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THE CIVIL ENGINEERS' CLUB



of the Institution of
Civil Engineers

Social and Sporting Events



2008 Newsletter

MOUSE T SHIRT

You will notice in the envelope in which this Newsletter came, is a small white T shirt. This is meant to be used to cover/protect your computer mouse.

With your computer turned off, take out the mouse lead from your computer, slip the T shirt over the cable and slip along, using it to cover/protect your mouse while not in use. Switch on your computer again.

INTRODUCTION CHAIRMAN'S REPORT - 2008

Once again I am very pleased to have this opportunity to provide an introduction to the 2008 Club Newsletter.

We have had a number of major events over the last year, and I am grateful to Committee members for their tremendous support. You can read in more detail about all these activities in the newsletter - one of which I regrettably missed, was the trip on the Tall Ship St Vaast when seven stalwarts joined others in the rigging of this beautiful boat on a fine April day.

Our aim is to have a Club representative in every ICE Region, and to publicise our events even more widely so that they will be enjoyed by a greater number of people.

Over the past year there has been a greater awareness of the Club amongst members of The Institution, and I will do my best to ensure this continues. We have an interesting programme of activities and a willing team of volunteers to arrange events. If you are reading this newsletter as a non member, then why not come to join us? I can assure you that you will receive a warm welcome to any of our meetings and that it will add a further dimension to your Institution membership.

My thanks are due to all those who have worked so hard to make the Club so successful and so willingly given their time to arrange our programme of events.

As some of you will have seen from recent articles the NCE the £16 Bn "Crossrail " project connecting the Great Western Railway with both the Great Eastern and the Southern Railways is to become a reality after decades of debate. Although once retired, I now have the great privilege as Executive Chairman of Cross London Rail Links Limited of being responsible for this great project. No doubt you will appreciate this no longer allows me sufficient time to serve the Club in the manner it deserves. Therefore it is with much regret that I will be standing down at the next AGM and handing over to my worthy successor whom I am sure will take the Club from strength.

I wish all the members every success throughout the coming year. Please enjoy your Club and take part in the activities whenever you can.

Doug Oakervee
28th March 2008

SECRETARY'S REPORT - 2008

The Club has had another successful year under the Chairmanship of Doug Oakervee. The success of the Club is very much due to the voluntary efforts of him and all the section leaders and to the support from members. It is expected that this will continue in the future.

This year has seen the continued development of the Club website (<http://www.ceclub.org.uk>) and we have been successful in getting the Regional websites to include a link to the Club website

Walking Section had six walks in various locations including one at Loose Valley Walk (near Maidstone) this one being a joint celebration of National Science and Engineering Week and the 250th anniversary of the birth of ICE inaugural president Thomas Telford

Sailing started the season with a supper at the Quayside Bar & Restaurant, Port Solent. In April, seven stalwarts joined the Tall Ship "Stavros Niarchos" for a day sail out of Portsmouth, with some venturing into the rigging. There was a Whitsun weekend trip to St Vaast. In June, there was a Bar B Q planned at Bembridge, but because of weather conditions this became a dinner on board Moonshadow - the sailors reported that funnily enough they had Bembridge almost to ourselves. In August, a number of boats rallied in Beaulieu River, eschewing the comforts of a marina for the pleasures of lying to anchor and using a dinghy to get to land. To round off the year the Voyage Vaches, in December our final rally of the year, in December was slightly curtailed again by the weather. The Smeaton Trophy was awarded to David West and Nick Hounsell. The Telford Goblet was awarded to Roller Coaster and the the Elvera Trophy was awarded Diana and Stephen Evans.

Visits had a combined sailing rally to Cowes and visit to the High Down Rocket Testing Site at the Needles in September

Golf held the Thomas Telford Trophy in September was held on the magnificent Open Championship Royal Portrush Golf Course in Northern Ireland.

The winners were Northern Ireland - must have been something to do with intimate knowledge of the course.

The South Eastern pair of Russell Calderwood and David Smith won the

morning foursomes. Julian McFarland won the Scott Quaich. Bryan Evans, (West Midlands) the best individual handicap prize. In parallel with the TTT tournament there was a Veterans Match which was won by Ingram Bill, a former ICE Vice President.

In Bridge, Brunel Trophy, was held in October and won by a scratch team consisting of Andrew and Liz Cleary, Paul Lamford and Stefanie Rohan.

Motoring ventured for the usual foray at the Spyker Factory at Silverstone, seeing the refuelling hose which had caused so much trouble the previous weekend in Magny Cours, France, when it had been taken for a short ride down the pit lane by Christian Albers.

