

# Capability and Commemoration



Operating its Tranche 2 jets from RAF Lossiemouth, 1 (Fighter) Squadron has been at the forefront of introducing the latest Typhoon capability to the frontline. Paul E Eden talked with Officer Commanding, Wing Commander Mike 'Sooty' Sutton, about the unit's new capabilities and its Battle of Britain commemorations

Paveway IV, carried here on the inner wing pylon of a 1(F) Sqn Typhoon, brings a key precision attack capability to the jet, including multiple fusing options and GPS or laser guidance. The weapon is used in combination with the Litening III pod, mounted further aft, under the fuselage.  
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Number 1(F) Sqn completed its first swing-role sortie during an armament practice camp on Battle of Britain Day, September 15, 2015. A live Paveway IV was dropped, an ASRAAM launched and the cannon fired. Here the ASRAAM accelerates away from the aircraft.  
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**PE: 1(F) Sqn flew Hurricanes during the Battle of Britain. How has the unit marked the 75th anniversary of its part in the Battle?**

Wg Cdr Sutton: This year actually marked two significant anniversaries for 1(F) Sqn. It is also the centenary of our first deployment for operations over the Western Front during World War One, although of course the squadron's roots go back much further to 1878.

The Battle of Britain 75th anniversary has been a significant celebration, and we marked the occasion formally and informally, supporting a number of key events during the year, including a poignant service at Westminster Abbey.

The highlight was in July, when the squadron standard was paraded during a changing of the guard at Buckingham Palace

in front of Her Majesty the Queen and a number of Battle of Britain veterans. It was a glorious day; as Spitfires, Hurricanes and Typhoons raced across London and several thousand spectators on The Mall looked into the bright blue sky it felt like a very special occasion indeed.

**1(F) Sqn led delivery of the P1Eb upgrade onto Typhoon – why was the unit chosen as lead? Will you continue to be involved in the ongoing process of expanding capability?**

Typhoon has undergone continual capability upgrades since its initial entry into service some ten years ago. This spiral improvement programme was always part of the plan, as equipment upgrades become available and new weaponry is developed and incorporated onto the aircraft. »

This majority 1(F) Sqn line up was at Lossiemouth in 2014 for a Joint Warrior exercise. The US Navy P-8 in the background emphasises the multinational aspects of Typhoon training. Sgt Stu Fenwick/© UK MoD Crown Copyright 2015





Phase One Enhancement B (P1Eb) is a significant upgrade because it marks the coming of age of the Typhoon into a true swing-role platform. It means we're capable of carrying out multiple tasks during the same sortie, changing from the air-to-air role to air-to-ground at the flick of a switch. Now we can fly into contested, hostile airspace, establish control of the air and conduct precision attacks in all weathers, day and night.

**Was P1Eb essential for delivering Paveway IV capability and why is Paveway IV such an important weapon for Typhoon? Does P1Eb enable other new weapons to be integrated onto the jet?**

Paveway IV is an operationally proven weapon, carried on the Tornado and, before it was retired, the Harrier GR9. It is exceptionally capable, reliable and precise. We can carry a lot of them and with the Typhoon's speed

and altitude capabilities, deliver them from a considerable distance away from the target if we need to.

Paveway IV will become a key part of the weapon inventory before Brimstone and Storm Shadow are integrated in the next couple of years and then, soon after, SPEAR 3. In combination these will form a capable, discriminate and precise selection of weaponry that can be employed against all possible target sets and stand the aircraft in good stead for the coming years.

The Meteor long-range active-radar guided air-to-air missile is also coming to the aircraft imminently. It will enhance our ability to conduct air defence missions against capable modern adversaries.

It is important to remember that although we are advancing our weaponry, there is absolutely no room for complacency; other nations are doing exactly the same,

and countries including Russia and China are developing very capable weapons and exporting them widely. We need to have an effective counter to these systems if we wish to retain the ability to conduct global operations and deploy around the world to protect the UK's interests.

**What additional benefits does P1Eb introduce?**

P1Eb is more than Paveway integration; it includes significant enhancements to the integration and capability of the Helmet Mounted Sighting System (HMSS) and the Litening III targeting pod.

