



Hawk T2



Kingair



Valley



Squirrel

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4

Flightline

UKMFTS Update from Ascent Flight Training

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Moving Ahead with Training Improvements – in Design and Delivery

I am often asked what the UK Military Flying Training System (MFTS) programme has achieved in the 20 months since the company was formed with just a handful of people based at Royal Air Force (RAF) Innsworth. At places like RAF Valley where there is major evidence of new build in the form of hangars and training squadron headquarters, or at RAF Culdrose where the 750Sqn building is undergoing refurbishment, the answer is obvious.

Less visible, but clear tangible evidence of progress is the work underway to modify four new Hawker Beechcraft King Air 350s for their role in Royal Navy (RN) Observer training, or the recently delivered Flight Training Device for Advanced Jet Training that is now in use at Valley.

Equally, behind the scenes, groups around the world are working on developing both the Advanced Jet and RN Observer training equipment and lessons so that the first student courses can start next year. Simulators are under construction, software is being developed, lessons designed and courseware constructed.

But these elements are just the tip of an iceberg. Ascent, the UK Ministry of Defence (MOD) and 22 Groups are working extremely hard to put in place the next stages of MFTS which will bring improvements in the training pipeline to a much wider audience. Indeed, it's fair to say MFTS will touch everyone involved in military flying over the next few years.

The holistic Training System Design for all the flying training pipelines is in the closing stages of maturing, with a final design due to be presented for approval this summer. Market soundings have been undertaken to understand the potential aircraft solutions to each of the training pipelines and site surveys have started to analyse the infrastructure requirements at each of the potential flying training bases.

Ascent teams are developing the Instructor Specifications for each of the 23 training

pipelines to reach decisions on the aircraft platform performance specification and on the optimum mix of live and synthetic training.

This preparatory work is essential to ensure the training system meets the needs of the Front Line and to meet the MOD's approvals process. In a climate of budget restrictions, there will always be the need to make a strong case for further spending and MFTS will be subject to these regular value-for-money reviews, but I am confident that the programme remains both value-for-money and affordable.

The next key stages in our programme for delivering the remaining training pipelines is a formal Pre-Qualification Questionnaire approach to industry to determine a list of

viable contenders for aircraft provision, and the submission of a holistic Review Note to the MOD's Investment Approvals Board.

At the same time we will continue to develop the instructional specifications, lesson design and performance requirements for ground-based training equipment to support the individual courses, using regular runs of a Dynamic Pipeline Model to determine the flying and synthetic training requirement.

Most of the above work is happening behind the scenes at the MFTS headquarters and so physical improvements won't be seen on the remaining flying training bases overnight, but rest assured, plans for new equipment, courses and infrastructure are well underway and I remain fully confident that whatever the

pipeline, there will always be a need to train our aviation personnel to the highest standards and that MFTS, being delivered by Ascent, remains the best vehicle to provide modern, more cost efficient flying training solutions that enhances the capability of our military aircrew.

Sir Barry Thornton
Managing Director
Ascent Flight Training



Progress on Rear Crew Gathers Pace

Improvements to Rear Crew Training (RCT) are continuing apace with aircraft and facilities being upgraded and course elements also set to undergo significant upgrading.

Following the signing of the RCT Stage 1 agreement with Ascent in August 2009, VT Group and its contractors have now started the refurbishment of classrooms at Barkston Heath, in Lincolnshire, whilst a separate team is preparing the 'Charlie site' at Culdrose in Cornwall for a major hangar and building refurbishment.

VT Group has also completed the design of the Integrated Training Centre (ITC) network. Lockheed Martin has conducted preliminary and critical design reviews for a large element of the ground-based training equipment including desktop trainers (DTT), mission planning system (MPS), Training Management Information System (TMIS) and tactical mission trainers (TMTs).

The Beechcraft King Air 350ER aircraft, which will be used to deliver Basic Flying Training (BFT) at Culdrose, are currently being modified under contract with Cobham Aviation Services to include the installation of two tactical mission training systems, two instructor consoles, a Telephonics RDR 1700 radar, VHF(FM) Marine Band radio and Jump Seat.

