



An Association for Retired Professional Engineers

NEWSLETTER

March 2009

PROGRAMME OF EVENTS 2009 Session

16 th Apr	Thursday	Coffee - at Spotted Cow, Angmering
22 nd Apr	Wednesday	Visit. 2.00 pm. Thales Training and Simulation Centre, Crawley
30 th Apr	Thursday	Coffee - with Partners at Beach Hotel, Worthing
13 th May	Wednesday	Outing. 2.00 pm Guided tour of Nymans Gardens.
21 st May	Thursday	Coffee - at Spotted Cow, Angmering
28 th May	Thursday	Coffee - with Partners at Beach Hotel, Worthing
9 th Jun	Tuesday	Outing. 2.00 pm. Guided tour of Fishbourne Palace
18 th Jun	Thursday	Coffee - at Spotted Cow, Angmering
25 th Jun	Thursday	Coffee - with Partners at Swallows Return, (Northbrook)
9 th Jul	Thursday	Outing. 2.30 pm President's Garden Party
16 th Jul	Thursday	Coffee - at Spotted Cow, Angmering
31 st Jul	Friday	Outing. 2.15 pm Croquet, Duncton (NOTE CHANGE OF DATE AND VENUE)
30 th Jul	Thursday	Coffee - with Partners at Swallows Return, (Northbrook)
20 th Aug	Thursday	Coffee - at Spotted Cow, Angmering
27 th Aug	Thursday	Coffee - with Partners at Beach Hotel, Worthing

All Talks and Meetings will commence at 2.30 pm and be held in the Chichester Room, Field Place, Worthing, unless another venue or time is indicated.

Timings for visits and outings will be as printed in the detailed description of the activity.

Coffee mornings commence at 10.30 a.m., except at The Beach, which is from 10.45 a.m

RCEA COMMITTEE MEMBERSHIP

You will probably recall, from my letter to members of 10th August 2008, that I hope to become President at our next AGM in September. So that I can do so we need a Secretary to take office from that date. Unfortunately we have no one currently on the committee prepared to fill this role.

If any member is prepared to take on the position of Secretary I would be delighted to hear from him/her. I will of course offer my full support and assistance to ensure that the changeover goes as smoothly as possible.

The concerns I expressed last year are still valid, so I would like to take this opportunity to encourage members to join the committee in any capacity. Your support and fresh enthusiasm would be very welcome.

Colin Pilling Hon. Secretary

Website for the RCEA

For latest information and photographs, log into www.rceasussex.org.uk

Brief Detail – Talks, Outings and other activities April - July 2009

Visit. 2.00 pm Wednesday. 22nd April: Thales Training and Simulation Centre, Crawley.

The visit will comprise a short introductory talk about the company including its origins, products and services and its future plans. A tour of the factory including a demonstration/experience of a simulator and finishing with a question and answer session.

The visit will be limited to 20 people so members will receive priority.

Applications by 14th April using Reply Slip at the end of newsletter

Directions see map at end of newsletter

Outing. 2.00 pm Wednesday 13th May Guided tour of Nymans Gardens.

"Theatrically designed with plants from around the world, Nymans is internationally renowned for its garden design, rare plant collection and intimacy. Visit the Messel family rooms in the house and see the dramatic ruins, which form a magnificent backdrop to the main lawn. Enjoy wonderful views across the Sussex countryside and explore the wider estate with walks through ancient woodland, beside lakes and wildflowers. Nymans is one of the leading green gardens in the National Trust, actively engaging visitors with its methods of sustainable gardening."

We will meet at 13.45 outside the main entrance for a conducted tour of the house and gardens. The tour will last between 1 and 1.5 hrs. The cost will be **£7** entry per head for non- members of National Trust and of course free for members. Members should bring along their membership cards. The tour will cost an extra **£2** per head for everyone.

Directions:

Nymans can be found on the B2114 at Handcross, just off London–Brighton M23/A23, 5ml S of Crawley

Closing date for applications 14th April, Applications to C Pilling.