They also had a visit to Wembley Race of Champions and a visit to Brands Hatch immediately before the AI GP race there in April

John D Brownlie
28th March 2008



WALKING

2007 was another good year for the Section with six walks covering London and the South-East, numbers attending varying between 15 and 25. The by-now accepted principle of two walks in and around the London area (January and November) with the remainder "out" in the countryside was adhered to.

January saw us following the Thames Path from London Bridge to the fine example of 20th century engineering, the Thames Barrier. Although one of our longer walks (some complaints!) those who made it agreed that the effort was worthwhile.

In March we joined forces with ICE South-East England for the Loose Valley Walk (near Maidstone) this one being a joint celebration of National Science and Engineering Week and the 250th anniversary of the birth of ICE inaugural president Thomas Telford. The Section provided over 75% of those attending.

In April we ventured to Guildford for fine views from the North Downs Way. Lewis Carroll's grave and Watts Gallery - lunch was at Puttenham (the "Good Intent".)

June took us further East to Harrietsham ("a few hills and 30 stiles") - lunch here was at the Ringlestone Inn built in 1553 as a hospice for monks (how times change).

The penultimate walk brought us back to Surrey, with a first-time leader, in the Dorking Area - another good attendance by the faithful and their friends. Without this continued support these things wouldn't work and the organizers are grateful to those who do turn up - long may they continue to do so.

The final walk for 2007 in November brought us back to London and commenced at Brunei's statue at Paddington Station (why is it so obscured in an alcove rather than in its former glory on the main concourse?). This walk took us through Little Venice, Regent's Park, London Zoo and culminated in a small group hiving off to see the magnificent splendor of the new St Pancras International - a tribute to 21st century engineering.

2008 has made a good start with over 20 walkers taking part in a nine miler around Barnes in West London - this one covered the Thames Path, Fulham football ground and several Thames bridges - again a new leader.

In conclusion it is fair to say that the Section (now in its 11th year) is thriving and with the 50th walk planned for May 2008 the future looks good.

For those of you reading this who live too far away to join us, how about starting a similar group in your own area? We look forward to hearing from you.

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SAILING

We have had another good season of events and although the weather has been perhaps more capricious than usual our programme has not been disrupted, we have had good sailing, good company and good meals together.

We started the season off this year on 20th April when 13 of us enjoyed a Start of Season Supper at the Quayside Bar & Restaurant, Port Solent and Robin & Gillie Whittle were presented with the Elvera Cup for 2006-7.

On 29th April, we started the season with seven stalwarts of the Club ranging in age from late twenties to mid seventies, joining the Tall Ship "Stavros Niarchos" for a day sail out of Portsmouth. It was a beautiful day, and she is a beautiful ship. Although we had very little wind; we learnt how to raise and lower the sails, climb the rigging, go out onto the yards and how to work as a team, not just working together, but working in unison. It was a great day.

25th - 28th May we sailed to St Vaast for the Whitsun long weekend. Three boats made the trip, Roger Hyde, Matt Woollacot, David Broughton in Cohort; John Scatchard, Hilary Webb (mate), Jill Campion, Hazel Bennett & Ben Connis in Sea Scamp; Bob Barlow, Colin & Gilly Myram in Alpha Helix arriving during Friday.

All three boats arrived to lock-in on Friday afternoon after a similar trip from the Solent which required motor sailing initially then finding some wind and good sailing, but this was unfortunately associated with a fairly solid bank of fog which only lifted close to the French coast. But close in, it became sunny and warm. St Vaast held its usual charms and after meeting up each boat crew wandered into town and found their own source of dinner on Friday night.

Saturday dawned with news that the weather was deteriorating and Sea Scamp was the first to announce that they were sailing back on Sunday. But Saturday is also the day of the St Vaast market, and the hot sunshine we were then enjoying gave no indication of an imminent change in the weather.

Dinner on Saturday evening was not to be disturbed. So pre-dinner drinks on Cohort, then to Le Chasse Maree Restaurant in Place General de Gaulle (which had been tested by Sea Scamp on Friday evening and pronounced excellent), and so it was and greatly enjoyed by all.

Sunday - we all set off back in winds starting south east F4 but increasing and backing to a northerly F7 with violent rain squalls. But we all made it safely back by Sunday evening, Cohort to Portsmouth, Sea Scamp and Alpha Helix to Yarmouth.

Something similar in 2008? I think so, but hopefully without the northerly gale on the return.

