

### Project Case Studies

SAS chilled ceilings and architectural metalwork

Page 5 & 12



### The Marsh Brothers

Gavin and Jevon

Page 6



### Meet the Team...

Who's answering the Insider's questions in this issue?

Page 11



# INSIDER

Metal Ceilings • Partitioning • Room Comfort • Architectural Metalwork

April 2008 Issue 6

## Extraordinary 2008 Price Increase

Recent articles in the press have been debating the potential extraordinary increase in steel prices.

Having recently concluded negotiations with our steel suppliers, SAS International have advised all customers that an expected raw material price increase has been realised commencing on the 1st April 2008.

Reasons cited by the steel mills are: -

- Cost of iron ore has increased in excess of 65%
- Other cost increases in coking coal, scrap steel, freight & energy
- Supply allocations due to limited 'foreign' importing into Europe from Asia.

The net result of the applied steel cost increase is: -

- 13% increase on metal tile product
- 20% increase on steel suspension grid, profiles and bracketry

Due to current material stockholdings we are able to delay the impact of the increase until the 1st July 2008 for metal tiles and 1st May 2008 for grid, profiles and bracketry. This of course is for product despatched and invoiced - not order date.

It is advised that aluminium is likely to follow and we are predicting a 9% increase to our products commencing 1st July 2008.

If you have any queries, please do not hesitate to contact John Bullock [jbullock@sasint.co.uk](mailto:jbullock@sasint.co.uk).



## SAS Ireland Stocks Up

With the Irish SAS office fully established commodity SAS product is now available direct to the Irish interiors market.

This affords the opportunity for local contractors to deal direct with the local SAS office collecting products from the warehouse located in Unit 228, Block C, Blanchardstown Corporate Park, Dublin 15, Ireland, Tel: +353 (0)1 899 1134, Fax: +353 (0)1 899 1753.

Various tiles types grid and trims are all in stock now.



## “Syteline” Roll Out Begins

For two years SAS have been developing a group wide internal software package to improve processes and efficiency for our customers.

Project CUEBS became the driving force to create one company system rather than using existing SAS systems Micros and KMS. This eradicates duplication across SAS sites meaning many services to customers can be improved.

The new system is called Syteline and is currently rolling out across the company.

Many SAS staff from various areas of the business have been involved on this software development.

Look out for the new Syteline System.



## Every quarter a representative from an area of the SAS Group reports on Company activities, important news and what to look out for in the forthcoming quarter.

While many sections of the press seem to be talking the UK into recession, the outlook for SAS in 2008 looks very buoyant. This is driven by entering new markets, new products, new territories and continuous investment.

Not everybody has been to visit Unit 33, the new home of SAS Modular Solutions and you should. SAS are attempting to integrate the provision of modular, offsite fabricated mechanical services with the inclusion above ceiling walls, all fully fire stopped and sealed. This is something never attempted before, putting it into context this is a start up business which will grow from zero revenue to £15m in its first year, something an individual could work a life time to achieve.

With the completion of Apollo Park's extension and recent commission of the first two roll forming lines at Bridgend, SAS are set to enter into supplying the interiors industry with many new products. Apollo Park will be offering a totally bespoke door manufacturing service as a result of investing £4m in new plant and equipment.

This is a product group SAS have had to decline to service in the past and have an aggressive plan to grow over the next 5 years. Bridgend will be producing Tee Grids, C-profiles and primary suspension channels, all items previously bought in.

### Mark McElhinney

After a record year in 2007, we start this year again with high levels of opportunity across all sectors and regions. It is a fact that 2008 will deliver the greatest volume of commercial office space to the market than ever seen before. The good news for SAS is that product of some description will be required. So we hope 2008 will be as good, if not better, than 2007.

I would like to thank you all for your purchases from our No.1 retail account John Lewis during the course of last year. They have recently reported record profits for the year, and are planning more new stores!

### Phil Smith

The first quarter of 2008 has been a busy time for all. From a marketing angle many long running projects are coming to fruition. The SAS metal ceiling system brochure has been completed and is currently undergoing proof reading before it goes to press. Despite delays you only need to see the detail and information it contains to appreciate how good it is. Feedback we have already received says it will be hugely influential in supporting SAS products sales. It replaces close to 20 brochures.

Well done to Malcolm Stamper who has project led since early page layout ideas. His attention to detail has been vital. Josh Hillman and all that have contributed need to be acknowledged too, a great job in difficult circumstances.

### Andrew Jackson

At a time with steel prices increasing rapidly, producing in house will allow SAS to provide a more cost effective package to end users.

HCP have been battling to obtain recognition within the Radiant Ceiling marketplace which is predominately hospitals and schools. Due to the effort put in by Robin Dixon and his team, SAS are specified on many major projects through the UK. By the end of 2008 the sales of Radiant may be approaching in value that of HCP's traditional market, trench heating. This has added benefits because Radiant is 100% manufactured in house.

Though a small department in people numbers, Export punches way above its weight in contribution to sales of ceilings and special metal work. For the past 10 years Ireland has experienced a construction boom, and with more focused effort one of our closest neighbours is still proving to be a good hunting ground. Bouygues (France) one of the world's largest contractors has completed several major projects and is keen to use SAS products on all major projects. This will open up opportunities which would not exist unless SAS had its own Paris based office and support staff.

While others may worry about what the future may bring, SAS can't wait that long. For those who have been willing to put in the effort and take the risk 2008 is going to be a busy year.

Our presence in Dublin is beginning to make headway in demonstrating value. Cathal McGuinness is now concentrating 100% on Ireland due to the growing demands and work load. Bob James has taken over Scotland. Bob, with his previous dealings with the Scottish professionals, and a great understanding of the local culture will, I am sure, continue the good work we have witnessed to date.

Moving into the second quarter of the year, we continue to focus on further erosion of the mineral fibre market. Generating revenue in regions historically un-associated with metal ceilings and hunting down opportunity in the architectural metalwork arena.

SAS Room Comfort and Architectural Metalwork are on the way. Both will join the Metal Ceilings brochure in an SAS specification binder.

On the sidelines the SAS Ireland intro flyer is complete and the CPD's are dominating our face to face meetings with specifiers.

Trevor Amor has been busy photographing SAS projects in Ireland and the number of case studies available for various applications is increasing.

We are now in a position to be more pro-active with our target markets.

The first few months of 2008 have seen the demand on the Maybole for large projects reduce from 2007 but this has been replaced by high volume of smaller orders so the factory continues to be very busy.

On the 19th February 2008 the Management made representation to the Scottish Government at the infamous Scottish Parliament (money well spent even just for the architecture alone!) via the Enterprise Minister, Jim Mather, looking for support to the business for our extension plans. The meeting went very well with the Minister taking on board our

Project Management has experienced a quiet start to the year. However, tendering activity is running at a high level with some major projects in the UK and Ireland under consideration.

There is increasing interest from clients and developers in the Integrated Service Modules (ISMs) market, and we are currently in negotiations with Krantz of Germany to extend the testing and R&D of our products to meet this demand, and assist us with the technical performance of the units. Hopefully the next major project to be awarded will be the office refurbishment at Greyfriars, Bristol by the Midas Group with a value of over £1.5 million.

Two specialist architectural metalwork projects were completed in the quarter; the Maggie's Centre project adjacent to the Charing Cross Hospital in Hammersmith where PM undertook the internal/external soffit linings and the roof finishes; and the walk through internal wave ceiling featured at the Rendezvous Casino in Springfield Quay, Glasgow for London Casinos International.

Avanti have recently supplied a number of interesting & prestigious projects including Chelsea FC's new training ground in Cobham and Cambridge Antibody Trust in Cambridge. Avanti have also won their largest order for Unity door/frame sets and glazing frames at Audi UK/Sytner in West London.

