

BRITISH AEROSPACE

Hatfield 83



Open Day

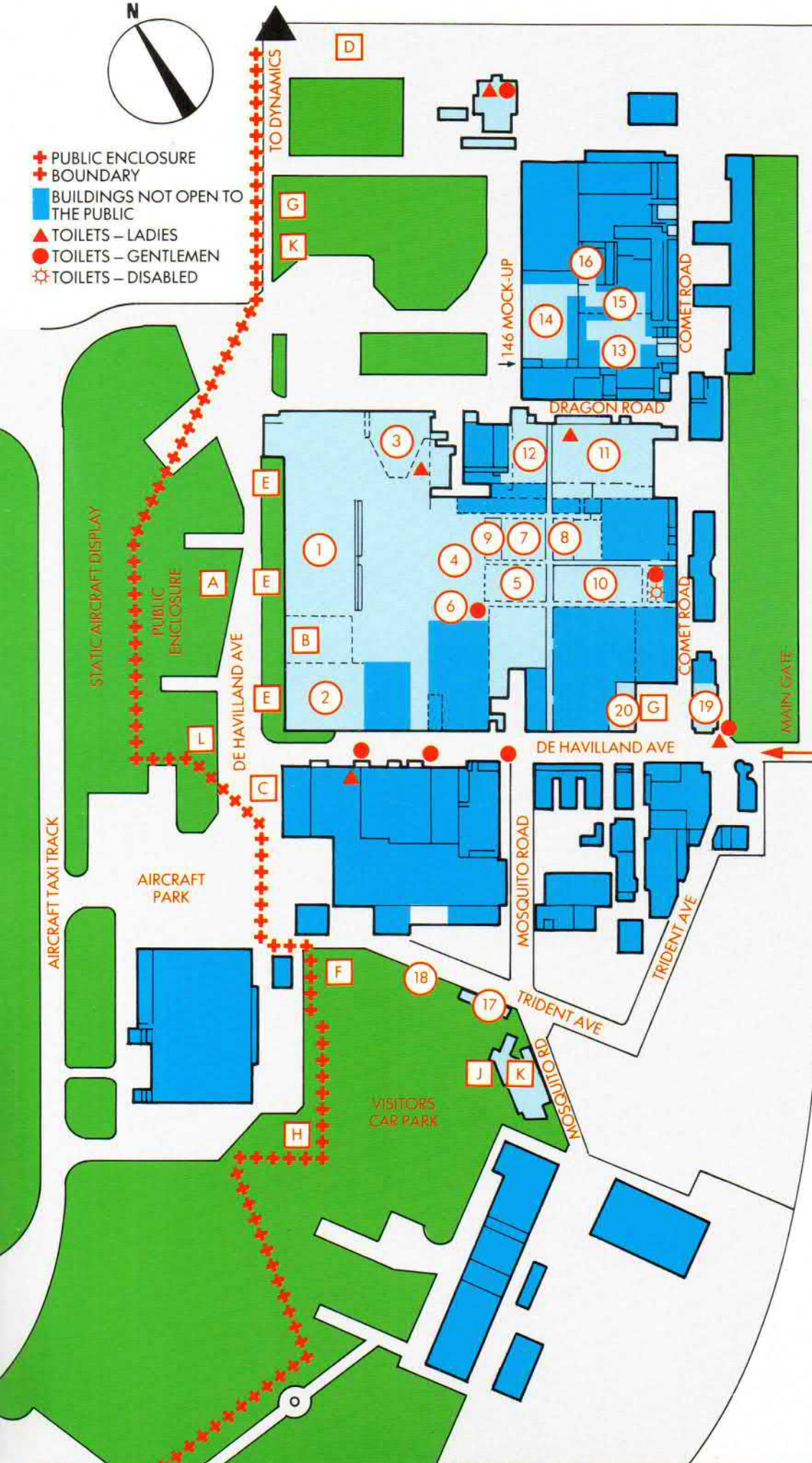
Programme

Price 50p

Aircraft Group Site



- ✚ PUBLIC ENCLOSURE BOUNDARY
- BUILDINGS NOT OPEN TO THE PUBLIC
- ▲ TOILETS – LADIES
- TOILETS – GENTLEMEN
- ☼ TOILETS – DISABLED



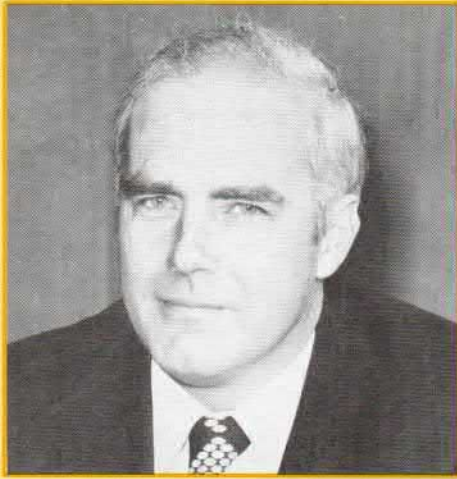
BUILDINGS OPEN TO THE PUBLIC

- 1 – Aircraft assembly area
- 2 – New Machine shop
- 3 – Aircraft paint shop
- 4 – D. A. D. 2
- 5 – E.S.A. Avionics
- 6 – Redux dept.
- 7 – D. A. D. 1
- 8 – Upholstery
- 9 – Training module
- 10 – Production engineering and safety
- 11 – Press and foundry
- 12 – Metal form shop
- 13 – Systems test
- 14 – Mock-up shop
- 15 – Tech. services
- 16 – Structural test
- 17 – Sales centre with Film Shows
- 18 – Museum
- 19 – Restaurant – Lunch tickets on sale during the morning
- 20 – Surgery