Outing. 2.00 pm. Tuesday 9th June: Guided tour of Fishbourne Roman Palace

We have arranged a guided outing to the Fishbourne Roman Palace, Fishbourne, just west of Chichester on the 9th June. The Palace is said to be the largest domestic Roman building yet found in Britain and it still contains many mosaic floors, some almost complete.

We meet outside the main entrance at 2pm, and first see a short film. At 2.30 pm, we will have a talk by one of the Curators at a scale model of the site and then move to the Discovery Centre for a guided visit where the

main archaeological reserve collection is housed. After the guided part of the visit we are free to roam the site including the garden, now re-planted to the original Roman plan. The Palace closes at 5pm.

The site is generally Disabled and wheelchair friendly, but as the paths in the garden are gravel, wheelchair users may find some difficulty.

The cost is £7.00 per person and reply slips should be received no later than 1st June.

There is a Cafeteria outside the main gate at the Palace serving refreshments and light lunches. The staff has asked that we let them know how many of our party are likely to want a light lunch. So that we can do this, will members please indicate on the reply slip whether or not they expect to have lunch. Please note, this is not a formal booking.

Directions:

The Palace is located in Salthill Road, which is a turning to the north off the A259, not far from the most westerly roundabout on the Chichester by-pass (where the A27 and A259 divide). We are told that the site is well signposted. For SatNav purposes, the Post Code is PO19 3QR.

Outing. Thursday 9th July: President's Garden Party

"At Home" in Findon. 17 Fox Lea, Findon, Worthing BN14 0XB

Anne-Marie and Ken Lane have agreed to host a garden party at their house on the afternoon of Thursday the 9th July. It is intended as a purely social occasion to allow members and guests to chat and relax (hopefully in the sun). Soft drinks, tea, coffee, and refreshments will be available throughout the afternoon, so why not come, meet old friends, make new ones and enjoy an English Garden Tea.

The cost will be £2.50 per person to cover catering for the refreshments and drinks. Any surplus will be retained in the Association funds.

If you are coming, it would be helpful if you could bring a folding garden chair, since these may be in short supply.

If you would like to attend please return reply slip at the end of this newsletter
Closing date for applications 12th June

Outing. 2.15 pm. Friday 31st July: Croquet and Afternoon Tea, Rother Valley Croquet Club, Duncton (NOTE CHANGE OF DATE)

The Croquet Club is in a beautiful setting with magnificent views over the Downs on the A285 Chichester to Petworth Road north of Duncton Village on the East side of the road. **No previous experience is required** and all equipment is provided.

Please wear flat-heeled shoes.

Spectators are welcome and some seats are provided but please bring a folding chair if you have one available.

The cost is £5 per player or £3.00 for non players to include a delicious home made afternoon tea served in the Pavilion. A further session of croquet will be arranged after tea for those wishing to stay later.

Please indicate on the reply slip if you wish to play, there is a 20-player limit.

This event proved to be a very popular social occasion each time it has been organised in the past.

REPORTS

Talk.

Tuesday 10th February, Field Place, Durrington,
The European Space Agency by Terry Turner

On the 10 February Terry Turner Gave a talk entitled '**The European Space Agency (ESA)**'.

Terry Turner graduated in Mathematics and Computing and gained further qualifications in Germany. During his career he worked in the U.K. for The British Aircraft Corporation and in Germany for Junkers Flukzoid and Motorewerke, and Messershmidt Bolkow Blohm.

After which he worked for the ESA as a project engineer in various locations including NASA and the Kennedy Space Centre.

He worked on Science and Earth Observations, Space Laboratory Programmes and latterly in managerial positions. He retired to the U.K. in 1998.

The talk covered background information on the ESA including satellites testing and launchers. The ESA was formed in 1974 for peaceful purposes and to help industry. The U.K. contributes £300million annually to help fund the project although it is given greater prominence in France and Germany. It has it's H.Q. in Paris with R & D. based in Holland, and Satellite Operations and Astronauts in Germany. The are further offices and sites in Italy and Spain.