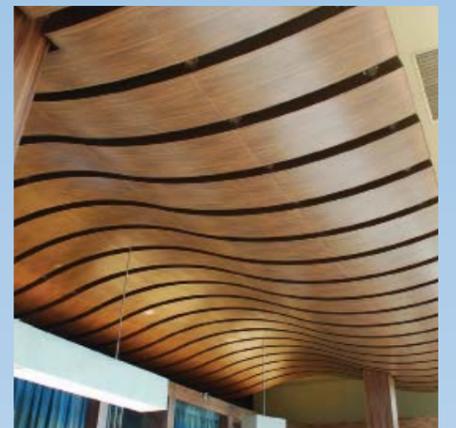
The order for Chelsea's training ground was £120,000 with a combination of the Solare frameless glazed system both fire rated and non fire rated. Avanti were involved at a very early stage with the architect AFL in Manchester.

The Avanti Unity product is unique as the only expandable door and glazing frame system suitable for plasterboard, blockwork or brickwork openings.

Although constructed from aluminium the system has up to a one hour fire rating. It was these features which enabled Avanti to secure the specifications and orders for the Cambridge Antibody Trust office and laboratory fit-out and the Audi UK/Sytner project in West London.

issues and promising a thorough review of our case within the next few months. In tandem with this review the Company has also instructed a structural engineering company to assess the suitability of the proposed development site due to the known land conditions that the existing factory was built upon. Over the next few months we have BSI re-assessment audits for both ISO 9001 and 14001, so this, the introduction of the new Group wide computer system, planning towards ISO 18001 and the on-going demand for bespoke specialist metalwork means that all employees at SAS Maybole are going to be very busy.'

### John Gemmell

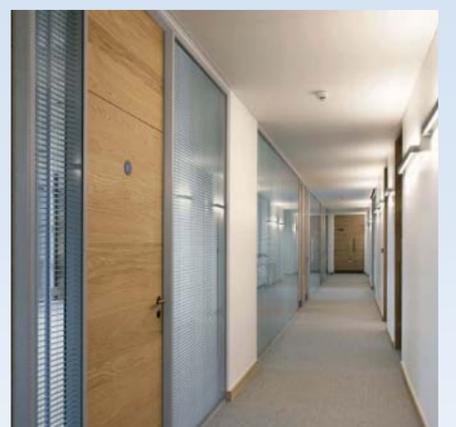


Alea Casino, LCI, Glasgow

Project Management welcomed the return of Duncan Wisely on a part time basis to assist with the technical aspects of the chilled ceilings, comfort cooling and comfort heating projects; and Mohan Vydianathan also joined the PM team as management accountant.

### David Bland

The Audi UK/Sytner project is the largest order to date for this product with approximately 250 door/frame sets and glazing frames on the shell and core and subsequent fit-out.



Cambridge Authority Trust

### Rob Wood

# Architects for Aid



The start of 2008 has been a busy one as A4A celebrated its 2nd birthday on 3rd January. While we are proud of all our accomplishments, it's onward and upwards from here! On the homefront, we've said goodbye to 3 interns who have moved on to other adventures. We've welcomed some new additions to our team. In the field, Sam Woodbridge has returned to Pakistan to oversee the progress of work with Muslim Aid, and two new A4A architects are in India. New projects include two ventures in Uganda (a hospital and a village) and a school in Sierra Leone.

A4A project manager Sun Ozhan, with architect Daniel Worthington travelled to India in February 2008 where A4A have been collaborating with UK NGO 'Life on Lens' and Indian NGO 'Land for Tilers Freedom' (LAFTI). Designing and constructing a flagship preschool and a community centre for children and grandparents from 25 villages in the district of Truvarur, Tamil Nadu is a challenge.

Victims of the social caste system, they endure extreme prejudice due to their ancestral history. The proposed school in the village of Thalair can give young Dhalits in the area the opportunity of an education, a privilege previously denied. The proposed community centre is aimed to improve the quality of life for all local residents, especially the elderly who have suffered a lifetime of abuse.

A4A and Linedota architects are currently developing the initial drawings for a primary health care clinic (including maternity functions), nursery & primary school, and guest houses. Watch this space for further development...

Without the continued support of sponsors like SAS we would not be able to contribute to worthy projects like these. Thank you for allowing us to provide free expertise to projects that make such a big difference.

A4A conducted a feasibility study last year, now Sun has produced some drawings she and Daniel will assist with the construction phase. The intended beneficiaries are the traditionally shunned members of society known as the "Dhalits".

In Uganda, A4A was approached by The Kyomya East Village Sponsorship Project to assist with their need to address the lack of services and infrastructure in the village. Supporting more than 250 orphans, and 650 local people there are currently no basic services in the village such as running water, sewage or electricity.



**Lisa Dayanandan**  
Office Manager, Architects for Aid

[www.architectsforaid.org](http://www.architectsforaid.org)



The nearest clinic is a 3-4 hour walk away and the nearest school is a 4 mile walk. In August 2007 A4A Architects conducted a site visit including community consultations to determine the next steps.

# New Signage and Tent for Bridgend



SAS Bridgend have been refurbishing some of their facilities as first reported in Issue 4.

Since taking over the ex-Fiona Footwear Factory. The building has undergone significant change. One of the final touches has been to put a huge SAS international logo on the side of the factory.

Recently bad weather and wind took its toll on the Bridgend tent causing significant damage as you can see in the picture. It is now undergoing some refurbishment too.

# SAS Sponsor Group 32



HCPT is a charity which organises Pilgrimage holidays each Easter to Lourdes, France for people of all ages and abilities. Each year around 8000 people travel to Lourdes in small groups, Group 32 is just one of those groups. This year, Group 32 will be taking 9 children, accompanied by 2 nurses, 12 helpers and a group leader.

Our trip begins on Easter Sunday. Once in Lourdes we stay in a family run hotel. During the day we go on excursions visiting several holy places such as the grotto (where Mary first appeared to Bernadette) We also take trips into the mountain, beach and spend time on the common. On one specific day all HCPT groups meet at the underground basilica for mass. We also have a few themed "fancy dress" and formal nights. Towards the end of the trip we participate in the HCPT torchlight procession outside the basilica built on top of the grotto.

Each helper pays £555 to go to Lourdes; all volunteer for HCPT and provide care and friendship for the children throughout the Lourdes trip. Each helper actively raises money throughout the year to cover the children's costs. This year I held a charity ball and also a football tournament, both were very successful and raised over £1000.

This year Group 32 was in serious need of a revamp. As more groups are forming and bringing with them their own identities we decided we needed to step up. Group 32 clothing an excellent way for the children to feel special and part of something, they also provide practical use of identifying each other in the crowded streets of Lourdes. SAS International have been kind enough to sponsor our group and pay for our clothing, which will be used for years to come. Group 32 now has hooded jumpers, rain jackets and even polo shirts with our group logo "happiness is a group called 32". On behalf of group 32 I would like to thank SAS International for their support.



**Claire Butler**

# Steve Burlton Completes Reading Half Marathon

After weeks of agonising training, early mornings and limited alcohol consumption Project Management's Steve Burlton crossed the line in 2 hours 2 minutes and 2 seconds. Steve has so far raised £700 for a children's charity in association with 2Ten FM.



# 370 M&E Specifiers complete BSJ SAS CPD Module

For the first time in November 2007 SAS published a CPD Unit in the BSJ (Building Services Journal) magazine.

Circulated to all CIBSE members the BSJ is one of the best M&E focussed publications in the construction industry. 370 people completed the CPD answering a number of questions that were required to gain the CPD credits.

The CPD system is used by a variety of professionals across various industries. It has been instrumental in ensuring that people are kept updated with the development of construction products, changes in regulations (such as Part L) and approved working practises and processes such as prefabrication and service integration.

Architects and Mechanical and Electrical Consultants collect CPD credits (often in required fields) and this contributes to their membership of the RIBA (Royal Institute of British Architects) or CIBSE (Chartered Institute of Building Services Engineers.)

