocks as diverse as moon dust, meteorites, deep sea sediments, gemstones and lavas."

These large plasma mass spectrometers take months to build and test, but the specifications are critical, hence the £400,000 or so price tag.

Commissioned by Oxford Professor Sir Keith O'Nions from Phil Freedman, a mass spectrometer specialist, the design and construction of this cutting edge technology led to them co-founding the company: a partnership which persists to this day as co-owners.

Nu Instruments' main customers are government and university earth and environmental science laboratories and some domestic nuclear power research departments.

"There is only one other manufacturer - a very large, $9bn turnover US corporation - and we compete pretty much on equal terms with them," says John.

"We were basically a one product company until 1999 when a second type was made, a bit like a Formula One version of the original.

"This is the Plasma 1700 Mass Spectrometer - the only instrument of its kind available in the world.

"At the moment, only one or two of these highly specialised instruments are sold each year at around £750,000 each.

"Turnover is now just under £5m. When we started it was essentially zero. For the first four or five years we were only making one or two instruments a year with two or three staff. Now we have 50 people here.

"Every product we make is entirely designed, constructed and tested in Wrexham.

"We've now developed a range for wider analysis of water, soil, medical, metals, electronics … and are selling 30–35 instruments worldwide a year. At around £250,000 each you won't find them in Sainsburys but they are popular."

Councillor Rodney Skelland, Wrexham Borough Council's Lead Member for Economic Regeneration, said: "Nu Instruments bring high quality employment and an internationally recognised product and we will continue to work alongside them and wish them success in the future."

John adds: "Wrexham Council have been very helpful as we have grown and the support we have received from them has been invaluable.

"We export 80% of what we make. You have to be a global business when you are working in our sort of numbers."

www.nu-ins.com

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contagious clubwear

The first thing that goes through your head watching a pole dancer 's athletic gyrations is probably not – I wonder who made her outfit.

But chances are that her skimpy costume was carefully cut out and sewn by a mother and daughter team from Flint.

Sheena and Billy – short for Kimberley – Parry run County Curtains from Holywell's Greenfield Business Centre but these days curtains account for only 10 per cent of their business.

The rest is taken up by the booming clubwear market – and that includes pole dancers and other exotic performers from Russia to Reykjavik to the Renault Formula One grid girls.

Sheena, 40, explains: "I had always worked in the rag trade, I had a really good apprenticeship – we had to be able to do everything."

When Contagious Clubwear got in touch, desperate for a rush order, County Curtains stepped into the breach and they haven't looked back, using their sewing skills to clothe – just – a whole new clientele.

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pole to pole

A man dressed in a voluminous yellow boiler suit can often be seen splashing in the chilly waters of the River Dee near Holywell.

But Graham Ogle hasn't fallen in so don't dial 999 or try to rescue him – he's just trying out his latest polar expedition suit.

Global warming has meant the pack ice that covers the North Pole is receding and that's bad news for polar bears and explorers – but good news for Graham.

His Deeside-based company, Brenig, is at the forefront of equipping expeditions to the harshest regions of the world from a small business unit at the Greenfield Business Centre where Graham and his machinists turn out their specialist clothing.

Trish Carlin, Senior Business Advisor with Flintshire County Council who have provided business advice and ICT support for Brenig, said: "Companies like this have risen from the ashes of the old textile industry on Deeside.

"This is a small business that is proving global changes are not beyond them providing they have the drive and the innovative ideas to succeed – we complement that with a business centre that provides an environment that encourages innovation and on-site support."

That innovation is illustrated by the development of the immersion suit because as well as the crippling cold, the snow, the ice and the winds - not to mention hungry polar bears – explorers face the increasing hazard of crossing open water.

Graham explains: "The melting of the ice means that cracks appear, usually only a few yards wide but often miles long, and these have to be crossed and that means swimming.

"In temperatures of -50C to get wet can be to die so we are producing immersion suits that allow you to swim across these gaps in the ice.

"Once on the other side you take the suit off, pack it away in the sled you've hauled behind you and carry on."

Normal polar suits aren't waterproof – for the simple reason it doesn't rain at the poles, it's too cold so it snows but getting wet is a killer in temperatures driven to -60C by the windchill.

It's highly specialised work and Graham says: "The clothing industry jobs have all gone to China now but they don't want to make hard wearing garments with a long life, nor small bespoke orders.

"But our gear has to work well because the users are putting their lives in our hands.