The first entry into space was the Russian Sputnik in 1957.

The speaker said that there are now more than 200,000 objects greater than 1cm and more than 10,000 objects greater than 10cm. circling the Earth which represent a significant danger to spacecraft and satellites. It was a strange coincidence that later on the day of the talk two satellites collided over the Russian Arctic. Over 500 people have now been in space which is very hazardous as over 200 have subsequently died. Also as the effects of radiation in space can take up to 20 to 30 years to appear older astronauts are now being employed.

An important part of the ESA's work is providing weather information which is now a major help in weather forecasting.

The Science and Earth Observation Section provide much important information on Global warming and other changes occurring on the Earth's surface.

The speaker described many missions undertaken by the ESA.

Two notable one's were :

1. The Giotto Mission.

Halley's Comet has been observed 30 times with it's last appearance in 1986 and five spacecraft have visited the comet.

The most productive was the ESA's Giotto mission which flew within 370 miles of the nucleus and took the first ever pictures.

Giotto proved that the comet's nuclei are large potato-shaped dirty snowballs.

The comet was about 93 million miles from the Sun when Giotto encountered it.

It is estimated that Halley's Comet will survive for about another 200,000 years.

2. The Rosseta Mission.

In 1969 the Russian astronomer Klim Churyumov discovered a new short period comet keeping between the orbits of Mars and Jupiter as it travels round the Sun.

It is now the target of ESA's Rosseta Mission.

The orbiting spacecraft was originally intended to go to the comet Wirtanen, but the launch was delayed due to problems with the Ariane 5 Rocket.

It was finally launched on 2 March 2004 and will go into orbit around the Churyumov Comet in November 2014 when it is 490 million miles from the Sun.

A small lander called Philae will be landed on the surface of the comet to provide much useful information on the behaviour of comets.

Ken Lane

Visit.

Tuesday 17th February at 2.30 pm.

Visit to West Dean College to view the wood chip fired boiler installation and clock workshops.

15 members enjoyed a visit to West Dean College, near Chichester, which was in two parts.

First, we visited the wood chip fired boiler plant. The output provides heat for the large historic building and its numerous outbuildings. The concept of wood chip heating was decided upon over 20 years ago following a visit by staff to Sweden. The plant installed as a result is of Swedish manufacture and has only recently become the standby, a new Austrian boiler having been commissioned a week before our visit.

All the wood is harvested from the College estate, amounting to some 1800 tonnes wet per annum. This is air dried for a year to 18 months before use when the weight is some 1200 t. Currently, all the wood being used is thinnings from the replanting of commercial woodlands following the 1987 hurricane and is of no commercial value as timber. There is sufficient for the College to sell wood chips to other users.

The wood is brought from the woods by tractor and trailer to the boiler house already cut into usable lengths, stacked and fed into the chipping machine from which it is transferred by conveyor to the covered store. There is also a log splitting machine for larger timber.

It was explained to us that wood chip does not “slide” and there is a system of four hydraulic rams which keep the pile disturbed causing it the “flow” into an auger feeder and thence to the boiler.

We were fortunate to be able to see the new boiler bearing in mind that the visit was arranged over a year ago.

The output of the boiler is hot water at 90 deg C. To the surprise of some of us, all the water used is town’s water, the system being purged and chemically treated once a year.

Our guides were the Head Forester and the Clerk of Works together with the College carpenter, the latter being on call for any automatic alarm, otherwise the boiler is unattended, all of who gave us clear descriptions of the system and plant and answered many questions.

The second part of the visit was to the Clock Workshop in the main College building. Here, the College runs one and two year courses in clock restoration, the students coming from many countries around the world. Matthew Read, a former student himself and newly appointed as Head of the Course gave us a talk which spanned from the basics of horology to the future employment prospects for graduates, which is mainly in lucrative self-employment although the courses are run in collaboration with the British Antique Dealers Association. Matthew told us that the examples the students work on as part of their training are sometimes extremely valuable and come from many sources from private individuals to the National Trust and museums. One student in his second year is making a reproduction of a Thomas Tompion clock, which will be on display at the Greenwich Observatory.