SAS International offer six CPD options to both specifiers including accredited factory tours.

cpd collection 89

**Chilled ceilings, chilled beams and integrated service modules – alternative approaches to cooling**

Welcome to our regular series of CPD modules, designed to help you broaden your professional knowledge while you work. This module covers the use of chilled ceilings, chilled beams and integrated service modules as alternative approaches to cooling. It is sponsored by SAS International.

**This free Building Services Journal reader service is designed to allow you professional skills and enhance your professional qualifications to an appropriate and acceptable level.**

**Working in association with London South Bank University, Building Services Journal has devised these distance-learning modules to help you meet the CIBSE CPD requirements. All you have to do is read the text supplied here (pages 88-92) and submit the multiple-choice questions on page 92. Then complete your personal details on attached card for our award-winning CPD team for assessment.**

**CIBSE has reported [1] that the market for chilled ceilings and beams grew 35% in 2006, with an increase of 40% expected in 2007 and further rises predicted in 2008 and 2009. One of the main drivers in the coverage is the amendment to Part L of the Building Regulations, in the requirement for a 20% reduction in CO<sub>2</sub> emissions for mechanically cooled, non-domestic structures, compared with 2002 standards. The challenge of attempting to meet and balance the requirements of regulation and performance may be met through the application of direct water-based cooling systems.**

**Comfort and productivity factors, combined with energy and environmental concerns and improvements in building methods, have generated a demand for alternatives to conventional air-conditioning systems.**

**Chilled ceilings, chilled beams and integrated service modules (ISM), also known as multi-service chilled beams (MSCBs), can provide a quiet, energy-efficient and comfortable cooling alternative. This article will provide an overview of the current market and technology of these systems.**

**Chilled ceiling and beam systems** Traditionally, cooling in the UK built environment is provided by centrally supplied air, refrigerant or water systems. Chilled ceilings, chilled beams and ISMs use

**Market overview** As part of the Energy Performance of Buildings Directive (EPBD) certification or labelling is due to become a requirement in the UK in April 2008. And with many large corporations having corporate social responsibility (CSR) policies in place and others keen to be seen to be cutting their carbon emissions, energy labelling is likely to act as a driver for change.

Another reason for the increase in recognition of this type of technology is the growing trend for off-site prefabrication. Building services can be integrated and tested in a factory-controlled environment, leading to on-site efficiency in installation and a reduction in on-site wastage and storage requirements. Costs and delivery can also be planned with increased certainty.

**Active chilled beams incorporate a ducted air supply. As conditioned air is introduced and passed through the chilled beam it reduces water air (from the room) through the cooling element (Figure 1). This air is then cooled, mixed with the conditioned air and returned to the occupied space.**

**Chilled ceiling systems are durable with lifetimes of 25 years and can incorporate acoustic absorptive panels in the rear of the ceiling tile. These are usually square or rectangular, but can be manufactured in a range of shapes and sizes to incorporate particular room or building requirements.**

**A chilled beam also features a copper cooling element at its core. Aluminium heat-transfer fins are bonded to this element, increasing its surface area and cooling potential. The fins are spaced further apart than, for example, a fan coil, to allow the air to pass across the coil by natural convection. They do not have fans or blowers and can provide cooling with relatively high water temperatures. Suspended directly from the soffits, a beam is then either covered by a stand-alone metal casing or installed above a suspended ceiling system that incorporates a large open area for the air to pass through.**

**Rather than radiation, chilled beams use convection to deliver the cooling. There are two different types of chilled beams – active and passive. Passive chilled beams rely on a recirculating element and chilled, before returning downwards to provide cooling to the space below. The higher the temperature of the air, the more air that passes over the chilled beam and, potentially, the higher the amount of cooling that is provided.**

**Active chilled beams incorporate a ducted air supply. As conditioned air is introduced and passed through the chilled beam it reduces water air (from the room) through the cooling element (Figure 1). This air is then cooled, mixed with the conditioned air and returned to the occupied space.**

**Integrated service modules** An ISM or MSCB is an architecturally designed metal casing that incorporates a chilled beam, heatlines and other building services. Also suspended from the soffit, the chilled beam component can be either active or passive, and the ISM designed to meet specific aesthetic and performance requirements.

**Current designs for ISMs involve flat, curved or faceted metal casings, and very depending on project needs. The design plays a critical role in the performance of the chilled beam, and much care can be manufactured and independently tested to ensure operational capabilities.**

**Along with lighting, the integration of building services is paramount and while the list of services that can be incorporated is endless, the most common services incorporated within an ISM are: fire alarm and smoke detection; sprinkler systems; voice, data and power cabling; speakers and public address (PA) systems; and passive infra-red (PIR) sensors.**

**Performance** The design and cooling requirements of a building will determine which water-based cooling method is most suitable. In the case of a well-designed office building with an occupancy of one person per 30-42 m<sup>2</sup>, the cooling load could be about 50 W/m<sup>2</sup>. This is due to the heat given off by the occupants, lighting and equipment and may be broken down as follows [2]:

- 10 W/m<sup>2</sup> for occupants
- 12 W/m<sup>2</sup> for luminaires
- 25 W/m<sup>2</sup> for general office equipment.

Chilled ceilings can achieve outputs in the region of 40-60 W/m<sup>2</sup> and are adequate to cope with the above cooling loads. However, depending on the orientation of a building and the formation, solar heat gains may add to the cooling load. To combat this, a chilled

90 cpd collection

**Chilled ceilings, chilled beams and integrated service modules – alternative approaches to cooling**

Welcome to our regular series of CPD modules, designed to help you broaden your professional knowledge while you work. This module covers the use of chilled ceilings, chilled beams and integrated service modules as alternative approaches to cooling. It is sponsored by SAS International.

**This free Building Services Journal reader service is designed to allow you professional skills and enhance your professional qualifications to an appropriate and acceptable level.**

**Working in association with London South Bank University, Building Services Journal has devised these distance-learning modules to help you meet the CIBSE CPD requirements. All you have to do is read the text supplied here (pages 88-92) and submit the multiple-choice questions on page 92. Then complete your personal details on attached card for our award-winning CPD team for assessment.**

**CIBSE has reported [1] that the market for chilled ceilings and beams grew 35% in 2006, with an increase of 40% expected in 2007 and further rises predicted in 2008 and 2009. One of the main drivers in the coverage is the amendment to Part L of the Building Regulations, in the requirement for a 20% reduction in CO<sub>2</sub> emissions for mechanically cooled, non-domestic structures, compared with 2002 standards. The challenge of attempting to meet and balance the requirements of regulation and performance may be met through the application of direct water-based cooling systems.**

**Comfort and productivity factors, combined with energy and environmental concerns and improvements in building methods, have generated a demand for alternatives to conventional air-conditioning systems.**

**Chilled ceilings, chilled beams and integrated service modules (ISM), also known as multi-service chilled beams (MSCBs), can provide a quiet, energy-efficient and comfortable cooling alternative. This article will provide an overview of the current market and technology of these systems.**

**Market overview** As part of the Energy Performance of Buildings Directive (EPBD) certification or labelling is due to become a requirement in the UK in April 2008. And with many large corporations having corporate social responsibility (CSR) policies in place and others keen to be seen to be cutting their carbon emissions, energy labelling is likely to act as a driver for change.

Another reason for the increase in recognition of this type of technology is the growing trend for off-site prefabrication. Building services can be integrated and tested in a factory-controlled environment, leading to on-site efficiency in installation and a reduction in on-site wastage and storage requirements. Costs and delivery can also be planned with increased certainty.