"Pen Hadow chose us for his solo trek to the North Pole; he said this gear is as good as it gets and better than anyone else and now he's used our stuff on five or six occasions and we're working with him on his next Polar trip."

Expeditions from all over the world have now worn Brenig gear, including the Indian Navy and the Royal Marines, but Graham has yet to visit the frozen wastes where his clothing is as much de rigueur as an Armani dress on Oscar Night.

"I don't need to jump into the Barents Sea to find out if an immersion suit is waterproof – the Dee is just as wet and as sea water is no lower than -2C then in January it isn't much warmer either."

www.brenig.co.uk

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island reaches for the sky

Anglesey Airport manager Sam Betley, right, with John Pinnington, Isle of Anglesey Council's Business Development Manager.

Until recently, to travel from North to South Wales in under an hour was an impossible dream.

Not any longer. The opening of Anglesey Airport/ Maes Awyr Môn in May 2007 has made that a reality with a 45-minute flight from the island direct to Cardiff.

Delighted by how quickly the service has taken off, Anglesey County Council, who operate the airport, are now looking for routes to other cities.

"Dublin is a possibility," says Jon Pinnington, Anglesey's Business Development Manager: "There has been some research by Bangor University to show that it could be viable in the right circumstances.

"And London would be our next choice. We would be very interested in talking to any airline about that route."

That the airport exists at all is thanks to an unusual partnership between RAF Valley, whose runway this is, the Welsh Assembly Government, who invested £1.3m in the project and subsidise the route, and Anglesey County Council who are responsible for it. Then there's Highland Airways who are the airport's sole airline.

"It's very unusual for a local authority to build and manage an airport," says Jon Pinnington." And it's been a great success story of co-operation.

"There's a strong businesses element to it. We always felt remote from our capital but thanks to this excellent link we've already seen inward investors coming to Anglesey from Cardiff."

At the airport itself, a scaled down version of any of its bigger cousins, Sam Betley, of ground operators Operon, is the man who ensures its smooth running.

His customers include the business community, Welsh Assembly Members, shoppers, NHS staff, RAF personnel and even students coming home for the weekend.

The airport may share its runway with the RAF, who also provide air traffic and fire cover, and passengers pass fighter planes sitting out on the tarmac as they board, but inside the terminal is as you would expect.

Beyond the state-of-the-art security check-in is a wireless broadband-equipped lounge allowing passengers to work right up to boarding.

Current figures show that 60 per cent are business passengers and 40 percent use it for leisure with many going on to catch long haul flights.

"I get passengers asking me all the time why we don't have flights to Dublin and London and Manchester so there is a demand there for future expansion," he says.

"One of the things I say is that most of those routes are available out of Cardiff, so why not go from here and catch a connecting flight. Compared to a £100 taxi to Manchester a couple can go from here from as little as £20 each way if they book in advance."

The size of the airport means a personalised service for all passengers, he says, followed by a flight with fabulous views of the island then the rest of Wales.

"There's a hostess on board and everybody gets free tea and coffee."

Any first class facilities?

"All our passengers are first class," he smiles.

www.angleseyairport.com

copper-bottomed plan

A Denbighshire company's world exclusive software is set to dramatically cut fuel consumption in the air industry.

Trace Technologies' design tool enables the installation of fibre optics to replace heavy copper wiring in aircraft.

On an Airbus, for example, it could mean a saving of up to a ton in weight, making the planes lighter and more fuel-efficient.

That could represent multi million pound savings for an industry that is fuel dependent

Trace Technologies' software package also has implications for car manufacturers, ship builders, railways and other fibre optic driven industries

Trace Technologies' software package also has implications for car manufacturers, ship builders, railways and other fibre optic driven industries.

"Fibre has been used for many years in military aircraft, not only because of weight saving but because it can carry high data rates," explains Geoff Andrews, above, Commercial Director of the company based at Technium OpTIC in St Asaph.

"Fibre also doesn't have a problem with high electro magnetic interference because it works by light rather than radio waves."

Nearly every function in an aircraft, from wing flaps to lighting to instruments, is controlled via copper wiring which could be replaced with fibre.

"By doing that you can save a lot of weight, which means you can either carry more fuel and go further or be more fuel efficient," says Geoff.

The software package emerged from a major European study, supported by Bae Systems, into using fibre optics in commercial aircraft.