Members had discussions with the students and discussed the work they were doing. We got the impression that the students enjoyed our visit as much as we did.

R Norton.

Spring Lunch.

Thursday 5th March, 12.00 for 12.30 pm Northbrook College, Worthing in the Arundel Room Training Restaurant.

The best yet ? Service and meal excellent. Attended by 37 guests. President’s speech received with resounding applause

J Underwood

Talk.

Tuesday 10th March, Field Place, Durrington,

DeHavillands – mainly during and after WW2, ‘From Tiger Moth to Comet 4’, speaker Alan Constantine

On the 10th March 2009 Alan Constantine gave a talk entitled "De-Havillands- mainly during and after WW2 from Tiger Moth to Comet 4. The speaker discussed the history- of the company and the influence Sir Geoffrey de Havilland had on the development of aircraft design, in the U.K.

At one time Sir Geoffrey was one of DH's main test pilots. Later his son Geoffrey de Havilland Junior was also a test pilot for the company but sadly he died in September 1956 when the DH 108 experimental jet aircraft he was flying broke up in the air.

The Tiger Moth and its derivatives have been used throughout the world as a training aircraft. An early version of the DH 4 was used as a bomber in the First World War. In 1934 the DH8 Comet Racer, a most advanced aeroplane of its day won the famous England to Australia Air Race. It continued to break records and in 1938 it flew from England to New Zealand and back more than 26,000 miles in eleven days. The aircraft was the forerunner of the wartime Mosquito.

Very little Government contract work had been placed with de Havilland since 1919 but in the autumn of 1938 in the critical days of Munich, de Havilland tried to interest the authorities in his idea for a twin engined, high speed, unarmed bomber. The Air Ministry showed very little interest in his idea but fortunately Air Marshal Winfred Rhodes Freeman, who, as the Air Member of the Air Council for Development and Production insisted in ordering 50 Mosquitos off the drawing board.

The Mosquito was designed at Salisbury Hall; a stately home near St Albans and the first proto-type was completed in November 1940 and taken by trailer to Hatfield for trials. The aircraft was constructed of balsa wood imported from Ecuador, sandwiched between layers of birch much of which was imported from Canada. Various furniture makers from High Wycombe including G-Plan helped to construct the bodies.

The aircraft was made in two halves, which enabled the controls to be more easily assembled before the two halves were glued together for final assembly. The Mosquito was powered by two Rolls Royce 12 cylinder Merlin piston engines

In all nearly 8000 Mosquitos were made during the war of which 3299 came from Hatfield, 1134 from Toronto in Canada, 208 from Sydney Australia. The Standard Motor Car Company also produced over 1000 Mosquitos in Coventry.

The Mosquito was involved in many famous exploits during WW2. On the 30 January 1943, on the tenth anniversary of Hitler's seizure of power Reich Marshall Goring was scheduled to address a large assembly of the Wehrmacht at the German Air Ministry at 11 00 am. A few minutes before eleven o'clock three Mosquitos swept across the city at 350 mph and bombed the radio station off the air. At 4.00 p.m. Goebbels was due to make a follow up speech in Berlin and again three Mosquitos bombed the capital.

On 25 September 1942, a special target was selected for a daylight attack at low level by four Mosquitos. This time the target was the Gestapo H.Q. in Oslo which was successfully bombed.

In Feb 1944, 120 French prisoners who had been condemned to death for helping the Allies were being held at Amiens Prison. Three waves of Mosquitos bombed the walls of the prison enabling some of the prisoners to escape. This raid was later made into a film called "Target for Tonight"

The de Havilland Mosquito was a highly versatile fighter-bomber and one of the most outstanding aeroplanes of WW2.