**Active chilled beams incorporate a ducted air supply. As conditioned air is introduced and passed through the chilled beam it reduces water air (from the room) through the cooling element (Figure 1). This air is then cooled, mixed with the conditioned air and returned to the occupied space.**

**Chilled ceiling systems are durable with lifetimes of 25 years and can incorporate acoustic absorptive panels in the rear of the ceiling tile. These are usually square or rectangular, but can be manufactured in a range of shapes and sizes to incorporate particular room or building requirements.**

**A chilled beam also features a copper cooling element at its core. Aluminium heat-transfer fins are bonded to this element, increasing its surface area and cooling potential. The fins are spaced further apart than, for example, a fan coil, to allow the air to pass across the coil by natural convection. They do not have fans or blowers and can provide cooling with relatively high water temperatures. Suspended directly from the soffits, a beam is then either covered by a stand-alone metal casing or installed above a suspended ceiling system that incorporates a large open area for the air to pass through.**

**Rather than radiation, chilled beams use convection to deliver the cooling. There are two different types of chilled beams – active and passive. Passive chilled beams rely on a recirculating element and chilled, before returning downwards to provide cooling to the space below. The higher the temperature of the air, the more air that passes over the chilled beam and, potentially, the higher the amount of cooling that is provided.**

**Active chilled beams incorporate a ducted air supply. As conditioned air is introduced and passed through the chilled beam it reduces water air (from the room) through the cooling element (Figure 1). This air is then cooled, mixed with the conditioned air and returned to the occupied space.**

**Integrated service modules** An ISM or MSCB is an architecturally designed metal casing that incorporates a chilled beam, heatlines and other building services. Also suspended from the soffit, the chilled beam component can be either active or passive, and the ISM designed to meet specific aesthetic and performance requirements.

**Current designs for ISMs involve flat, curved or faceted metal casings, and very depending on project needs. The design plays a critical role in the performance of the chilled beam, and much care can be manufactured and independently tested to ensure operational capabilities.**

**Along with lighting, the integration of building services is paramount and while the list of services that can be incorporated is endless, the most common services incorporated within an ISM are: fire alarm and smoke detection; sprinkler systems; voice, data and power cabling; speakers and public address (PA) systems; and passive infra-red (PIR) sensors.**

**Performance** The design and cooling requirements of a building will determine which water-based cooling method is most suitable. In the case of a well-designed office building with an occupancy of one person per 30-42 m<sup>2</sup>, the cooling load could be about 50 W/m<sup>2</sup>. This is due to the heat given off by the occupants, lighting and equipment and may be broken down as follows [2]:

- 10 W/m<sup>2</sup> for occupants
- 12 W/m<sup>2</sup> for luminaires
- 25 W/m<sup>2</sup> for general office equipment.

Chilled ceilings can achieve outputs in the region of 40-60 W/m<sup>2</sup> and are adequate to cope with the above cooling loads. However, depending on the orientation of a building and the formation, solar heat gains may add to the cooling load. To combat this, a chilled

## SAS Brochure for Dublin

As reported on the front page SAS Ireland are properly up and running. To introduce the SAS team and products to the market a brochure is currently being produced.

Highlighting recent project success and the additional service SAS can provide it will support specification and commodity sales efforts across Ireland.



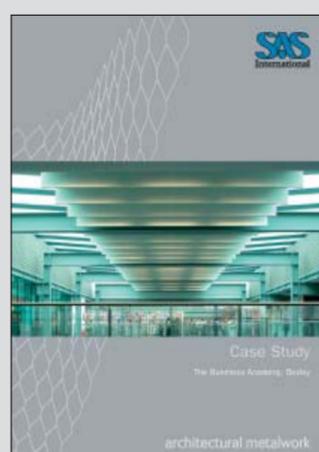
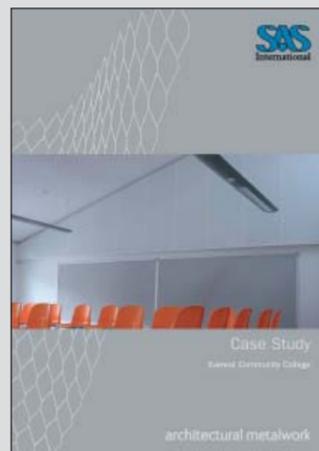
## Insider Feedback

Having now been established for over a year the SAS Insider is slightly changing its look. Keeping the design fresh is important to keep readers interested. Please let us know if you have any ideas for the SAS Insider.

In every issue we try and ensure the entire group, including every facility, is represented fairly and accurately. If you as a reader or contributor to the Insider feel that you have a story or picture to contribute please send it to Andrea Nightingale, Marketing department, Reading.

## New Case Studies 2008

SAS Case Studies continue to develop, referencing recent and notable past projects. New studies include acoustic wall panelling, baffles, ISMs and System 600 acoustic lighting rafts.



## Expansion of SAS CPD Programme

In the last issue we reported that the SAS CPD programme in 2007 had been a great success presenting to 170 people in ten months. With demand for SAS product information increasing the CPD programme has been expanded.

SAS have signed up to the RIAI (Royal Institute of the Architects of Ireland) CPD Programme and the CIBSE CPD network. Being a part of such recognised bodies means that both architectural and mechanical and electrical specifiers can collect CPD credits to utilise for their professional qualifications.

John Staunton and Malcolm Stamper will be presenting these CPD's throughout the year with technical sales executives. 20 CPD's have already been booked before the end of May 2008.



# Jobcentre Plus, Bournemouth

As part of the Government's Jobcentre Plus programme by the Department of Works & Pensions (DWP), Scott Brownrigg were commissioned by Land Securities Trillium to design a new 28,450 sq ft office building in Bournemouth.

The building merged two Jobcentre Plus offices into one modern, three-storey building, which features an active chilled beam system from SAS International. The facility was designed on an unusually shaped site and incorporates sustainable initiatives in order to achieve the highest possible "BREEAM" rating.

"The chilled beams supplied through SAS provide an ideal cooling solution" commented Mark Longland, the Jobcentre Plus Mechanical Engineer for M&E Consultants WSP. "The system is energy efficient and quiet making it ideal for a modern office type environment. SAS were able to manufacture a bespoke ceiling system which met the strict design and branding requirements the DWP has for all its Jobcentre Plus buildings."



Active Chilled Beams provide comfort cooling

A solution utilising SAS active chilled beams to provide room cooling and fresh air was specified. SAS undertook the design, manufacture and co-ordination of the suspended metal ceiling system to meet the DWP's strict fit-out requirements.

A hybrid ceiling incorporating a tapered profile between the ceiling tiles was specially designed to accommodate the curvature of the building. Extract grilles were produced to exactly match the design of the grille used on the underside of the chilled beam.

SAS chilled ceilings and beams use water, as

opposed to air or refrigerant, as the heat transfer medium. In addition active chilled beams incorporate the distribution of fresh air.

This type of system helps to reduce energy usage due to the system's comparatively high operating temperature of between 14°C and 17°C, as well as the ability to set up separate cooling zones, ensuring only occupied areas are cooled.

Chilled ceilings and beams can be combined with technologies such as free cooling and ground sourcing to increase their energy efficiency even further.



Active Chilled Beams in radial building



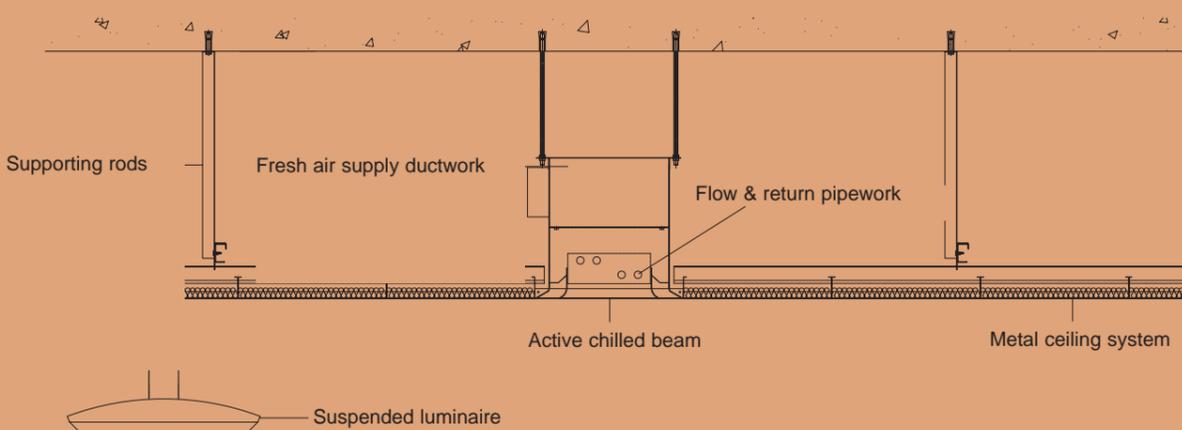
Active Chilled beam integrating with SAS metal ceiling

### Key Facts:

- The new JCP building is curved due to an unusually shaped site.
- It occupies 28,450 sq ft.
- SAS supplied both the metal ceilings and active chilled beams.
- The active chilled beams are used to provide comfort cooling to the occupants.
- Sustainable initiatives such as a green roof for water attenuation, solar shading and a green travel strategy were incorporated.