DISPLAYS AND AMENITIES

- A – Outside Exhibitions
- B – Bandstand
- C – Fire Brigade Exhibition
- D – Children's Corner
- E – Snacks, Beverages and Ices
- F – Ices
- G – First Aid
- H – Aircrew Briefing
- J – Company Guests and aircrew
- K – Restaurant (Advanced booking only)
- L – Lost Child Centre

Welcome



Michael Goldsmith

MICHAEL GOLDSMITH
MANAGING DIRECTOR
HATFIELD/CHESTER DIVISION
AIRCRAFT GROUP

It is with great pleasure that we again open our doors to welcome you to Hatfield '83.

The Aircraft Group here at Hatfield is a very active site in 1983 with responsibility for three major civil aircraft programmes, the BAe 125 business jet, the Airbus airliners and of course, the new BAe 146 feederjet.

All three of our programmes have achieved important milestones in 1983. The latest version of the Airbus, the A310, entered service in May flying on our highly advanced wings, the BAe 146 completed its test programme and also saw airline service for the first time earlier this year, and the BAe 125 was launched into another phase of its successful career with the roll out of a new version – the 125-800.

Over the years our Open Days have been extremely well supported and I am sure today will be no exception – I wish you all an enjoyable day.



B Rosser

BERNARD ROSSER
MANAGING DIRECTOR
HATFIELD DIVISION
DYNAMICS GROUP

I would like to welcome you all to Dynamics Group's Hatfield Division for our 1983 Open Day. Today gives you a good opportunity to see something of the exciting projects on which we are working, together with a look at what the future holds in store both in the way of projects and in the advanced development and manufacturing techniques which we are applying to them.

This is also an opportunity for you to see at first hand some of the British Aerospace missiles which performed so well during the Falklands conflict last year. Much effort is being put into obtaining new orders, particularly for export, to provide a long-term centre of employment at Hatfield.

Have an enjoyable day. And if you want to know more, don't hesitate to ask the staff on duty.

Programme of Events

Morning Events with the Aircraft Group

- 09.30** Gates open to the public (Aircraft Group)
- 09.45–10.45** Hatfield Concert Band in 146 Assembly Hall
- 11.00–11.30** Swedish band recital in 146 Assembly Hall
- 11.30–1.00** Flying display of aircraft drawn from British Aerospace, Airbus Industrie, The Ministry of Defence and private sources.
- 1.00–1.45** Swedish band recital in 146 Assembly Hall
- 3.00** Aircraft Group site closes (further attractions on Dynamics Group site).

Attractions during the Morning include:

BAe 146 Production Areas open to public – many with departmental exhibitions.

BAe 146 Mock-Up

BAe 146 Film Show – a continuous showing of films of the BAe 146 on the sales tour of the Far East.

Static Aircraft Park:

DH Rapide joy rides – take a flight in a Rapide
(no flights during the air display)

Children's entertainment

QE.II Hospital stand

RAF Museum stand

Bomber Command stand

Post Office display

BMW and Harley Davidson Motor Cycle stands

Police traffic and crime prevention display

In addition we have two bands for your enjoyment today:

The Hatfield Concert Band has been playing a wide range of music in the area since 1979 and amongst the many pieces in today's programme is one written by musical director John Collinge and dedicated to the BAe 146 entitled 'Jetset 81'.

The Swedish Red Cross Band from Malmö, Sweden, consists of 40 accomplished musicians who are currently touring this country and have kindly agreed to play for us today. The high standard of the band has resulted in an invitation to perform each year at the changing of the guard ceremony at the Royal Palace, Stockholm. We welcome Malmö Musikkor to further cement the links between Sweden and ourselves on the BAe 146 programme.

de Havilland Sports Club (Aircraft Group):

Attractions at the Sports Club include:

Model Railway exhibition

Art Exhibition

Cricket and bowls matches

Club ties and souvenirs on sale

10.00– Light refreshments available

14.30

20.00 Grand dance and Miss de Havilland personality competition

Please refer to the map on the inside front cover of this programme

Programme of Events

Afternoon Events with the Dynamics Group

- 11.30 Gates Open**
Parts of the factory are open from 11.30 pm to 4.30 pm. There are indoor and outdoor displays of Hatfield products and displays of our development and manufacturing capabilities. Enquiries concerning employment can be made at the Personnel Department caravan after 1.00 pm. We regret no cameras are allowed in the factory building.
- 12.30– 1.30 Band Concert by the Hatfield Concert Band – Bandstand**
- 1.00 Sports Field Open Displays – Sports Field**
Continuous displays through to 5.30 pm which include the Royal Anglian Regiment small arms display, 201 Hertfordshire and Bedfordshire Yeomanry Field Battery field gun display, Fairground and numerous other displays by local organisations and sections of the Dynamics Hatfield club. There are refreshments available and a beer tent.
- Helicopter Flights – Aircraft Park**
For £7.00 per person (infants on laps free) you can have a five minute flight in a Bell Jet Ranger helicopter provided by Cabair Air Taxis Ltd.
- Aircraft Flights – Aircraft Park**
Again for £7.00 per person you can fly in a fixed wing aircraft. Flights are of about 15 minutes duration and provided by Hatfield Executive Aviation.
- 2.00 The Red Devils Free Fall Parachute Display – Main Arena**
The Red Devils are the display team of the Parachute Regiment and are famous for their displays of free fall parachuting.
N.B. Parachuting can be a hazardous activity. Although the Red Devils take every precaution, there is always the possibility of the unforeseen hazard. Spectators therefore watch at their own risk.
- 2.00– 3.00 Band Concert by the Band of HM Royal Marines – Bandstand**
Famous for their white helmets and immaculate turnout and drill, the Band of Her Majesty's Royal Marines are popular wherever they go. The band is conducted by Lieutenant Colonel G. A. C. Hoskins, MVO, LRAM, RM.
- 2.30 Field Gun Display – Main Arena**
A team from the 201 (Hertfordshire and Bedfordshire Yeomanry) Field Battery Royal Artillery (Volunteers), will demonstrate how a gun is brought 'into action'.
- 3.00 The Royal Air Force Police Dog Demonstration Team – Main Arena**
Always a favourite with show crowds, the Royal Air Force Police Dog Demonstration Team is an exciting display of total understanding between man and dog.
- 3.30 Tracked Rapier Display – Main Arena**
Tracked Rapier is the highly mobile tracked version of the Rapier short range anti-aircraft system which gave such a good account of itself in the Falklands last year.
- 3.30– 4.30 Band Concert by the Band of HM Royal Marines – Bandstand**
- 4.30 Historic Vehicle Rally Winners Parade – Main Arena**
The winners of the historic vehicle concours d'elegance will parade their vehicles and receive their prizes. All vehicles were built between 1897 and 1955.
- 4.45 The Band of HM Royal Marines – Main Arena**
Marching and counter marching, to be followed by
- 5.00 Sunset – The Band of HM Royal Marines – Main Arena**
- 5.30 Site Closes**

IN EMERGENCY Contact the control caravan, any uniformed security policeman or the First Aid Posts shown on the map on the inside front cover of this programme. First Aid coverage has kindly been undertaken by members of the St. John Ambulance Brigade.

Please refer to the map on the inside back cover of this programme

BAe 146

The BAe 146 is a new generation short haul feederjet seating between 80 or 109 passengers in two versions, the Series 100 and Series 200, built alongside each other here at Hatfield. Powered by four Avco Lycoming turbo fans (ALF 502) the 146 is fuel efficient and very quiet. Final Assembly of the 146 is carried out at Hatfield from assemblies supplied by other BAe factories at Filton, Manchester, Brough, Prestwick and Weybridge. In addition we have two overseas partners in the programme, Avco Aerostructures in the USA who supply the wings and SAAB-SCANIA in Sweden who build the tailplane and control surfaces.

The BAe 146 was designed from the outset to provide an economical replacement for the ageing turbo-prop aircraft and short haul twin jets. The BAe 146 offers feeder airlines good fuel economy and low maintenance costs and combines jet standards of speed and comfort with the airfield performance of the turbo-props.

The first 146 flew in September 1981 and immediately commenced an intensive flight test programme. Aircraft 001 was soon joined over the following months by 002, 003 and 008 (the first Series 200) all of which were fully instrumented development aircraft to carry out the testing necessary for certification. The fourth aircraft (004) was assigned to another phase of certification and in late 1982 flew a rigorous programme of route proving flights (often up to eight flights a day) to demonstrate reliability.

Whilst the certification flying was continuing the marketing team were busy with demonstrations to the world's airlines. Aircraft 005 was pressed quickly into service as the demonstrator and took off in October on a gruelling seven week tour of the Far East, showing its paces to airlines in Japan, the Philippines, Australasia, Malaysia, India and Pakistan.

After completing the route proving 004 assumed the role of demonstrator for a second sales tour, this time to Africa for four weeks.

In March this year the CAA awarded the type certification for both the Series 100 and the Series 200 and the programme passed from testing to customer deliveries with the handover of 006 to Dan-Air on May 23rd, shortly followed by Dan-Air's second 146 (007).

The first Series 200 to be delivered was aircraft 012 for Air Wisconsin in the USA. Meanwhile the two demonstration aircraft were refurbished and delivered to the RAF.

In addition to the above deliveries the 146 has been ordered by Pacific Express in the USA, TABA in Brazil, AIRPAC in Alaska, and the Republic of Mali.