Trace Technologies' applied for exclusive rights to the report's findings to develop an engineering tool that would design, test and install the fibre optic harnesses within the aircraft.

Individual licenses cost £15,000 each. With leading aircraft manufacturers employing several hundred engineering designers, Trace believe they will make their target of £5m within five years.

www.tracetechnologies.co.uk

we can help

Initial funding of £1/2m for Trace Technologies came from several sources, including the Welsh Assembly Government, Denbighshire County Council who provided a marketing grant.

They also won the £17,000 Technium Challenge Award for best business plan.

"Technium is a great place to be," says Geoff. "There are lots of similar small businesses here and we get lots of help in marketing our businesses."

Technium Optic (Opto-electronics Technology and Incubation Centre) has just celebrated five years at St Asaph Business Park.

One of eight similar centres throughout Wales set up by the Welsh Assembly Government, it hot houses small new opto electronics businesses within a secure and innovatively designed centre.

The companies are supported by a team of business and technical staff and have access to specialist laboratory facilities and communal networking areas.

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turbine boost for mountain men

A top supplier of mountaineering equipment is scaling new heights thanks to new markets opened up by the growth in health and safety legislation.

Once it was just people climbing rockfaces from Snowdonia to the Himalayas that would beat a path to the door of Llanberis-based mountain equipment manufacturer DMM but now it's just as likely to be tree surgeons and wind turbine engineers.

And that has contributed to 98 per cent of the firm's sales going outside Wales, an estimated 70 per cent of them abroad.

Managing director Richard Cuthbertson, left, says: "What we are finding is that more and more of our products are being used in above ground work.

"We are winning large orders for providing service contracts for offshore wind farms, in Denmark and Scandinavia in particular.

"In principal there is no great difference in climbing a sheer rock face and the concrete tower of a wind turbine – in both cases when you step off the ground your life is in our hands."

That's a welcome boost for a company born 20 years ago out of four friends' passion for rock climbing and the wild beauty of North Wales.

"We were all keen on climbing and liked the area and wanted to see whether we could have a decent life and climb," says Richard, a business studies graduate who was then working for Heinz in London.

In those days, climbing equipment was rudimentary stuff - nuts and bolts stripped from cars were used to anchor the climber's rope.

"We saw an opportunity. Everyone was making their own and struggling. If they had a bit more mechanical help they could do it much more easily. It wasn't rocket science."

And so the business was born - in a shed in Bethesda with a Black and Decker drill and a hacksaw.

Today it's worth £7m, and that figure climbs higher every year. DMM, based in Llanberis since 1986, employs 120 people, 90 per cent of whom are Welsh-speaking.

As well as technical safety gear and harnesses for climbers, around half of DMM's products these days are for the safety industry - everybody from tree surgeons to wind turbine engineers. Burgeoning safety legislation has meant more business.

But the heart and soul of the company remains in the Welsh hills.

"One of the wonderful things about Gwynedd is that if you love outdoor pursuits you've got the most fantastic coasts, mountains and cliffs," says Richard, who is still an active climber. "If you are somebody who doesn't want to be in your house playing on your computer or watching TV, there is so much to do here."

The company has had help from Gwynedd Council and the Welsh Assembly Government and Colin Morris, Gwynedd Council's principal Business Support Manager, says: "DMM are a flagship company operating in a business which is very appropriate to Gwynedd with its mountaineering traditions.

"But vitally they are a manufacturing company which sells to an international market which means they are bringing money and jobs into the area from around the world."

Their rural position is the ideal testing ground for their equipment and DMM employ some of Wales' finest climbers to work on and sell it.

"We do everything in-house and can guarantee its quality. Almost every product we make saves people's lives so safety is critical."

www.dmmclimbing.com

sky's the limit for welsh gold

It's 18 years since Bill Roberts, above, realised that while there wasn't enough gold in 'them there hills' to start a rush there was enough to make jewellery.

He snapped up Wales' last working mine, employed three miners to dig out the booty and set about making Celtic-themed jewellery.

The fact that the mine had provided gold for all the royal wedding rings for centuries was a big selling point.

And a naked golden lady as part of their advertising campaign has been an added attraction!

"We started off with twee dragons and hat pins for shops, gradually put some adverts in Sunday supplements and started to do quite a lot of direct mail business with Celtic designs. That's what kick-started the business," explains Bill's son Ben, now Clogau Gold's managing director.