After the war de Havilland developed the Comet 1, which was the world's first jet airliner. In 1952, 10 were delivered to BOAC (British Overseas Airways Corporation). They cut flying times in half, but a series of disastrous accidents led to the grounding of all Comet 1's by 1954. Lengthy investigations showed that the accidents were caused by metal fatigue. The improved Comet 4 had a longer range and in 1958 made the first Jet-powered passenger crossing of the Atlantic.

Ken Lane

Visit.

Wednesday 18th March at 11.00 am Mercedes-Benz World, Brooklands.

Twenty-two members and guests attended this event. The visit consisted of a guided tour of the three floors of exhibits, which included a range Mercedes cars through the ages. The exhibition starts with a reproduction model of the very first Mercedes car, (the world's first motor car), and progresses through a series of early and mid 20th century models to those currently available in the showrooms today. The primary purpose of the exhibits is to demonstrate Mercedes experience, heritage and technology in the motorcar industry.

As well as the guided tour we were shown a film of the history of Mercedes-Benz, which recorded the 120 years of innovation in car design. This was followed by a 3D simulator experience, which illustrated the build process for a modern Mercedes car as it progresses along the production line.

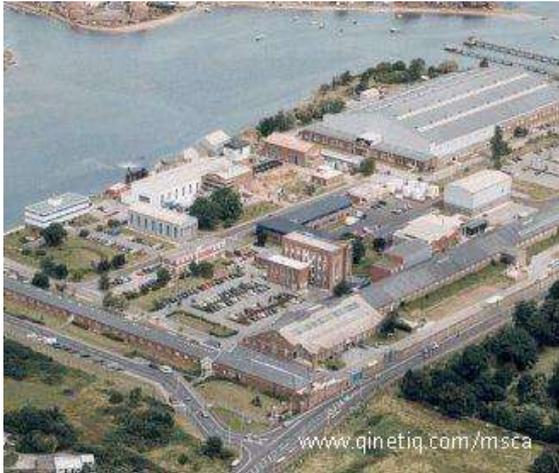
After the tour we were free to wander around the exhibition at leisure or for the adventurous, take a 'Driving Exhilaration ride' in one of their AMG Cars around the handling and wet skid circuits. (6.3 litre engine, developing 600-horse power) (Extremely fast cars driven by Mercedes Staff who were really Lewis Hamilton 'wannabe's' a real test for those who took part to see if they could keep their lunch down !)



Visit

Wednesday 1st April at 2 pm QinetiC ship test tank facility, Haslar

At very short notice we were offered a visit to the QinetiC ship test tank facility, located at Haslar in Gosport. With only a few days to organise the collection of applications and all of the security clearance data they needed to allow the visit to proceed, we were unable to advertise it in the normal way. Those members who attended the West Dean visit were informed during the visit and all members who we know to have an e-mail address were sent the information as soon as it became available. Details were also posted on our web site. Unfortunately we were unable to choose another date other than the one offered, so the visit had proceed on that basis. The application list was over-subscribed in a few days.



(Pictures copyright and courtesy QinetiQ from Internet site www.qinetiq.com/msca)

Nineteen members attended this visit. After a brief introduction by the Manager of the Hydrodynamics Department we were given a short slide presentation on the work undertaken at the QinetiQ site. This varies from ship hydrodynamics testing using models (surface ships and submarines) to work on atmospheric control systems, fire testing, submarine escape systems, and hyperbaric facilities for testing of life support respiratory equipment (e.g. diving sets). Our visit on this occasion was principally to see the test tanks.

Our host for the afternoon, Chris Richardsen, then gave a talk on the history of the facility, which dates back to the 1880's, an outline of the current work being undertaken for the MOD and some foreign navies, and finished with a view of the future sources of work for this unique UK test facility....After answering a multitude of questions from our members relating to ship design we were given a guided walk around the test tanks and some of the other facilities on site.