**John Staunton**

### Case study available



room comfort

# Team Marsh: Rugby Playing Brothers

Gavin Marsh who recently celebrated ten years of service at SAS International has worked at both Bridgend and Reading. A keen Rugby player Gavin has been playing regularly for top teams in both Wales and Reading.

Having had painful back injuries he was ruled out for selection at new team Redingsians. However, due to expansion at SAS Modular Solutions Gavin's brother Jevon is now also working for SAS based in Reading. Coming from the Marsh rugby dynasty he is also playing for the same club as Gavin.

Both were selected for a match versus Weston Super Mare in February which the local Reading news covered. After both playing for the full 80 minutes the Marsh brothers were instrumental in putting an end to the club's losing streak of 8 matches with a well deserved win.

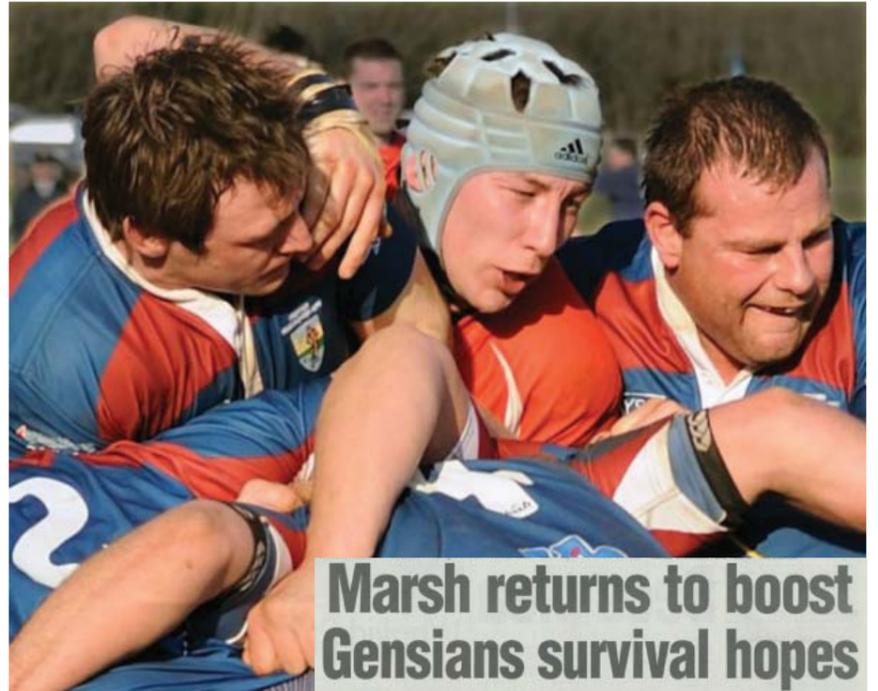
Unfortunately at a recent match Gavin was injured again meaning Jevon is the only fit Marsh making the Rugby news in Reading at present.



Gavin Marsh: Injured



Jevon Marsh



Gavin Marsh gets stuck in

## A Day in the Life

Group HR Manager: Julia Davies

My working day begins at 5.45am. It's always a rush as I have to leave by 7.10am to make my 35 mile journey to work. It's quite hectic preparing for work as my two little ones wake as soon as they hear my movements around the house.

I have three children: Zaac aged 20, works at SAS Bridgend as a Line Leader in Assembly (he has his own place with Polish girlfriend Anna who also works in the factory).

Kizzy aged 7, who is a very garrulous person, particularly in the mornings as she follows me around the house chattering about anything that enters her head. Xander-Vin aged 4, is equally as loud as his sister but is controlled by his love of Nintendo Mario Sunshine and Power Rangers that keeps his interest glued to the TV.

My husband Rick is an Electrical Engineer for Dalika who is the loudest of them all!

I have been at SAS for seven years and my role has recently been enhanced to Group Human Resource Manager for all seven sites within SAS International.

The HR Team within the SAS Group are: Julie Heath: Maybole, Rachel Ketley: Apollo Park, Brigid Matthews: Reading and Beverly Toms: Avanti, so between us there is a lot of experience of how SAS works.

To assist me at Bridgend is the newly appointed Nadia Vermeulen who has relocated from Modular Solutions in Reading to Bridgend. I report directly to Mark McElhinney on a daily basis providing him with weekly HR Reports summarising key issues across the Group.

SAS International currently employs over 650 staff including Modular Solutions, HCP and Avanti Systems.

My working day is never straight forward. A phone call can quickly change everything. Typical examples would be a potential disciplinary issue that requires immediate investigation or I receive a managers request, usually Mark Hacker our Works Manager, who wants to change everyone's shift around and letters need issuing.



*"I have my own flair and rules can always be stretched and adjusted to suit all parties providing they are fair and no one is less favourably treated."*

Our workforce is becoming more diverse employing Welsh, Polish, Lithuanians, Portuguese and Iranians which make up approximately 25% of the workforce. To ensure our working practices are communicated effectively we presently have some of the notices posted on the notice board appear in Polish. We are implementing English Language training courses, working directly with Bridgend College.

Our aim in providing this opportunity is to equip employees with improved communication skills to aid on the job training, identifying potential in people that may currently be hindered by poor English skills. It also ensure everyone understands health & safety issues and company policies and procedures. The benefit for the employees is that improved communication skills may lead to future opportunities for promotion and development, for a prosperous and long term career with the Company.

My role is led by ensuring we are consistent with policies and procedures which reflect statutory legislation. I organise company training and induction applying a more structured approach.

As SAS has been increasing in size I regularly conduct talent spotting for promotion and career development. As other companies (particularly in the local area) close I meet the workers who are being made redundant to see if they would be suitable for SAS. There are many experienced workers out there. I also deal with recruitment agencies constantly. SAS use various agencies across the company depending on the type of role or person required.

One of the largest responsibilities of my role is interviewing. I interview approx 3 to 4 candidates a week for various roles and this obviously takes time. This includes issuing contracts and offer letter to all staff.

My style I hope is friendly and approachable. I'm not a typical conventional HR type. I have my own flair and rules can always be stretched and adjusted to suit all parties providing they are fair and no one is less favourably treated. I know at least 350 people by name now. I want to get to know everyone in the group.

My favourite part of the role is the variety of issues I deal with day to day. I also get to play chauffeur quite a bit which is no hardship as I love driving.

My day usually finishes about 5:30pm when I leave the factory and make my way home. However, over the coming months I will be travelling more frequently throughout the Group liaising with Managers, Directors and the HR Team.

The HR resource is developing as the company develops but more work needs to be done to bring the various sites working closely together.

This will hopefully include a revised Company Handbook with revised policies considering changes to employee benefits and how we can improve them.

This will mean improving our overall HR service to both our employees and the management team.

# SAS Factories set for OHSAS 18001 Standard

Having completed ISO 9001 and ISO 14001 across all SAS factories, 2008 targets are set for the OHSAS 18001 accreditation.