BAe 146 in the livery of TABA at the Paris Show in June



The 146 demonstrator at Safdarjung airport, Delhi



The first BAe 146 for the Royal Air Force



First 146 customer in the States is Air Wisconsin



Dan Air was the first airline to operate the BAe 146

125-800

The British Aerospace 125-800 is the latest version of this highly successful 8-10 seat business jet of which total sales of all types now exceed 550 aircraft.

The 125 is designed and marketed at Hatfield with production centred at Chester.

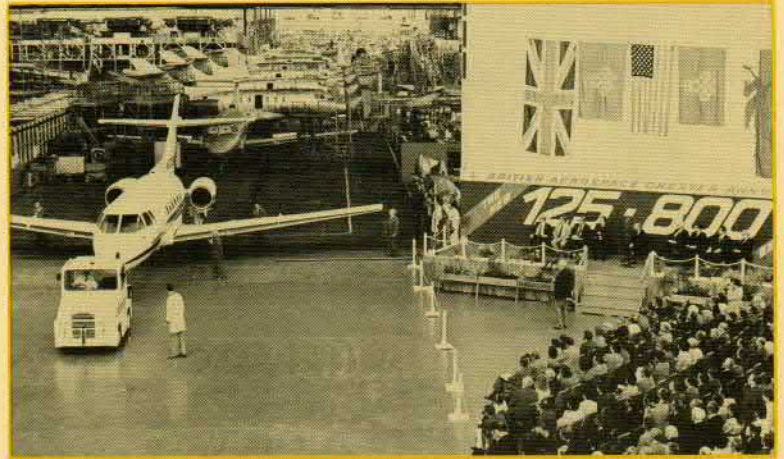
The 125-800 took an unsuspecting world by surprise when it was rolled out and flown during the recent Paris Air Show amid a blaze of publicity. All knowledge of this latest version of the 125 had remained a closely guarded secret whilst the first aircraft was being assembled at Chester. Orders for the new aircraft have already been received.

The 125-800 is powered by new, more powerful and even more efficient, Garrett fan engines (TFE731-5) which, with larger fuel tanks and 'Airbus' technology wings, give the aircraft a transatlantic range of over 3,000 miles and performance improvements in every aspect.

The flight deck of the 125-800 features the very latest in technology with electronic TV display type instruments (EFIS) replacing the mechanical flight instruments. The new curved windscreens provide a wider flight deck and reduce wind noise.

The passengers are well looked after in the new 125-800 with a newly styled cabin providing extra width and headroom.

The continued development of the 125 since the type's first flight in 1962 has kept the 125 where it should be - way above the competition.