RCT will comprise a two-stage strategy: Stage one to address the urgent RN training requirement to replace the existing Basic Observer Course and the ageing Jetstream T2 aircraft fleet, and stage two will meet the full Tri-Service RCT needs.

Stage one puts in place a training system for RN Observer students that comprise Phase 1 Introductory Flying Training (IFT), a Common Core Ground School (CCGS), Phase 2 Elementary Navigation Training (ENT) and Phase 3 BFT. On successful completion of Phase 3, graduates will be appointed to their Operational Conversion Units (OCUs).

The complete Stage 2 capability will include all RAF, Army and RN rear crew aircrew specialisations for Rotary Wing and Fixed Wing (RW and FW); will be introduced subsequently as Stage 2 which will add Phase 4 training by putting in place an Advanced Training and Tactics Unit (ATTU).

RCT Stage 1 training solution will be delivered at 2 sites: IFT, CCGS and ENT will be delivered at RAF Barkston Heath and Phase 3 BFT will be delivered at RNAS Culdrose. At Barkston Heath, the instructors will use the Grob 115E Tutor aircraft to support IFT and ENT. Whilst at Culdrose 4 the new KA350ER will be used.

The ground training element of the RCT Stage 1 solution will include Computer-Based Training (CBT), Computer-Aided Instruction (CAI), DTTs, MPSs and TMTs; all underpinned by a modern IT network and state of the art Audio Visual systems. Course scheduling and student progress will be managed by the TMIS.

The Curriculum Design work that will produce the student syllabi and other course material is being worked 'in-house' using Ascent designers. These same designers will collaborate with a team of Courseware Developers from Lockheed Martin to produce the electronic lessons for the CBT and CAI.

Since RCT Stage 1 Contract Award in July 2009 Ascent and its sub-contractors have made significant progress against a Master Schedule that will see the first ab-initio students start IFT in the middle of 2011.



System Design at the Heart of the Future

Re-writing training doctrines and the way it is delivered is not an overnight job and producing a training system concept, populating that and then designing a new curriculum continues to be at the core of the UK MFTS programme.

Ascent's concept for the future training of fixed and RW, plus rear crew, personnel was central to its successful bid back in 2008.

But that was just the beginning. Since then, teams of Ascent, 22 Training Groups and MOD personnel have been working to develop the content and methodology that will ensure future aviation personnel move through the system more quickly, more cost effectively and ultimately better equipped when they reach their Operational Conversion Units.

Current work on curriculum design involves looking at the nature of

courses; the enablers needed; costings and timings, with the aim of having the full detail ready for presentation at Main Gate in summer 2011.

Carl Prosser, Head of Systems Integration at Ascent, explains: "In five years time training will be modernized. Lessons will be more interactive and the latest technology will be used in the way training is delivered.

Training will be presented in a different way. It will be done more quickly, there will be more of a logical flow through the system and it will be more straight-forward. That's what we're working on now."

First FTD Delivered

The first of six Flight Training Devices (FTDs) have been delivered to RAF Valley as part of the ground based training environment (GBTE) element of the Advanced Jet Training (AJT) service contract.

The FTD is the first of five key deliverables on the AJT service contract and has been formally approved as Ready For Training Use. It is representative of the Hawk T Mk 2 aircraft and was designed and manufactured by Lockheed Martin in Orlando, Florida, USA.

The FTD will provide an initial training capability to allow for early conversion of pilots to the Hawk T Mk 2 aircraft and also for syllabus development associated with the Training Service design and implementation.

The FTD has been installed and is operational at RAF Valley in a temporary location, pending the completion of the new Squadron and Training facility currently under construction and due to come on line towards the end of 2010. In parallel, the programme to complete the remaining GBTE, including Full Mission Simulators, further FTDs and other Part Task Trainers (PTTs) continues apace for delivery in 2011.