On 30th June, we had a Bar B Q planned at Bembridge, but the pattern of this summers weather was already established and so in driving rain and a SW F6 only Moonshadow, Mike Broughton and David Topley, and Cohort, Roger Hyde & Colin Wilson, made the trip, And the BarB Q became a dinner on board Moonshadow after a starter at the excellent Baywatch Beach Restaurant which overlooks the entrance channel. But there were advantages, because apart from some exciting sailing back on Sunday when we had wind and sun, we had Bembridge almost to ourselves. Wonderful!!

11th 12th August. Mike Broughton in Moon Shadow; Alec Leggatt, Pamela Woodroffe and John Symons in Dreamer: and Roger & Alyson Hyde in Cohort rallied in Beaulieu River, eschewing the comforts of a marina for the pleasures of lying to anchor and using a dinghy to get to land This weekend, despite forecasts to the contrary, the weather was kinder and we all had good sailing in F3/4 on Saturday and Sunday. (this weekend was the end of Cowes week and the Fastnet Race was postponed for reasons of the weather). The Beaulieu river is a beautiful almost magical place to anchor, and when the weather forecast deters the crowds, it is even more perfect. We all came ashore for a very happy and excellent supper at Ginns Farm.

Voyage Vaches, our final rally of the year, on **1st & 2nd December** was this year to have included a race from Portsmouth to Cowes, and we had six competing boats including a boat from CrossRail Project for an informal race between them and Terminal 5; and we had a total of 8 boats due at Cowes and 33 to meet at the ISC.

But the weather gods had other plans and with F7 & 8 on Saturday, the race was cancelled, and with F9 & F10 forecast for Sunday, all but one boat decided not to sail. The heroes of the day were Matt Woolacott with Martin Hadley in Blazer, a Sigma 33 supported by Chris Harrison, Mark Peacock & Atul Jewitt, who were all except Martin, from the Terminal 5 project team. They sailed from Portsmouth to Cowes in a SW F718, and returned on Sunday in F9 gusting over 50 knots. Putting the rest of us to shame!

So although there was only one crew that really earned their supper, many of the remainder still made their way to Cowes, and twenty of us met up for drinks and dinner at the ISC. They included John & Tricia Witchell, John & Mary Crofts, Sepha Woods; the Smeaton Cup winners for 2007, David West and Nick Hounsell; Peter & Gill Hunter, Mike Broughton , David Topley, Roger & Alyson Hyde.

We intend to make the race a regular event, but since the Terminal 5 Project will have finished, we will never know whether they or Cross Rail would have triumphed. A fitting end to a stormy but enjoyable sailing year.

Roger Hyde

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SAILING TROPHIES

Smeaton Trophy and **Telford Goblet** awarded to yachts competing in the ISC Round the Island Race.

The winner of the **Smeaton Trophy**, awarded to the yacht having the lowest quotient determined by dividing the yachts finishing position in its class by the number of starters in that class, was won by **David West** and **Nick Hounsell** sailing Fulmar with a quotient of. 0.42. Second for the second year running was **Mailys** sailed by **David Tarrant**.

The **Telford Goblet** awarded to the best placed yacht in the IRC classes was won by **Roller Coaster**.

The winner of the **Elvera Trophy** awarded for the most interesting log of a voyage completed in the past 12 months was awarded to **Diana and Stephen Evans** for their account of their sail from Prickly Bay in Grenada to Chagaramus in Trinidad in their yacht **Independent Freedom**.

Diana and Stephen are sailing to New Zealand so we look forward to another interesting log in 2008.





Stavros Niarchos alongside at Portsmouth

Stowing the sails



Le Chasse Maree in St Vaast



Blazers Crew: Martin, Mark, Chris, Matt and Atul

NEEDLES VISIT

On the 14th, 15th & 16th September we had a combined sailing rally to Cowes and visit to the High Down Rocket Testing Site at the Needles. We had 5 boats sailing to Cowes and 15 people for the visit who included a number of new faces and some old faces we hadn't seen for some time; Martin Hadley in Marylou, Kieren Coyne and Ian Haley in Sea Bird, Don and Anne Wade in Shaker Too, Roger Hyde, Matthew Woolacott, Chris Harrison in Cohort, Colin & Ann Smith, Gerald & Diana Davies in Bateau Antares, and on leave from Independence Freedom in West Indies, Steve and Di Evans, and by Ferry Tang Sin Nyap and Chen Sze Tyng. We were indebted to club members in the IoW Ian Hodson, Adrian Birtles and particularly Dave Street who organized the visit and accompanied us on Saturday. A coach took us to Alum Bay from where in glorious sunshine we walked up to the Needles Rocket site to be met by Hannah Griffiths from the National Trust who gave us an extraordinarily interesting tour and history of the site. Suffice to say that from 1956 - 1971 Saunders Rowe developed and launched a series of research rockets, (Black Knight and Black Arrow) the

engines being tested at the Needles prior to the rocket being flown to Woomera in Australia for launch. The final rocket launch in 1971 put a satellite (which is still transmitting) into polar orbit. Two days later, the Government cancelled the project because "there was no foreseeable commercial benefit from satellite technology" and proceeded instead with Concorde.