125-800 rollout at Chester



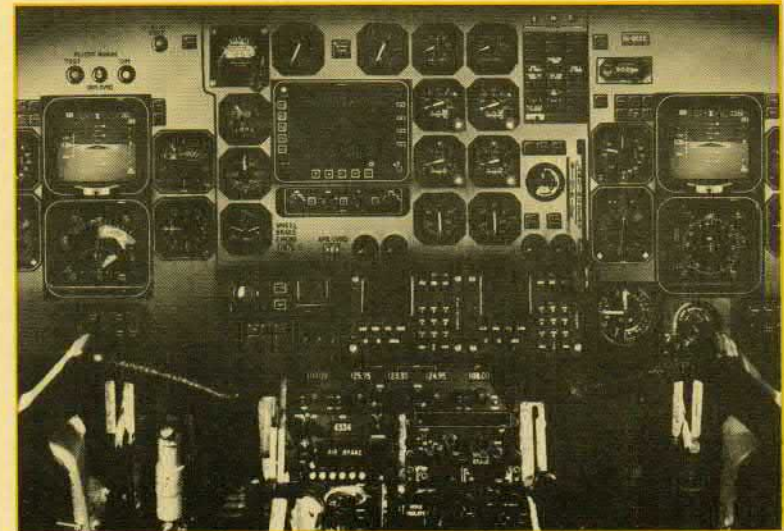
The 125-800



The 125-800



Re-styled 8 seat interior of the 125-800



EFIS instruments on the 125-800 flight deck

Airbus A300 and A310

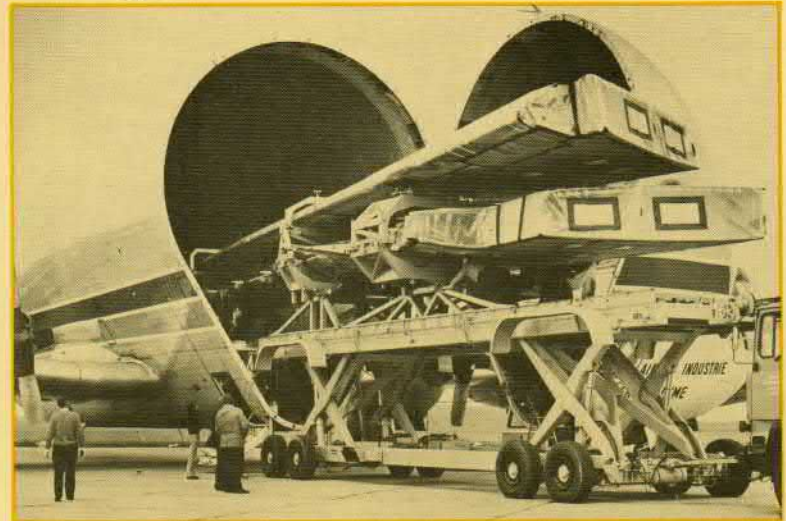
The Hatfield/Chester division is responsible for the design and manufacture of wings for the Airbus family of wide-bodied airliners. Over 200 of the 260–300 seat Airbus A300 airliners are in service world-wide and deliveries of the new smaller A310, seating between 210 and 280 passengers, commenced earlier this year. The advanced design of the new highly acclaimed A310 wing has helped establish the A310 as the most efficient airliner flying today.

Wings for the A300 and A310 are assembled at the Chester factory from parts supplied by several BAe sites including Hatfield where the large one piece inner spars and the under-carriage pickup ribs are machined. The high Airbus production rate has led to substantial investment in advanced new machining facilities at Hatfield and Chester including the construction of a radical new Machine Shop here at Hatfield.

A fleet of Super Guppy freighter aircraft are used to transport completed Airbus wings and other major assemblies to Toulouse in the south of France where the Airbus' are assembled.



Airbus wing production at Chester



Airbus wings being loaded into a Super Guppy freighter

A310 – the new Airbus



Inside Aircraft Group Hatfield

This last month has seen the first deliveries of Britain's newest airliner the BAe 146.

Designing and building today's civil aircraft is a complex and challenging task involving a multitude of different skills and disciplines. 8,700 people are employed in the Hatfield/Chester division of which 4,200 work here at Hatfield. The skills required to produce aircraft such as the new BAe 146 are the result of many years' experience on numerous aircraft including some of the de Havilland types seen here today and there is a thriving Training department moulding the aircraft builders of tomorrow.

A high technology product like the 146 or Airbus requires high technology to make it. The Hatfield site is equipped with many of the latest machine tools backed by an advanced Computer Aided Design And Manufacture (CADAM) system. In the design field a combination of advanced computer modelling, our wind tunnels and experience have made Hatfield aerodynamics the envy of the world's aircraft industry.

The hand-over of A/C 005 to the Royal Air Force on 14th June watched by the Hatfield workforce.





Sky Flash on the Swedish Air Force Viggen JA 37

Sky Flash

A radar guided medium range air-to-air missile. Sky Flash is in service with the Royal Air Force on the Phantom and with the Swedish Air Force on the Viggen JA 37. Sky Flash will also arm the Royal Air Force Tornado F2.

Sea Eagle on the Royal Navy Sea Harrier

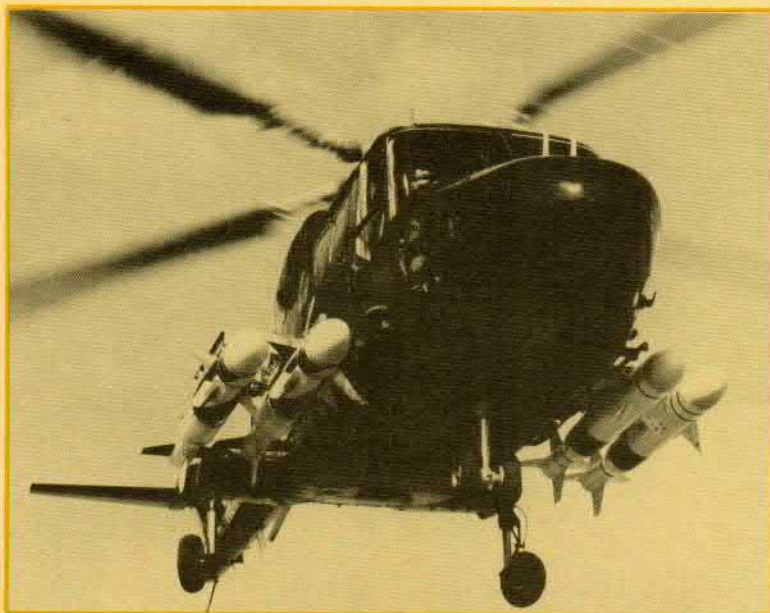
Sea Eagle

A new generation long range sea-skimming anti-ship missile and currently our main development project. Sea Eagle has proved very successful in trials firings and is due to enter Service with the Royal Air Force and Royal Navy in the Mid-1980's.