Ascent's Programme Manager Ian Mullen explained: "The delivery of the Flight Training Device represents an important milestone in the development and delivery of the high quality training service that MFTS will provide."

Ascent Profile

Sarah Meleady – Rotary Wing Programme Manager



Former RAF Administrative Training Officer Sarah Meleady has the task of revamping RW training for the RAF, Royal Navy and Army in her new role, having recently moved from the job of Elementary Flying Training Programme Manager.

Sarah has been with Ascent for just over two years, having spent the previous seven in the RAF. Her major task going ahead will be the comprehensive management of the RW training requirement for pilots and aircrew, looking at everything from platforms to infrastructure and the GBTE.

It will be a transformational time for the Defence Helicopter Flying School and the facilities at RAF Shawbury with a new integrated training system set to be developed over the next few years.

Sarah says one of the major tasks will be to appoint an Aircraft Service Provider (ASP) whose role will include providing platforms to meet Ascent's RW training requirements.

"It's about value-for-money. Platform choice and numbers will be down to the ASP and training will be a blended solution of aircraft and synthetic solutions, the latter under the umbrella of Lockheed Martin," she says.

New Training Buildings Take Shape at Valley

Two impressive new buildings which will form the new GBTE for fast jet pilots are set to be complete at RAF Valley in North Wales by the end of the summer.

A massive hangar that can accommodate over 20 Hawk T-2 training aircrafts, a new squadron building and a related area where pilot training simulators will be installed have taken shape over the past 18 months at the home of fast jet training.

Following construction by project manager Morgan Ashurst, the buildings will be fitted out by VT Group, under subcontract to Ascent. In addition, Lockheed Martin will have responsibility for installing and commissioning the advanced flight simulators that will be brought into service by early 2011.

The 9,000 square metre hangar building includes amenity areas and workshops, with facilities for maintenance of the latest Hawk trainers, while the squadron building will house briefing rooms, offices and classrooms linked by a new IT system.



Major New Training Aircraft Procurement Starts

Ascent has embarked upon a major equipment procurement that is set to culminate in a fleet of new training aircraft and helicopters brought on stream over the next few years.

The process to replace current fixed and RW assets used in pilot and rear crew training has already started with potential suppliers at an Industry Day in early April.

There is plenty of scope for the way the new assets will be provided with Ascent as Acquisition Director Andrew Cromwell explains: “We want people to present innovative solutions. We are asking for aircraft service providers (ASPs) and there are plenty of options within those parameters. The successful supplier will almost certainly design their solution in conjunction with the ground-based training solution.”

The options will include a provider owning, maintaining and fulfilling a commitment to make the aircraft available for a set requirement of flying hours as opposed to the customer owning the aircraft.

The aim is to replace the existing Grob Tutor, Tucano and Dominy aircraft that are used for basic, fast jet and rear crew



training respectively. The improvements to rear crew training will supplement those already announced in August 2009 which included replacing Jetstream T2 aircraft with four Hawker-Beechcraft B350ER King Air aircraft. Both rear crew elements will be delivered out of Culdrose.

An initial FW platform will be required to fulfil basic training, elementary flying training and multi-engine pilot training roles. One of the major drivers is to provide a similar number of hours flying to present but with fewer aircraft and Andrew Cromwell does not rule out the possibility of Ascent and its partners in UK Military Flying Training System actually stipulating which aircraft will be used.

The choice of platforms is much more flexible in RW provision, which will be centred on Shawbury and Middle Wallop, and could result in single and twin engined variants being used.

“The aim is to have ASPs under contract by 2012,” added Andrew.

Two-Year Base Study Reaches Conclusion

The outcome of a two-year study to determine the bases that will be used for future flying training is set to be revealed shortly.

The study, conducted by a combined Ascent, 22 Group and Ministry of Defence (MOD) team, has looked closely at future fixed and RW training needs with the aim of using the airfield estate in the most effective way.

VT Group has conducted a comprehensive survey of all the sites to identify what investment would be needed on facilities and this has been fed into the study. The final decision on the composition of the future training estate will be taken by the MOD.