We made a start viewing the Ocean Test Tank where we able to see the massive rotary towing arm in action and the generation of waves in the tank. This was followed by a brief visit to the old cavitation test facility; a test rig rebuilt in the UK in the 1950's after it had been 'rescued' from Germany as part of the second world war repayment scheme; now no longer used because they have access to a more modern facility in France. Finally, we visited the Towing Test Tank to see its incredible length, the towing mechanism, the types of model used, the calibration equipment, etc. This tank is currently being used to test a commercially designed wave power generator. Throughout our tour Chris gave a running commentary pointing out the many interesting features of the facility and the models we were able to see, in addition to answering the many many questions this generated as we moved around the different parts of the site.

We concluded the afternoon with another question and answer session in the Conference Room before thanking Chris for giving us such an excellent and informative afternoon.

REMINDER:

RCEA members are covered by a Members' Club Protection Policy whilst engaged in Association activities This cover does not extend to non – members and guests.

REPLY SLIP 1:

To: Glyn Mathias, 16 Tamarisk Way, East Preston, Littlehampton, BN16 2TF,
telephone 01903 859191. glyn.mathias@btinternet.com

I wish to attend the **Visit at 2.00 pm on Wednesday 22nd April to Thales Training and Simulation Centre, Crawley..**

Full name.....(Block capitals)

Address.....

Phone No.....

e-mail address.....

Applications please by **14th April 2009 (note early return date)** **20 maximum.**

Please note restricted numbers for this visit, Members only, first come first on list.

REPLY SLIP 2

To: Colin Pilling, 84 Marine Crescent, Goring-by-Sea, BN12 4JH Tel 01903 522356

Please reserve.....places for me for the **Outing at 2.00 pm on Wednesday 13th May to Nymans Gardens.**

Name.....(block capitals)

Address.....

Phone No..... My visitor/s will be

E mail address.....

I enclose a cheque made payable to RCEA for £.....(**£9.00 per person or £2.00 per person for NT Members**)

Applications please by 14th April 2009. (note early return date)

INTENTIONALLY

BLANK

REPLY SLIP 3:

To: Richard Norton, 106 Wallace Avenue, Worthing BN11 5QA
Tel 01903 242204, or at rwvnorton@iee.org.

I wish to attend the **Outing at 2.00 pm. On Tuesday the 9th June to Fishbourne Roman Palace**

Name.....(Block capitals)

Address.....

Phone number..... Name of Guest/s.....

E mail address.....

I enclose a cheque made payable to RCEA for £.....(**£7.00 per person**)

Please indicate whether or not you expect to have lunch at the Cafeteria Yes/No .

Applications please by 1st June 2009

REPLY SLIP 4

To: Ken Lane, 17 Fox Lea, Findon, Worthing BN14 0XB, 01903 873956

I/we wish to attend the **President’s Garden Party at 2.30 pm on Thursday the 9th July 2009**

Name:.....(Block capitals)

Address:.....

Phone Number:.....

Guest names.....

I enclose a cheque made payable to RCEA for £..... (**£2.50 per person**)

Applications by 12th June 2009. (Separate cheque please)

REPLY SLIP 5

To: Ken Lane, 17 Fox Lea, Findon, Worthing BN14 0XB, 01903 873956

I/we wish to join the outing to **Duncton Croquet Club, 2.15 pm Friday 31st July 2007**

Name:.....(Block capitals)

Address.....