Planning restrictions curtailed any further mining at St David's Mine, near Barmouth, but the business has grown faster than you can say bling.

"This year average jewellery growth is 0.4pc and is predicted to be 4pc over next three years," says Ben, who seems to have the Midas touch. "But we increased by 35 pc last year and just under 20pc this year. In two years we've doubled our business.

"Three years ago we were doing £2.8m, we're now on target for £7m in 2008, so it's been quite an upward cycle."

Over half of Clogau Gold's sales are to Welsh customers keen to snap up a piece of history while the rest is bought by people sold on the royal connection.

"We ran an advert in BA's in-flight magazine without the royal imagery and didn't do very well. The next time we paid for the rights to use the royal image and it went to number one jewellery product in their magazine," says Ben.

Nowadays, with the precious metal in short supply, each of the beautifully crafted pieces contains just a small amount of Welsh gold. But Ben makes no excuses for that.

"Last year we had eight years' supply left so we have a decision to make whether to stop putting Welsh gold in our jewellery, which would be a shame as it's a great selling point, or we look at re-opening the mine."

That requires a lengthy application to the Crown Commission so, in the meantime, Ben is eking out their reserves while trying to satisfy increasing demand.

"The beauty is that it makes people realise it's a finite resource," he says.

Ben has big ideas for Clogau Gold and hopes to be involved in the 2012 Olympics: "As the last working British gold mine it would be nice to do something with the gold medals."

North Wales singing star Duffy is also in talks with the company with the possibility of designing a piece of jewellery.

"We approached Duffy and she'd heard of us, so we're hoping to do something for Christmas with her," Ben says.

Clogau Gold are based in Denbighshire at Bodelwyddan Industrial Estate and, while the jewellery is now made abroad, North Wales is without doubt the only place to be.

Denbighshire County Council have provided advice and support and the Welsh Assembly Government (WAG) have given them £15,000 for a computer system modification

WAG also helped the company to take part in an exhibition in Cannes, in the South of France.

"That was with the intention of doing business with the duty free world and we came back with three big customers," he adds.

"We thought this business had a glass ceiling, that we would get to a critical mass and not be able to do more but we've been proved wrong."

With or without a new seam to mine, the future looks very shiny and bright for Clogau Gold.

www.clogau.co.uk

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why tony's just loco about thomas

It took more than two years, a lot of persistence and some luck but an Anglesey company is now licensed to make the ultimate locomotive.

Creating a replica of the world famous Thomas The Tank Engine had been Tony Martin's dream since taking over Cromar White (CW) in 2002.

But it didn't come easy. Despite a successful track record in manufacturing miniature railways and selling to an international market, pinning Thomas down proved tricky.

"We weren't getting anywhere because the licensees kept changing," explains marketing director David Dean. "It was very frustrating."

Used to dealing in pyjamas and toys, a £25k package of three engines weighing several tonnes was a new concept in the Thomas The Tank Engine spin-off market.

Eventually, with the license in the hands of HIT Entertainment, who happened to be at the same trade fair as Tony and David, a deal was struck. Licenses for the UK, Germany, Holland, Italy, Scandinavia and the United Arab Emirates quickly followed. With on-going negotiations for Australasia, CW's Thomas engines are going full steam ahead towards a global marketplace.

"We've sold three in the US where we are still marketing them," says David. "That may not sound a lot but now we're coming up to Christmas, interest is really growing for them.

"They take six weeks to make. The US ones are made there by a company we work with in California. All the others are made here on Anglesey."

And Anglesey, which Tony moved the business to from the South Coast of England six years ago, has proved to be the ideal place for the enterprise.

Currently much of the production work is contracted out but little goes off the island. Steel, hydraulics and assembly workers are all local. Painting is done in Caernarfon just over the Menai Strait.

Now, thanks to a grant from the Welsh Assembly Government and a grant and business help from Isle of Anglesey County Council, a purpose-built workshop will be created. Busy order books mean the company now needs to employ permanent staff and turnover has grown from £30,000 in 2002 to £750,000.

But children's favourite Thomas is just one aspect of the business which now has two divisions.

Cromar White, started in 1946, has traditionally supplied miniature railway owners and enthusiasts with the means to build and maintain their own layouts.

"We can provide everything they need whether it's 100 screws or 3,000 foot of track," explains David. "Just recently we've designed and built carriages that are suitable for disabled people as many of them are owned by local councils.

"A lot of people want American locomotives so we work with Roll Models in California, who also make our US Thomas."