Sea Skua

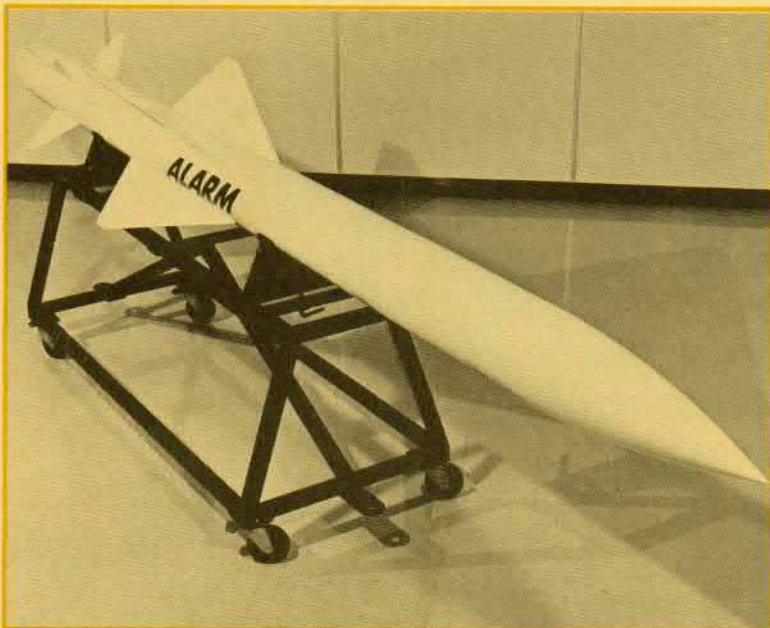
A lightweight sea-skimming anti-ship missile for helicopters and maritime patrol aircraft. Sea Skua was used operationally for the first time by the Royal Navy in the South Atlantic last year, scoring eight hits out of eight missiles fired, in some cases despite darkness and appalling weather conditions. Hatfield has responsibility for Sea Skua project leadership.



Sea Skua on Lynx helicopter

ALARM

Air Launched Anti-Radar Missile. ALARM is a defence suppression missile proposed for the Royal Air Force. ALARM is designed for strike and close support aircraft, to counter enemy surface to air missile and anti-aircraft artillery defences by destroying their associated radars.



ALARM missile

ASRAAM

We are working with Bodenseewerk Gerätetechnik of West Germany on the European Advanced Short Range Air to Air Missile (ASRAAM), under the AMRAAM/ASRAAM Memorandum of Understanding signed by the United States, United Kingdom, Federal Republic of Germany and France. Under the agreement, the United States is developing an Advanced Medium Range Air to Air Missile (AMRAAM). Both missiles are part of the NATO 'family of weapons' concept.



Artist's impression of ASRAAM firing



Propellers

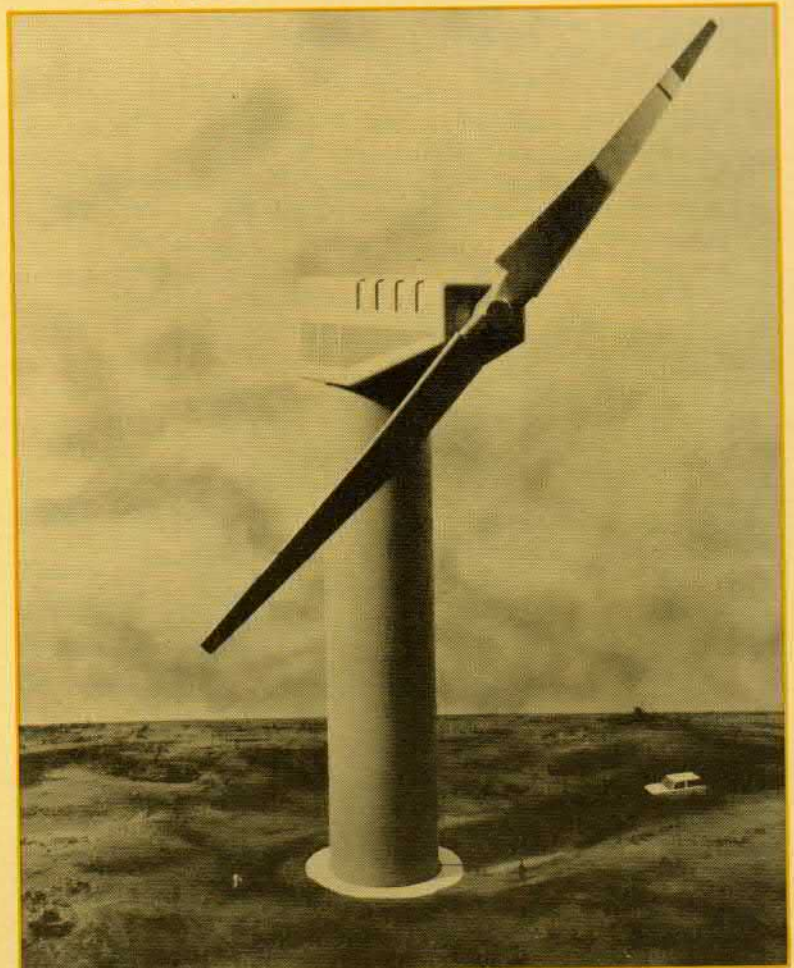
We are developing new multi-blade propellers for tomorrow's quiet, fuel efficient aircraft and manufacturing the largest hovercraft propellers in the Western World for a new application, a giant hoverplatform being built by the oil company SOHIO for moving heavy equipment across the tundra in Alaska.