We returned to Cowes via Carisbrooke Castle, and enjoyed an excellent evening together at the Island Sailing Club. Sunday was bright and increasingly windy for the return home.



The visit with the rocket testing rig behind.

Artists impression of same view in 1971.

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GOLF

THE THOMAS TELFORD TROPHY 2007

On the 6th September 2007 the Thomas Telford Trophy was held on the magnificent Open Championship Royal Portrush Golf Course in Northern Ireland. This was the second occasion on which ICE Northern Ireland Region have hosted the tournament on this splendid links course on County Antrim's stunning northern coastline. The scenery is beautifully illustrated in a painting which adorns the club house and is shown herein after

This is the only Northern Ireland club to have hosted the British Open

Championship. Indeed, the Times correspondent, Bernard Darwin reporting on the "Open" wrote - I find it hard to imagine a more admirable test of golf.

The ICE Regions enter teams of four players to compete in the tournament, the trophy for which was presented by Sir Bill Francis in 1986. St. Andrews Foursomes is played in the morning, followed by singles in the afternoon - all six stableford scores to count.

The golf tournament was preceded by a reception on the previous evening and was followed by an excellent dinner in the Royal Portrush Clubhouse. Guests at the dinner included the incoming NI Chairman Mark Lowry and ICE President David Orr, who presented the prizes. In his remarks, David said that he was delighted that NI were hosting the tournament on the 250th anniversary of the birth of Thomas Telford.

On an overcast day, but with only one light shower and almost no wind - unusual for Portrush - the 22nd TTT was won by the host team consisting of, from the left in the photograph, Gareth McKibbin, Phil Donald, Chris Caves (non-playing Captain), Edward Bill and Tom Bill with a total of 192 stableford points. The Yorkshire Region came second with 189 points and the East Midlands were a close third with 188 points.

The following prizes were awarded for individual performances. The South Eastern pair of Russell Calderwood and David Smith achieved a superb 40 stableford points in the morning foursomes. Julian McFarland won the Scott Quaich for the best individual scratch score in the afternoon singles. He scored 36 stableford points off a handicap of 6 - the equivalent of a gross score of about 78 shots. Bryan Evans, (West Midlands) also scored 36 points and won the best individual handicap prize on count back. In parallel with the TTT tournament there was a Veterans Match which was won by Ingram Bill, a former ICE Vice President.

Everyone was impressed, not only by the golf challenge of the Royal Portrush Golf Course, but also by the splendid scenery, hospitality and catering. All were indebted to the main sponsors Graham, to Thomas Telford Limited who contributed the prizes and the Civil Engineers Club who have supported the tournament since its inception and awarded all the participants with commemorative glassware.

The NI Region are to be congratulated not only for winning the trophy but also for being wonderful hosts.



Cliffs at The White Rocks from the 5th Green.



The winning Northern Ireland Team

THOMAS TELFORD TROPHY 2007 ROYAL PORTRUSH GOLF CLUB

WINNERS		Foursomes	Singles	Total
Northern Ireland	Edward Bill (5)	33	34	
	Thomas Bill (18)		23	
	Phil Donald (11)	38	31	
	Gareth McKibbin (11)		33	192
RUNNERS UP				
Yorkshire	Colin Jenkins (5)	32	34	
	James Dalton (7)		32	
	David James (7)	32	28	
	Richard Fuller (11)		31	189
THIRD				
East Midlands	Simon Carter (4)	38	32	
	Bryan Elson (8)		27	
	Paul Fleming (4)	33	30	
	Neil Dixon (8)		28	188

THE BEST INDIVIDUAL SCORES

Scott Quaich - Singles Scratch	Julian McFarland (6)	London - North	36 points
Singles - Handicap	Brian Evans (15)	West Midlands	36 points
Foursomes	Russell Calderwood (18)	South - Eastern	39 points
	David Smith (6)		
Longest Drive	David Smith	South - Eastern	
Nearest Pin (11th)	Martyn Taylor	London - South	
Veterans Match	Ingram Bill (18)	Northern Ireland	32 points

THOMAS TELFORD TROPHY 2008

The London Region, champions at Moor Allerton in 2006, are hosting this years Thomas Telford Trophy at the Royal Ashdown Forest Golf Club near East Grinstead on the 1st September 2008.