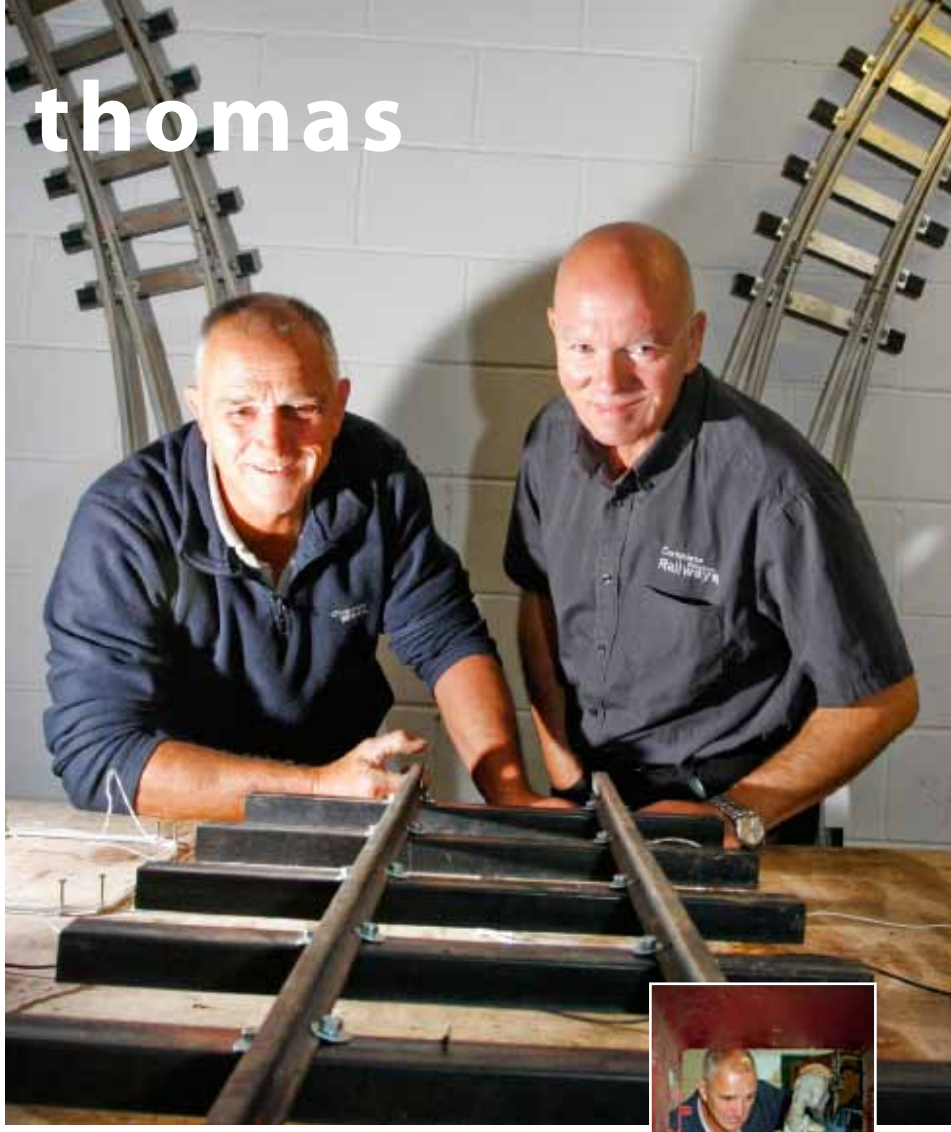
In 2005 CW's sister company Complete Miniature Railways was started. "It does what it says on the tin," says David. "We can build a whole model railway from the ground up with the tracks or engines coming from Cromar White."

As well as wealthy parents with very lucky children, Complete Miniature Railways' clients also include shopping malls, who use the company's Promo Locos to run around stores.

"Tony's recently been in Egypt setting one up for President Mubarak's wife who has been creating a public garden," says David. "We're also in negotiation with Toys R Us and their Manhattan store which is so big it even has a Ferris wheel inside."

Once upon a time British-made trains were sold around the world. On Anglesey, Cromar White are fast reclaiming that tradition for themselves - in miniature.

www.cmrailways.co.uk



Main picture: Tony Martin and marketing manager David Dean, right, on the right line with Thomas
Right: Tony at work
Below right: David with a loco ready for delivery

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