The roll out of the ISO accreditations at SAS International has been ongoing for the past eighteen months. It has brought all SAS factories in line with current best practise, providing our customers with the assurance that there are proper quality and environmental management systems in place.

The "Occupational Health and Safety Management" Systems – (OHSAS) specification has been established for eight years. OHSAS 18001 has been developed to be compatible with the ISO 9001 and ISO 14001 management systems standards,

In order to facilitate the integration of quality, environmental and occupational health and safety management systems by organizations, should they wish to do so.

The (OHSAS) specification gives requirements for an occupational health and safety (OH&S) management system, to enable an organisation to control its OH&S risks and improve its performance.



## Benefits

The OHSAS specification is applicable to any organisation that wishes to:

- Establish an OH&S management system to eliminate or minimise risk to employees and other interested parties who may be exposed to OH&S risks associated with its activities.
- Implement, maintain and continually improve an OH&S management system.
- Assure itself of its conformance with its stated OH&S policy.
- Demonstrate such conformance to others.
- Seek certification/registration of its OH&S management system by an external organisation.
- Make a self-determination and declaration of conformance with this OHSAS specification.

## Dates for your Diary 2008

26th March:	Syteline Go Live across SAS International
UK Bank Holidays	5th May 26th May 25th August 25th December 26th December
2008 SAS Shutdown Dates	
<b>Maybole</b>	
Summer Shutdown (10 days)	Monday 21st July 2008 to Friday 1st August 2008 (inclusive)
Christmas (6 days)	Wednesday 24th December 2008 to Wednesday 31st December 2008 (inclusive) Returning to work Monday 5th January
<b>Apollo Park</b>	
Christmas (9 days)	Tuesday, 23rd December to Friday, 2nd January 2009 (inclusive) Returning to work Monday 5th January
<b>Bridgend</b>	
Whitsun Shutdown (4 days)	Tuesday, 27th to Friday, 30th May
Summer Shutdown (10 days)	Monday, 4th August to Friday, 15th August
Christmas Shutdown (4 days)	Wednesday, 24th, Monday, 29th Tuesday, 30th & Wednesday 31st Returning to work Monday 5th January

## SAS Become CIBSE Patron



SAS have become CIBSE Patrons. The CIBSE's Patrons scheme was set-up in 1979 as a way of developing closer links and working between the Institution and a broad range of organisations involved in the building services engineering industry.

Patrons work together to use their wide ranging expertise to strengthen the building services industry, through collaboration and co-operation with the Chartered Institution of Building Services Engineers (CIBSE) and other related organisations.

Patron's funds and voluntary resources are used to support initiatives and innovations that have a direct relationship to the betterment of the building services industry, and which encourage the use of best practice in sustainability, health and safety, environmental quality and work efficiencies, recruitment, education and other matters of concern to the industry.

With SAS M&E room comfort products becoming more popular due to changing legislation, direct involvement with organisations such as CIBSE is hugely important. The Patrons meet at least every quarter, usually in central London, to discuss industry issues and to review projects the group is undertaking.

# Porsche Supercup 2008

# Team SAS

## SAS Lechner Racing Ready for 2008 Porsche Supercup Season

With the 2007 season over Team SAS have re-structured and been working hard on preparations for the 2008 Season.

As highlighted in the last issue of the Insider SAS International's commitment to the Porsche Supercup is expanding in 2008. Running two cars with the already successful Lechner Racing team (owned by Walter Lechner) and teaming up with drivers Damien Faulkner and Danny Watts, team: SAS Lechner Racing hope to be dominating the front line of the grid throughout the season.

Damien, who lost out to Richard Westbrook by six points in the 2007 drivers championship is out to prove he can win, whilst 2008 will be Danny's first full Supercup Season. Damien narrowly beat Danny in the 2006 UK Championship. However, Danny won 7 of the 10 championship rounds. The racing is sure to be close with a very competitive grid of drivers and teams competing.

The team have been testing in two locations. Hockenheim is a new circuit on the calendar after the Nurburgring was dropped for 2008. All teams were given a two day testing period for those who have not driven it before. Barcelona in March is being used exclusively for the team to polish their set up and times.

The new highly anticipated Valencia street circuit makes its debut on the Supercup calendar and everyone is looking forward to a Monaco style challenge in Spain's up and coming city. SAS International will for the second consecutive year invite various construction professionals to races throughout the season.



To check SAS Lechner Racing's progress throughout the Porsche Supercup season tune in to Eurosport 1 and 2.



Guests will be invited to experience SAS Lechner Racing

## 2008 Race Season

6 April	Bahrain	Bahrain
27 April	Spain	Catalunya
11 May	Turkey	Istanbul
25 May	Monaco	Monte Carlo
22 June	France	Magny Cours
06 July	Britain	Silverstone
20 July	Germany	Hockenheim
03 August	Hungary	Hungaroring
24 August	Europe	Valencia (New Race)
07 September	Belgium	Spa
14 September	Italy	Monza



**Name:** Walter Lechner Sr. (Team Principal )

**D.O.B:** 04/08/1949

**Nationality:** Austrian

**Marital Status:** Married with two sons (Robert & Walter jr.)

**Hobbies:** Scuba diving, and music

**Special Interest:** Carpets, underwater aquatic photography

There is hardly one team in Europe, which celebrated more successes during the last three decades of motorsport than the team from Austria owned and managed by Walter Lechner.

For more than twenty years the team manager himself was behind the steering wheel and brought in innumerable sports car successes. During the Group C times with a Porsche 956 and 962 he was known as one of the best sports car drivers of the world. Almost at his own discretion he dominated the Interserie, a European sports car championship.

As a team manager in the Formula Ford, the Formula VW and the Formula Renault he led numerous young talents to international racing maturation. In 2003 the Formula team turned into a sports car team – Lechner Racing charged into the Porsche Michelin Supercup. Straight off he finished fourth, He won the Championship in 2005 with Alessandro Zampedri, 2006 with Richard Westbrook and won the team Championship in 2007.

### Lechner Racing TEAM



**Name:** Damien Faulkner

**Car Number:** 20

**D.O.B:** 15.02.77

**Nationality:** Irish

**Marital Status:** Single

**Hobbies:** Fishing, boats and fitness

Most of you will have heard of Damien who raced for SAS in 2004, 05 and 06. The 07 Supercup runner-up wants the championship title. In 2007 he was beaten by Richard Westbrook by only six points. This season a tenth of a second could make all the difference.

The Twice British Porsche Carrera Cup Champion collected two pole-positions, two race wins and altogether six podium finishes in 2007. Up to the final corner of the last race in Spa he kept his championship hopes alive. He will have to rely on this consistency and determination to win in 2008.