This course was founded in 1888, is ranked as one of the top 100 golf courses in the British Isles and has been selected by the R & A as an Open Championship Regional Qualifying venue. Royal Ashdown Forest is set in a beautiful forest location and is considered to be really special. It is very natural and is renowned for its lack of sand bunkers and excellent greens. Martyn Taylor is Chairman of the Organising Committee and can be contacted via : m.s.taylor1@btinternet.com.

THOMAS TELFORD TROPHY 2009

The ICE Wales Region have agreed to host the Thomas Telford Trophy in 2009 and are planning to hold it at the Celtic Manor Golf Club set in the beautiful Usk Valley near Newport. The courses were designed by Robert Trent Jones and the Wentwood Hills Course is a prospective venue for the Ryder Cup in 2010.

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For all you budding Golfers - some golfing terms for those shots!

An Adolf - *taking two shots in a bunker*

An Arthur Scargill - *great strike but a poor result*

A Rodney King - *over-clubbed*

An O.J. Simpson - *shouldn't have, but got away with it*

An IRA shot - *a provisional*

A Diego Maradonna / Dennis Wise - *nasty five footer*

A Rock Hudson - *thought it was straight, but it wasn't*

A gynaecologist's assistant - *just shaves the hole*

Does your husband play? - *for when a man hits a short tee shot*

A Cuban - *needs one more revolution*

An Elton John - *a big bender that lips the rim*

A Glen Miller - *kept low and didn't make it over the water*

A Princess Grace - *should have taken a driver*

A Princess Di - *shouldn't have taken a driver*

A Michael Jackson - *fading away*

An Anna Kournikova - *looks great, but unlikely to get a result*

A Tony Blair - *too much spin*

A Bin Laden - *driven out and never to be found again*

A Jamie Oliver - *you really want to smack it but you can't*



REPORT OF ANNUAL BRUNEL TROPHY CONTRACT BRIDGE COMPETITION 2007

The Civil Engineers' Bridge Club runs the annual competition for the Brunel Trophy, which was presented to the club by Travers Morgan in 1990. The event is an all-day multiple teams-of-four event. The trophy itself is a handsome cut glass crystal bowl.

The 2007 competition was held in the Council Room at Great George Street on 5 October 2007 and a record twelve teams entered. With so many players competing the room was buzzing all day long and consequently it took longer than usual to finalise the results.

The winners were a scratch team consisting of Andrew and Liz Cleary, Paul Lamford and Stefanie Rohan. Congratulations to the winners and well played all the other players. The Chairman of the London Association Steve Miller presented the winners with the Brunel Trophy.

After the bridge the evening dinner was taken in the nearby Old Star public house. The previous restaurant used the Sorriso restaurant has now been compulsorily purchased by the Metropolitan Police on security grounds because of its proximity to New Scotland Yard. This year there were 33 diners which was another record.

Next year's event will be held on Friday 10 October 2008. If you are interested in playing please contact me and if you don't have a team or even a partner don't worry- if you let me know early enough I can usually find others who are in the same boat to make up a team.

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SILVERSTONE - Tuesday 3rd July 2007

Four go mad at Silverstone

A select band of four battled the storms to visit Silverstone on the Tuesday prior to the 2007 Grand Prix. [See Photograph hereinafter]

Our first point of call was to the Spyker factory, where our band of drowning rats were met in reception by Steve Martin, who is the both the teams Health and Safety Officer and Quality Assurance Officer. Steve was to be our guide for the visit and he outlined a short history of Spyker and the usual do's and don'ts (please don't take any close-up pictures of gearboxes or engines etc...) whilst we dripped water and created little puddles on the floor of the immaculate reception area.

First stop was the race shop where a team of 12 technicians were hard at work stripping and rebuilding the race cars of Christian Albers and Adrian Sutil, along with the spare car and updating the livery on one of the show cars. We were allowed to get up close and take some really detailed shots of the chassis under preparation, it has to be said that the attention to detail is fantastic and this is from a team fighting to survive life at the back of the grid!

As we walked through the race shop we wandered by the refuelling hose which had caused so much trouble the previous weekend in France, when it had been taken for a short ride down the pit lane by Christian Albers. None of us could resist the chance to pick it up and test it's weight, it's no wonder it takes a team of burly blokes to carry out the refuelling task, these hoses are heavy and that's without them being full of fuel! [See photograph hereinafter]

On the way to 'Pre-Assembly' we managed to highjack one of the technicians who was carrying a couple of freshly prepared race helmets and he let us have a detailed look at Sutil's helmet, which had already been fitted with it's new tear-off visor covers.