Air Conditioning

The winning of a contract to design and supply the complete environmental control system for the new Swedish JAS 39 Gripen aircraft is the latest in a long line of successes in this field. We also make systems to provide environmental control for military vehicles, aircraft on the ground and similar applications.

Wind energy

We are a member of the Wind Energy Group, which is building giant wind turbines to generate electricity. The first of these, rated at 250kW, is due to be completed this year on the Island of Orkney, and will be followed by a 3MW machine.



Model of 3MW wind turbine

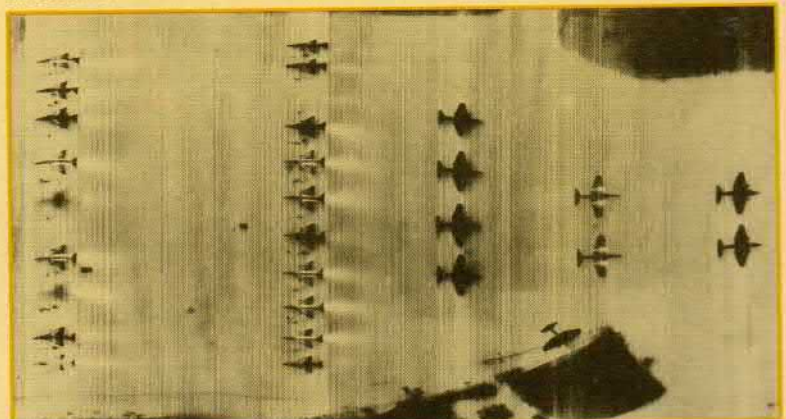
Infra-Red Equipment

All bodies radiate thermal energy in the infra-red waveband as a function of their absolute temperature and emissivity. Infra-red aerial reconnaissance provides intelligence not obtainable by optical cameras or radar. Night operation is possible without artificial illumination, and camouflage, smoke and foliage do not conceal heat. Most military and covert activity or presence produces detectable radiation.

We have developed an airborne infra-red surveillance system called Linescan. It detects the minute variations in the infra-red radiation from the terrain overflown, building up a comprehensive thermal picture which can be displayed in real time or recorded for later analysis. Linescan units are made for use on drones, light aircraft, helicopters and also for high performance aircraft.



Linescan 214



Linescan imagery

Hatfield Division

Hatfield, formerly the headquarters of Hawker Siddeley Dynamics and before that, of de Havilland Propellers, is now the Division responsible for Dynamics Group's air launched weapons.

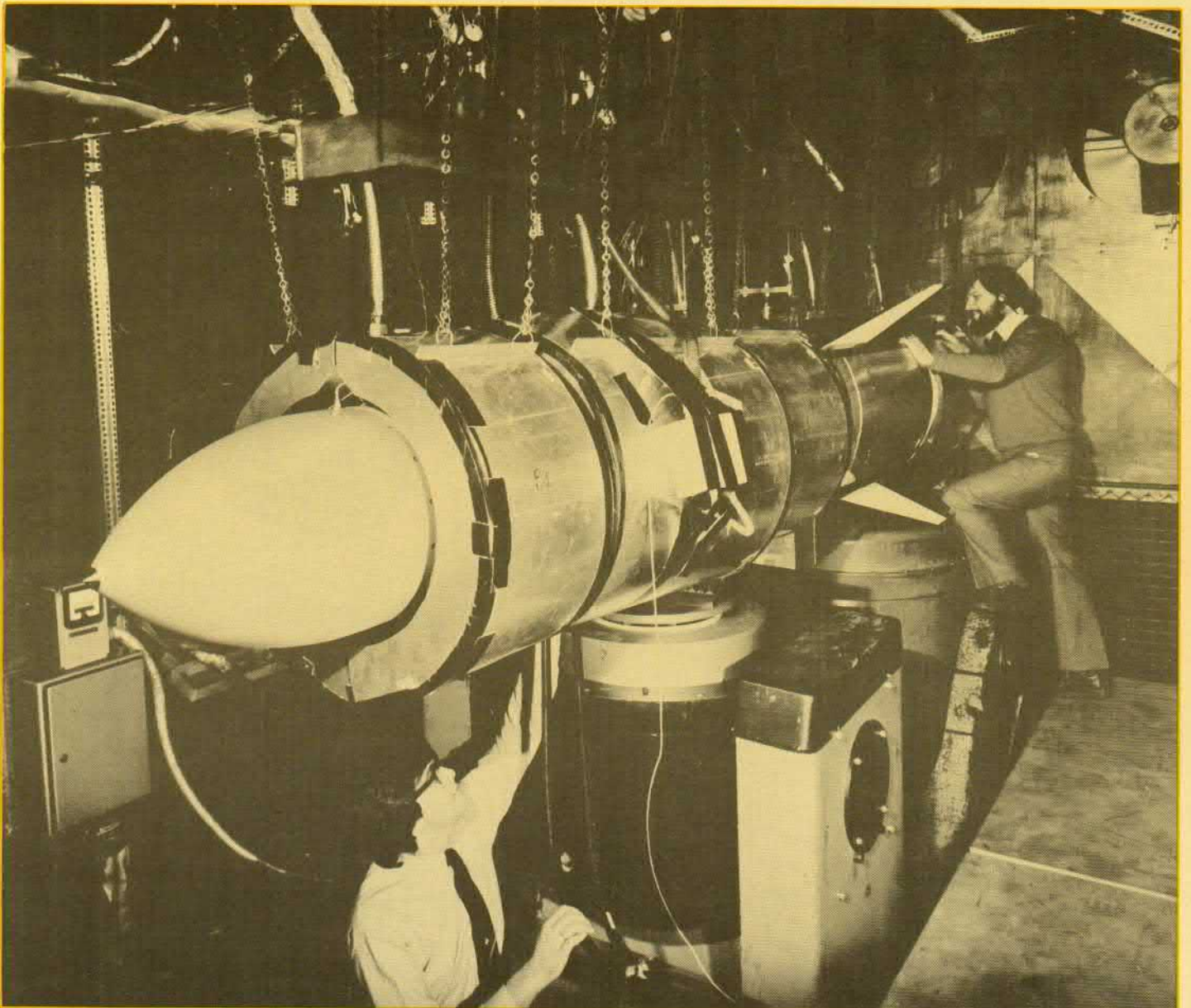
The work at Hatfield is concerned primarily with the research, design and development of the products described in this booklet.