Phone Number:..... Number of Persons

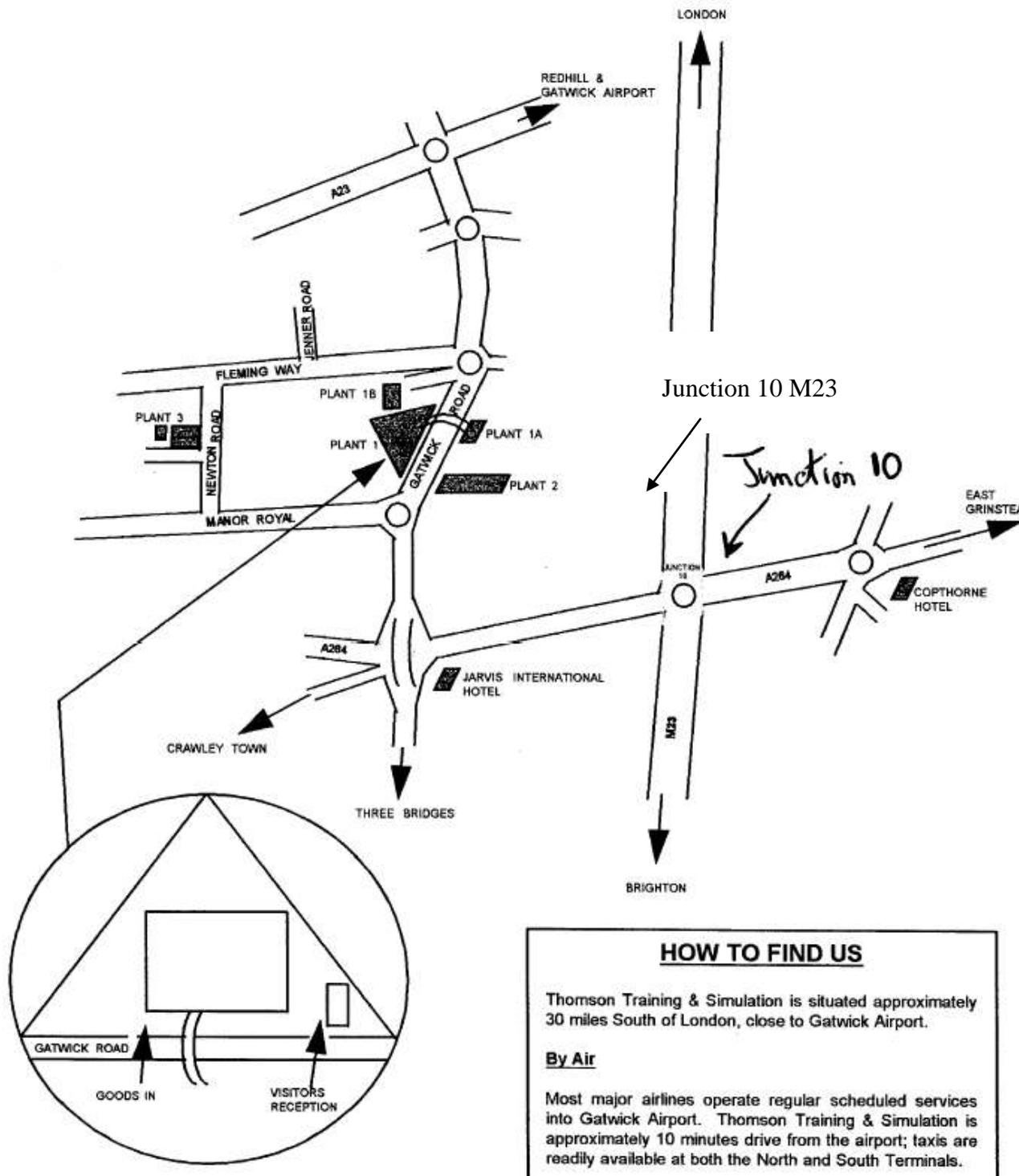
Guest names.....

- 1) who would like to play:(£5.00)
- 2) who would like to be a spectator : (£3.00)

I enclose a cheque made payable to RCEA for £..... (**£5.00 per player, £3.00 for non-players**)

Applications by 20th June 2009. (Separate cheque please)

LOCATION MAP



HOW TO FIND US

Thomson Training & Simulation is situated approximately 30 miles South of London, close to Gatwick Airport.

By Air

Most major airlines operate regular scheduled services into Gatwick Airport. Thomson Training & Simulation is approximately 10 minutes drive from the airport; taxis are readily available at both the North and South Terminals.

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