The 'Pre-Assembly' shop is where all the components of the cars are taken apart and cleaned before being sent for testing, after which they return for re-assembly and are then sent off to the race shop where they are refitted to the chassis.

During our visit one of the technicians was stripping a drive shaft assembly, whilst boss Phil Howell (a former engineer on the race team in the old

Jordan days and who became a good friend of both Rubens Barrichello and Ralf Schumacher) took time out to explain how his department worked. He also showed us the difference in accelerator pedals, explaining how each driver liked a different style of damping on the movement of the pedal. To explain this he opened up a small packing case and lovingly removed a couple of throttle pedal assemblies and showed us the differences. Once again the attention to detail was quite amazing. Phil also said that with some drivers if you give them too many options then everything just gets too complicated and you get nowhere! [See photograph hereinafter]

Phil also made the comparison between themselves as the minnows at the back of the grid to the might of the big boys such as McLaren where a new part is completed every 20 minutes!

The next stop was the non-destructive testing department where, under UV light, we were shown the cracks in a gearbox cog. The technician keeping a watchful eye on the team's quality control has to test around 1,000 parts off each car following a race and as you can imagine when it's back-to-back races such as France and Silverstone, he doesn't get home to put the kids to bed very often!

Next-door was another testing lab, this time where Ultrasonic and proof loading is carried out using machinery supplied by the Denison Mayes Group. Whilst we were present the technician in charge was testing a carbon fibre wishbone using a high-speed digital camera and a number of sensors attached to the wishbone.

The machinery runs through three cycles, testing each component under both tension and compression and we were able to view the proceedings on a computer screen, as well as listening to the strands of carbon fibre cracking under duress. The equipment is able to measure and plot the location of any possible defects in the carbon and then these are examined using ultrasonic means to see if the part has failed.

We then moved on to the carbon room, where we watched one of the technicians building a carbon fibre wishbone, using a mould, a sharp knife and lots of pieces of carbon fibre sheet. To be perfectly honest, it looked a bit like Blue Peter and the days of 'sticky backed plastic', but I'm sure it's a bit more high tech than that. Certainly the carbon steering wheel we spotted looked the part and would have looked good attached to anyone's Sony PS2!

It was then a quick trip past the Autoclaves (used to bake the carbon fibre parts), through the composite and manufacturing sections, before ending our tour back in the race shop.

The visit was then completed by saying our goodbyes as we had the obligatory group photograph taken by the Dutch receptionist, very appropriate for Holland's new F1 team!

A visit, which was expected to last for around 45 minutes, eventually took us nearly 2 hours and proved to be a fantastic insight into the world of F1. It's hard to imagine what some of the other teams are up to, when you consider a 'small' team like Spyker employ 230 personnel compared to McLaren's 1500!

Next stop was to the A1 GP operation, which is located only a short distance from Spyker, only this time within the confines of the Silverstone circuit itself. A1's hangar size building is actually on the outside of Bridge Corner and is the large building with the A1 logo on the end, which you sometimes see from the in-car TV footage as the cars race towards Bridge.

This being GP week access in and around the circuit was not easy (not helped by the recent security incidents) and getting to the A1 site involved a bit of clambering over / under or through (!) wire fences separating car parks and saw Sarah take a bit of a tumble

Once we arrived we were given a talk by David Cleverdon, the AIGP Facilities and Parts Manager and then allowed to wander at will around the building. For the most part it was eerily quiet, with cars everywhere but very few mechanics. Only 10 - 12 people are actually based at Silverstone and mechanics come in from their teams as and when they need to do work on their cars.

David explained how all the cars and parts are packed up into containers known as 'Shacks', 'Wedges' and 'Coffins', which then neatly slot together into the holds of Jumbo jets and are flown to the fly away races in the Far East. The whole package is then unloaded, arranged neatly at the racetrack and then thoroughly messed up when each team's 10 mechanics arrive. After the race, it's all packed-up and transported to the next venue and the whole process rolls on again.

At the moment it's close season for A1 and with no development allowed as such on the cars it's very quiet. The only folks working were mechanics

from Team Australia (Matt Smith from Alan Docking Racing, also located at Silverstone) and a couple of guys from Team Ireland.

A couple of cars of note was the Brands Hatch winning car of Robbie Kerr and Team GB which was fresh from its outing at Goodwood, whilst the Team USA car was ready for display at the prestigious pre-Grand Prix ball at the Albert Hall (see page 9 of Autosport July 12th 2007).