**Name:** Danny Watts

**Car Number:** 21

**D.O.B:** 31.12.1979

**Nationality:** British

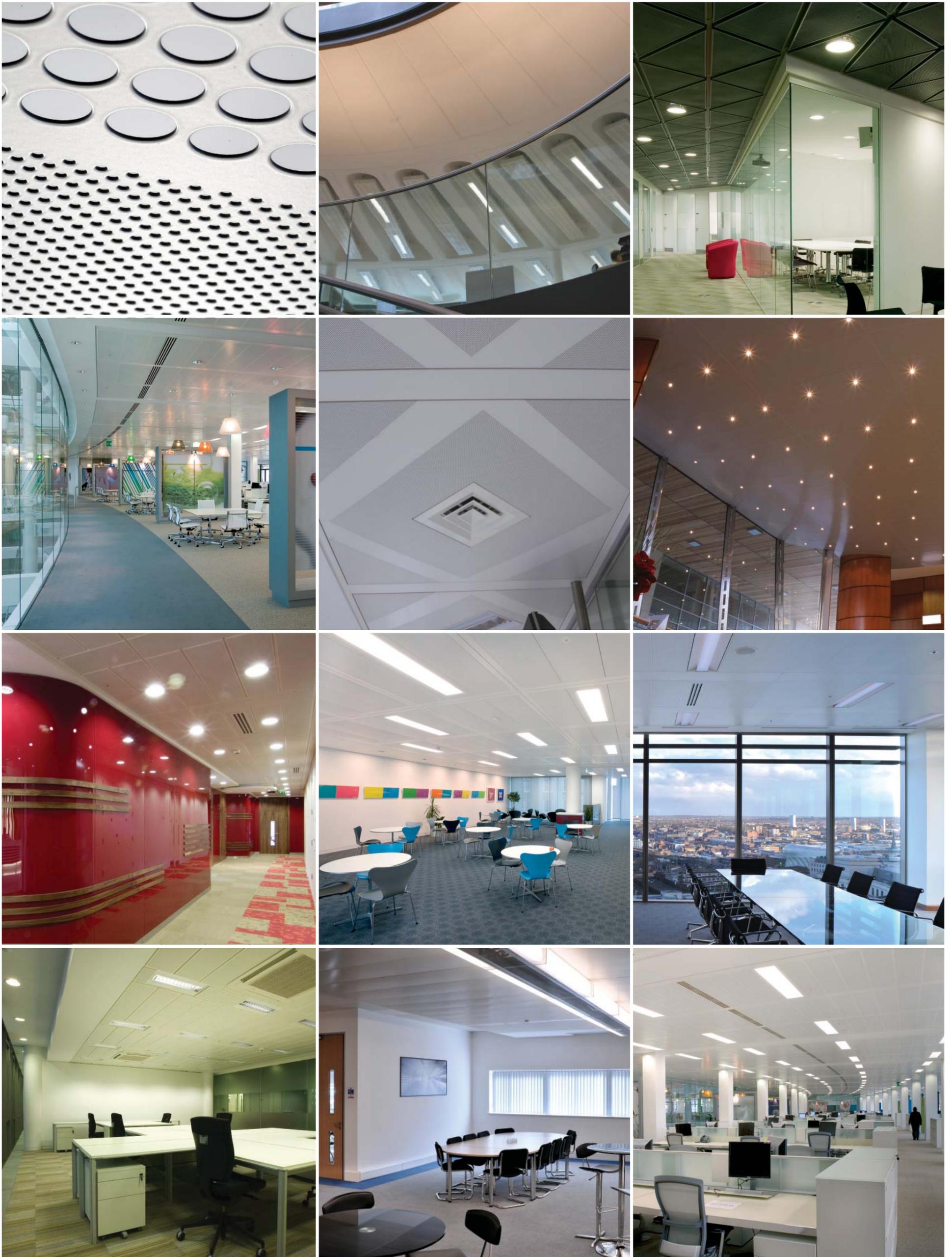
**Marital Status:** Engaged

**Hobbies:** Karting, sports, and music.

In 2006 Danny Watts dropped in at the Silverstone Grand Prix for a guest start in the Porsche Mobil1 Supercup. The three first ranking drivers of the British championship got the opportunity to breathe some international racing air.

After an interruption of almost two years he now returns to the Porsche Supercup. He has filled the time between this very well. The former Formula Driver started in the British Porsche Carrera Cup in 2006 and swapped to the Asian championship in 2007. He also found time for the UK GT championships and the International Le Mans series.

Visit [www.sasint.co.uk/teamsas](http://www.sasint.co.uk/teamsas) for team and race updates.



**Top Left to Right:** ABP Heerlen, Holland · Commissioner of Irish Lights, Dublin · Glasgow University, Sir Alwyn Williams Building · **Second Row Left to Right:** Unilever House, London · Platt & Reilly, Dublin · The Oval, Dublin **Third Row Left to Right:** Accenture, Dublin · British Land, York House, London · Colmore Plaza, Birmingham · **Fourth Row Left to Right:** Glasgow University, Sir Alwyn Williams Building · Apollo Park ISM Mock Up Area · Unilever House, London.

# The SAS Working Family: Maybole

Over the past few years the staff levels across all SAS facilities have slowly risen as the company expands. We thought it would be interesting to see how many families work within SAS. For each 2008 Issue of the Insider we will focus on a SAS location and outline the related employees. There are certainly more than you think.

Family Members	Relationship(s)
Hugh Bell (Maintenance) Darren Robertson (CNC Operator) Alex Bell (Brake-Press Operator)	Hugh is Alex's father and Darren's father-in-law Alex and Darren are brother-in-laws
Eric Caldwell (Brake-Press Operator) William Wallace (Brake-Press Operator) Graeme Watt (Technical Manager)	Brother-in-Laws
Ian Chisholm (Dresser) Andrew Kirkpatrick (Dresser)	Brother-in-Laws
Alisdair Connell (Welder) Etta Connell (Paint-Line Operator)	Husband and Wife
Scott Davidson Snr (Dresser) Scott Davidson Jnr (Brake-Press Operator) Nathan Davidson (Joiner)	Father and Sons
Michael Galloway (Brake-Press Operator) James Galloway (Brake-Press Operator) James McClung (CNC Operator)	Michael is James's father and James McClung's brother-in-law. James McClung is James Galloway's uncle
Claire Harper (Paint-Line Operator) Emma Harper (Paint-Line Operator)	Twins
Julie Heath (Personnel Manager) David Heath (Team-Leader) David Kerr (CNC Operator) June Minnis (Accounts Administrator)	David and Julie are husband and wife June is Julie's sister. David Kerr is David and Julie's nephew
Ryan Jess (CNC Operator) David Jess (Dresser)	Cousins
Tommy McBride (CNC Operator) Darren McGill (CNC Operator)	Tommy is Darren's Uncle
David McGregor (Team Leader) Lynsey McGregor (Paint-Line Operator)	Father and Daughter
Marc McKenzie (Brake-Press Operator) Ross McKenzie (Brake-Press Operator)	Brothers
Hugh McNeill (CNC Operator) Gary McNeill (Production Engineer)	Father and Son
Jamie Milligan (Brake-Press Operator) Robin Milligan (Brake-Press Operator)	Brothers
Ross Milligan (CNC Operator) Jamie Harkness (Paint-line Operator)	Ross is Jamie's Uncle
Sammy Robertson (CNC Operator) Ian Henderson (Brake-Press Operator)	Brother-in-Laws
Kate Rodger (Paint-Line Co-Ordinator) Kirsty Wood (Paint-Line Operator) Kayley Rodger (Production Administrator) Amy Rodger (Paint-Line Operator)	Kate is Kayley and Amy's Mum and Kirsty's Stepnum
John Skilling Snr (Joiner) John Skilling Jnr (Production Engineer) Jordan Skilling (CNC Operator)	Grandfather, Son and Grandson
Bill Smith (CNC Operator) Stuart Smith (Brake-press)	Father and Son
Gary Steele (Brake-press Operator) Kelly Steele (Paint-line Operator)	Brother and Sister
Irene Thomson (Painter) Colleen Thomson (Paint-line Operator)	Mother and Daughter

## Insider on Tour

We know the Insider is requested by various construction disciplines around the construction industry and within SAS each quarter. However, we want to find out how far the Insider gets on its travels please email us a picture of the Insider out and about.



## Retirement

John Roche retires on the 28th May this year. John started at the Maybole site on Monday 7th June 1999 on day shift in the Production area and now works the three shift pattern as a Brake Press Operator.

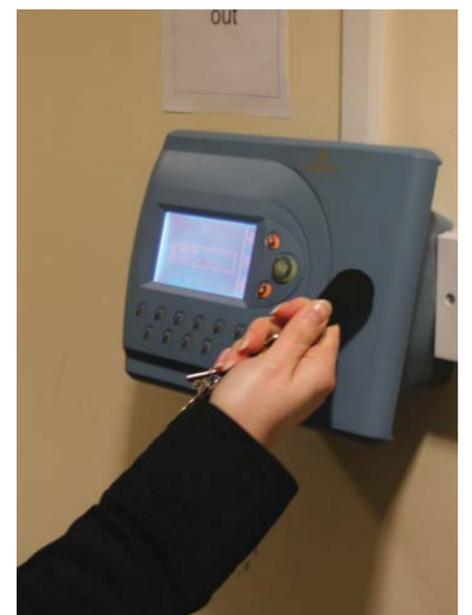
We would like to thank John for his contribution over the last 9 years and wish him all the best for the future and his retirement.