To produce such products, which are designed to meet the most exacting standards of quality and reliability, demands a workforce backed by the most comprehensive and up to date facilities. These include research, design, development, test and quality assurance departments, a microelectronics production facility and machining and assembly areas for the production of prototype equipment.

Teams experienced in the latest techniques are responsible for design work from a product's initial concept to its final form in production. Working closely with the designers are systems development departments where the initial concepts are developed to the required standard of performance and reliability.

Products are proved for their often harsh working environments by extensive testing under simulated conditions and by detailed fault analysis.

We attach great importance to training and as well as operating very highly regarded apprenticeship schemes carry out training of other staff continuously.



Sea Eagle is prepared for environmental and vibration testing

Dynamics Group Site



- BUILDINGS NOT OPEN TO THE PUBLIC
- TOILETS
- TOILETS – DISABLED
- VIEWING AREA – DISABLED

DYNAMICS SITE (MANOR ROAD) OPEN TO THE PUBLIC

- A Display of Development and Manufacturing Activities
- B Lunches and Refreshments
- C Sports Club

DISPLAYS AND AMENITIES

- 1 Main Arena
- 2 Historic Vehicles
- 3 Static Displays
- 4 Funfair and Steam Railway
- 5 Beer Tent
- 6 Static Aircraft Displays and Pleasure Flights
- 7 Bandstand
- 8 Display of Missiles
- 9 First Aid
- 10 Security Police Control
- 11 Employees Car Park
- 12 Public Car Park
- 13 Airfield
- 14 Bus Stop
- 15 Employment Information
- 16 Light Refreshments
- 17 Information
- 18 Retired Employees

British Aerospace
employs 79,000 people.

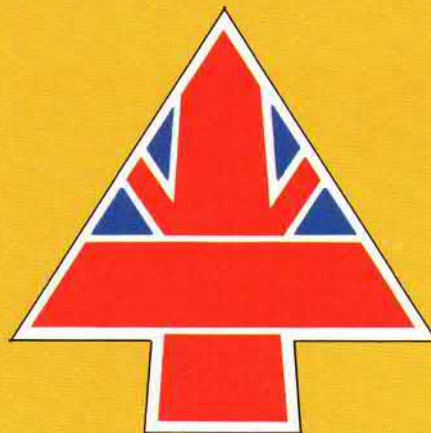
British Aerospace
has 25 factory sites in the UK.

British Aerospace
has an order book of over
£4,200m.

British Aerospace
last year exported 68% of its
£2,053m sales.

British Aerospace
has the widest range of
aerospace products
in the world.

British Aerospace
has customers in
77 countries.



BRITISH AEROSPACE
AIRCRAFT GROUP

British Aerospace Aircraft Group
Hatfield, Hertfordshire AL10 9TL
A PART OF BRITISH AEROSPACE PUBLIC LIMITED COMPANY

BRITISH AEROSPACE
DYNAMICS GROUP

British Aerospace Dynamics Group
Manor Road, Hatfield, Herts AL10 9LL
A PART OF BRITISH AEROSPACE PUBLIC LIMITED COMPANY



British Aerospace Aircraft Group Open Day 1983 Flying Programme



1. 11:30 Battle of Britain Memorial Flight
(Lancaster, Spitfire and Hurricane)
2. 11:50 Westland Lynx Helicopter
3. 11:55 Airbus A310
4. 12:03 de Havilland Mosquito
5. 12:10 BAe 146-200
6. 12:18 Vintage Pair (Vampire and Meteor)
7. 12:27 Pitts Special Aerobatics
8. 12:37 125-800
9. 12:45 Hawker Hind
10. 12:51 BAC Lightning