Next on our agenda was a visit to the Silverstone Innovation Centre and a meeting with Jon Hilton, formerly Technical Director of Renault Engines, but now one of the Managing Partners of a company called 'Flybrid Systems'.

Jon gave us a presentation on his new system, which is a high-speed flywheel based energy storage and recovery system. The flywheel is connected to the transmission of the vehicle via a Continuously Variable Transmission (CVT) and manipulation of the CVT ratio achieves control of energy storage and recovery. When the ratio is changed so as to speed up the flywheel energy is stored and when the ratio is changed so as to slow down the flywheel energy is recovered.

This technology is not new. Flywheel energy storage has been used in hybrid vehicles such as busses, trams and prototype cars before but the installation tended to be heavy and the gyroscopic forces of the flywheel were significant. Flybrid Systems have now overcome these limitations. The key difference with the Flybrid device is the flywheel speed. Rotating at more than 60,000 RPM the flywheel can be very much smaller and lighter than has previously been possible and the gyroscopic forces are also reduced to a level that can be considered insignificant.

For further information about Flybrid and how it can be applied, especially in motorsport as it conforms to the FIA 2009 specification, I ask you to refer to the company's website at www.flybridsystems.com as a lot of what Jon said went over our heads!

Next stop was the actual track itself and we were collected in a minibus driven by Paul Robinson of Silverstone Circuits who gave us the guided tour.

We started off with a lap of the circuit where we could see all the work which was going on. The start / finish straight was littered with team transporters, as was the pit lane, as each of the teams was battling to get

their gear installed in the garages. Whilst out of the track cleaning and painting work was ongoing, Paul said they had been badly affected by the wet weather and parts of the infield and outfield were flooded in places due to the increased level of the water table. Extra drainage was being dug whilst we were driving around, though care has to be taken in ensuring that any french drains are flat and don't allow cars the chance to use them as a launch pad for a roll.

Andy Thorpe and myself were then given the chance to drive around the track, we were on our best behaviour and were asked to avoid running over any workers, crashing into transporters or errant forklift trucks which were buzzing around! The Transit seemed a world away from my last Silverstone outings (with Chris Hodgetts in a BTCC Toyota Corolla and behind the wheel of a Ford Cosworth on a Brooklyn customer day with Midlands rally driver Paul Dyas as tutor!) but the Abbey chicane and Bridge corner still seem tight in a 12 seater even at a miserable 25 - 30mph!

Unfortunately we were only allowed a cursory look along the pit lane from the window of our bus and then only half way down as lorries and loading equipment made it impossible and dangerous to pass. The only team who had already got cars in place were Ferrari and their cars could just about be seen behind the scarlet coloured boards they had blocking the front of their garages.

Paul then took us up to Race Control where he would be spending the weekend with the likes of the FIA's Herbie Blash and Charlie Whiting, the men behind the running of any GP.

We were shown the bank of 28 Sanyo TV screens that take the output from the cameras which cover 98% of the track. These used to be connected to video recorders but they used to wear out too quickly and they now send their signals to DVD recorders, which also record any radio traffic to disc. In the event of an incident taking place, this is to enable the full picture to be provided in words and moving images to any enquiry. These cameras are in action whenever the circuit is in use, be it race, test or corporate.

For any Grand Prix the FIA bring along their own control desks for both race control and timing, these had just arrived from the French race and had just been installed, each was a high-tech work of art being constructed from carbon fibre. I wonder if I can get a carbon fibre desk for my office?

Our final port of call was to the paddock to see all the trucks perfectly lined up behind the pits and to watch the motorhomes and hospitality units being erected. It looked like a large construction site, with cranes and scaffold everywhere, but none of us were talking about the cars only about the debut of the monster McLaren hospitality unit, known as the 'McLaren Brand Centre' which quickly became nicknamed 'Terminal Six' over the GP weekend!

It was then time to thank our host, wish him luck for the weekend and then make our way home at the end of a very enjoyable few hours at the home of British Motor Racing.

John Clewer

WEMBLEY RACE OF CHAMPIONS - Sunday 16th December 2007

Yes, Wembley certainly was good, if a little bit on the cold side. [See bottom Photograph hereinafter]

We had great seats on the front row of the Club Wembley tier, with the bridge right in front of us. The visit was an early present Christmas present from our eldest son who, along with a friend, has a 10 year Club Wembley season ticket.

We arrived at the glass front door of the stadium and went up a number of escalators to reach our level, being confronted instantly by a champagne and oyster bar (what ever happened to Bovril?). The facilities are excellent, OK so the drinks and food are a bit dear, but I guess that goes with the territory.