## Time and Attendance at SAS

The same time and attendance packages have been installed at all SAS locations. The last locations added to the system; Modular Solutions and Reading are now up and running.

In the past Reading relied on a receptionist to record the number of people inside the building. As staff numbers at SAS Reading have grown in line with company expansion it has become difficult to keep track of staff movement. It will now be easy to monitor how many people are in and out of the building in case of fire or incident.

The system will also be used for recording timekeeping and attendance ensuring the lengthy administration process involved is eradicated and made more efficient.



This double page spread of the SAS Insider is now totally dedicated to Human Resources stories at SAS International. If you would like to make any contributions to this section (including nominating for meet the team and photos/entries for the caption competition) please contact the marketing department at Reading or direct to you HR representative. We need you contributions....



# Meet: Some of the Press Shop, Bridgend

## Q&A

**How did you end up working at SAS and what is your current role ?**

**The best thing about working at SAS ?**

**And the worst ?**

**If you could change one thing about working at SAS what would it be ?**

**First job ?**

**Hobbies ?**

**Your proudest achievement and why ?**

**What is your favourite music ? ?**

**Favourite food why ?**

Stuart Jackson



I came to SAS three and a half yrs ago as a temp and worked on the main assembly, I am now a tool setter/ QA guy in the Press Shop.

Good friends and attractive women all round. Also I must say I appreciate the consideration I'm given of my many hospital appointments etc.

No canteen on afternoon shifts. And the air quality could be better on the shop floor!

I'd like to have better quality air on the shop floor.

I took a Sunday job when I was thirteen selling footwear on market stalls. Very long days for insultingly little money.

Ice hockey, surfing, music, archeology, literature. My local scene and generally looking good.

I'm proud of all my major achievements, which are so many to mention. But I was especially proud of myself when I completed Scar face on my Xbox 360.

I like all types of music, except the teenyboper nonsense that's always on in the charts.

The best food I ever had, was a large red snake, that my guide caught and cooked on an open fire, in Cambodia. Not something you have in the fridge though really!

Gordan Jones



Through a friend - Tool Setter Brake Press.

Wages.

Night shift.

I would like music back on the shop floor.

George Webb shoe factory.

Fishing, rugby and football.

Climbing Scafell Pike highest mountain in England. (3.208 feet).

Rock.

Italian.

Valentinas Avdejevas



Agency Press Operator.

Break times.

Breaks are too short.

Longer breaks and more pay as an incentive.

Press Operator.

Fast cars, music.

I hope my biggest achievements are in the future.

Any.

Lithuanian food, Please let Mark in the canteen know.

Piotr Kwiatkowski



I came here a year and a half ago from Poland to find a job. I got a job at SAS and that's how it all started, now I am a Press Operator.

It's a permanent job, so I feel quite safe here and I like the atmosphere at work.

Sometimes being a Press Operator feels quite monotonous.

It would be nice if there was music coming out of the speakers during work.

Fork lift driver.

Football.

It is still ahead of me.

Depeche Mode.

Italian and Greek cuisine.

Alexandres Douglas



Through an agency - Beyder Operator.

Regular work.

The air in the factory.

To have music.

Railway worker.

Motor sports.

In the army with the Lithuanian President.

Rock, club music.

Lithuanian & Russian food.

Alius Bieliauskas



Through a local recruitment agency used by SAS. I started in the Wemo Department.

Break time.

Occasionally oil leaks on press-messy and slippery.

To go back to the Wemo Department. I preferred it to press shop.

In Lithuania I was a shelf stacker in a supermarket, then I came to the UK.

Music and sports.

My car an Audi A3 "It's fast".

All types.

Lithuanian - my mother's cooking.

Nigel Cooper



Moved from H.M Forces into civilian work.

Finishing shift at 2pm/10pm.

Starting shift.

Must have constant standard of work going out of our doors.

H.M. Forces 22 yrs.

First Aid, Rugby.

Qualified for army ski finals, finished in top 20 in Europe 1988.

Any.

Anything but cheese.

## Long Service Awards 2008 January - April totalling a huge 125 years service between them..

Name	Location	Start Date	Service
Gary Grant	Bridgend	08/01/1988	20 Yrs
Mark Wren	Apollo Pk	09/01/1998	10 Yrs
Henrietta Connell	Maybole	19/01/1998	10 Yrs
Hilary Morris	Bridgend	08/02/1993	15 Yrs
Phillip Spence	Apollo Pk	13/02/1998	10 Yrs
Robert Burns	Maybole	25/02/1998	10 Yrs
Gavin Marsh	Reading	09/03/1998	10 Yrs
Stuart James	Bridgend	16/03/1998	10 Yrs
Eurshell Fearon	Reading	23/03/1993	15 Yrs
Mike Temby	Reading	25/03/1993	15 Yrs

## Caption Competition Issue 6:

Mark Gleed and Steve Burlton from SAS Project Management

Suggest what Mark and Steve might be saying or a caption for the entire photo to win a special prize.

The best entries will be printed in the next issue. Send all entries to sasinsider@sasint.co.uk



# Royal College of Obstetricians & Gynaecologists London

When the Royal College of Obstetricians and Gynaecologists was refurbishing its Sussex Place premises near Regent's Park in London, it looked to SAS to provide the solution.

SAS International's System 150 ceiling system was specified, along with bespoke metal column casings.

Plain rectangular ceiling tiles have been installed to echo the shape of the vaulted ceilings within the entrance to the College, as well as assisting in the reduction of ambient noise. Hinge down access throughout the ceiling provides easy accessibility to services, including lighting. SAS System 150 consists of clip-in self levelling, bevelled edge tiles.



The concealed suspension system utilises a deep Omega bar profile thus offering wide spanning capability.

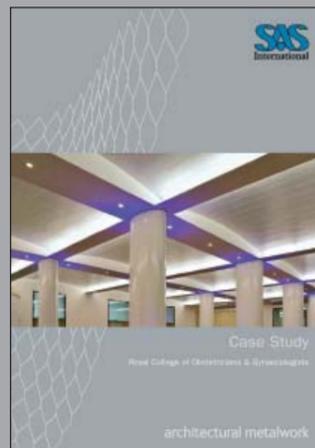
Robert Potter, Project Architect, commented "The main challenge was to install to a very fine tolerance within an existing building. For example, SAS International worked with us to ensure that the elliptical column casings were as small as possible around the structural columns in situ, which varied in size. The SAS metal solution was chosen for its precision, finish and acoustic absorption."

SAS International supplied matching wedges and trims to add to the co-ordinated visual appeal of the ceiling.

The striking plain column casings feature a perforated pattern towards the column base. These perforations allow heating and cooling to be provided to the space via a low-velocity displacement ventilation system.



### Case study available



architectural metalwork



The SAS Insider welcomes news and comments from everyone at SAS International, HCP and Avanti Systems. Please email [sasinsider@sasint.co.uk](mailto:sasinsider@sasint.co.uk). Contact Andrea Nightingale on 0118 929 0900 or any member of the marketing team. Written & Produced by the SAS Marketing team.

SAS International 31 Suttons Business Park, London Road, Reading, Berkshire, RG6 1AZ, United Kingdom. T: +44 (0) 118 929 0900 F: +44 (0) 118 929 0901 W: [www.sasint.co.uk](http://www.sasint.co.uk)

\* FSC certified Paper - Printed using vegetable based inks on paper produced from sustainable and well managed forests. Our printer holds the environmental standard ISO 14001.