The racing was very good and the whole show very professionally done. I was intrigued by the flying camera, which was suspended on 4 wires over the track and gave some great angles for pictures.

The crowd was around 50,000, but although the stadium wasn't anywhere near full, it did produce a good atmosphere. The noise when the Tora Roso and Red Bull F1 cars ran around the track and did a few doughnuts was fantastic.

For me perhaps the best bit was the tribute to Colin McRae and after watching a video of Colin on the big screen, a lone piper played a lament and nearly everyone slowly rose to their feet. As he finished Alister drove

the '555' World Championship winning Subaru into the stadium, flying the blue and white cross of St Andrew it took you back to when Colin won the World Championship and celebrated at Chester!

Report by John Clewer



A1 GP BRANDS HATCH

A dozen of so arrived at Brands Hatch on a very cold and wet day in April, braving the walk down to the paddock where some of the supporting races were preparing their cars

The weather brightened up as we walked across to the pits where we had a delight to come. John Surtees is the seat holder for Team GBR and he spent a long time with us explaining in great detail about how the team has developed over the two or three years that A1 GP has been running. He introduced us to Robbie Kerr one of his drivers.

Various pit garages were visited along the pit road, including the Australian team who had been most kind to me a year ago in Jakarta

We had a visit and explanation in the control room where the Clerk of Course sits during the race, before venturing out onto the track in two minibuses.

The photograph hereinafter shows the sweep down the hill having rounded Paddock Bend

All in all a highly successful day, made by Jon Surtees' kindness and then by Team GBR winning one of the races on the following Sunday



Thomas Telford in Scotland: A pioneer of the Public Private Partnership

After the battle of Culloden in April 1746 the Government was faced with building a new social and economic structure in the Highlands to replace the old feudal order. New roads were one of the first priorities.

By the end of the 18th century the military roads built by General Wade in the 1730s were falling into disrepair, and travellers in the Highlands, most famously Boswell and Johnson in 1773, regularly reported on their poor condition .

Prompted by the newly formed Highland Society of Scotland and the British Fisheries Society the Government eventually decided to act. The Treasury appointed Thomas Telford in 1801 to select sites for fishing harbours on the west coast and to plan communications from the islands to the mainland and the Lowlands. He was also instructed to consider the possibility of a canal between the east and the west coast to enable sailing ships to avoid the difficult passage through the Pentland Firth, and unusually for an engineer, to report on the social and economic causes of emigration from the Highlands. To the Government this may have been a genuine matter of concern to solve a social and agricultural problem, or simply alarm at the threat to recruitment for the army in the middle of the Napoleonic wars.

Telford travelled extensively in Scotland in 1801 and 1802 and made his report in 1803. The Government acted with commendable speed and passed the Highlands Roads and Bridges Act in 1803 and, within a few months, granted an initial sum of £20,000 for the new roads and bridges.

The cost of the roads was to be shared equally by the government and the local land owners. Since the main purpose of the roads was to enable the landowners to move cattle, sheep and fish more readily to the markets in the Lowlands, it was considered reasonable to ask them to share the cost. Any cost overrun was to be met by the land owners so that the government contribution was known and decided in advance . The landowner's contribution was usually secured by a mortgage on their estates.

The first road supported by this scheme in 1803 was from Fort William to Arisaig and the contract was awarded to a Perth contractor, Messrs Dick and Readdie, for their offer of £6,900. Unfortunately their offer was too low to do the work, the contractors had difficulties with the weather and

with their labour and the road was not finished until 1812. Subsequent contractors were more careful with their quotations.

By 1828, twenty five years later, a total of 920 miles of road and over 1,100 bridges had been built, together with harbours and ferry piers, at a cost to the Treasury of over £600,000.

But by 1828 transport had changed with the invention of the steam engine and the development of railways and steam ships. And the passage of the Pentland Firth ceased to be the difficulty it had been for sailing ships. A chapter of successful road building had been completed.

(PS London Region has organised 4 lectures on the modern use of the PFI on 3,10,17 and 24 May at the City University)

Robert Freer



MISSION STATEMENT

The objectives of the Club are:-

- i. to promote social and sporting activities amongst civil engineers and their families
- ii. to give retired Members of the Institution the opportunity for maintaining friendships established during their professional life to enhance the image of the Civil Engineer through the organisation of major events
- iii. to enhance the image of the Civil Engineer through the organisation of major events

WEB SITE

The Club web site for the Club is up and running at www.ceclub.org.uk

The programme is updated on a monthly basis so keep your eyes on that page if you want to be kept up to date. If you have any comments, or want additions to the web site, then please contact me at

secretary@ceclub.org.uk

John D Brownlie