We now have the ability to point the pod at aircraft tracks of interest on the air-to-air radar, to make identifications of those aircraft at long range.

We can also use the HMSS to designate points of interest on the ground and instantly

get the Litening pod onto that point, to investigate and conduct reconnaissance of the area. Should we need to, for example if friendly forces were under attack, we can then quickly employ weaponry onto a threat. In essence, we can simply look at something and target either an air-to-air or air-to-ground weapon onto it.

**Does Typhoon offer connectivity with Tornado, Lighting II, Sentry, Voyager, Reaper and/or coalition assets?**

The Typhoon has excellent integration with a number of intelligence, surveillance and reconnaissance (ISR) platforms, and we train very closely with these assets to ensure that we continue to develop our tactics and procedures.

We also train with key partner nations and this year deployed to the US for Exercise Red Flag, where we conducted several weeks



Groundcrew load an inert Paveway IV during trials with 1(F) Sqn at RAF Lossiemouth. © UK MoD Crown Copyright 2015



Typhoon ZK335 wears the wasp marking painted on Hurricane Mk I P3395/JX-B, flown by 1 Sqn's Sgt Arthur 'Darkie' Clowes DFM during the Battle of Britain. © UK MoD Crown Copyright 2015

Below: Again typical of RAF joint operations, this 1(F)-marked Typhoon was taking fuel from a US Air Force Reserve KC-10 tanker over the North Sea. US Air Force photo/Master Sgt Donna T. Jeffries





## COMBAT AIR

of outstanding training with the US Air Force, integrating with their combat air assets and ISR platforms. This is core business for the RAF.

### **1(F) Sqn is at the forefront of swing-role Typhoon capability with the Advanced Medium Range Air-to-Air Missile (ASRAAM), Paveway IV and the aircraft's cannon. What have you been doing with it this year?**

We've conducted swing-role weapons training and recently fired an ASRAAM, released a live (high-explosive) Paveway IV and fired the 27mm cannon in the same sortie. This was an excellent end-to-end test of the weapons system.

We don't employ live weapons every day, but we train for swing-role missions as a core part of our daily flying programme, so that we're ready for whatever we're asked to do.

### **Tactical reconnaissance is a key RAF capability and Typhoon is being trialled with the RecceLite reconnaissance version of the Litening pod. What is the aim of these trials?**

Typhoon has a reconnaissance capability and various options are being considered for an enhancement of this in the coming years. No. 41(R) Squadron, the RAF's fast jet test and evaluation unit, is conducting trials and RecceLite has been part of this, but to date this has occurred only on the Tranche 1 Typhoon.

A tactical reconnaissance capability is critical to the RAF and currently the Tornado

French Mirage 2000C and Spanish F-18M fighters join RAF Typhoons and Tornados on the Exercise Trident Juncture ramp at Albacete. SAC Robyn Stewart/© UK MoD Crown Copyright 2015



GR4 has that role. We'll need to pick it up when that platform is retired from service.

### **Does 1(F) work closely with the other frontline Typhoon units, 41(R) Sqn, the Air Warfare Centre, Tornado Force, the Royal Navy, the Army and industry partners, including BAE Systems?**

The Typhoon Force has five frontline squadrons, an operational conversion unit and a test and evaluation squadron. We all fly the same tactics, and pilots and engineers are posted between units as part of normal career progression. So while we have different number plates and are fiercely proud of our own squadron's history (and have been known on occasion to banter each other) we have

an excellent professional understanding and rapport, and work very closely together. We normally support each other's exercises and training, and there is continual discussion and integration between units about enhancing our overall capability as a Typhoon Force.

As for integration with the land and maritime environments, we've been doing this for decades and it is as a joint force that we have our best effect on the battlefield. Each service has its specific training requirements due to the very different environments in which they operate, but we frequently exercise together in close air support training and maritime exercises, including Joint Warrior.

As for our industry partners, they're integrated at every level from technical support on a daily basis, to weaponry procurement programmes. This is very much a partnership and it has to be for the Typhoon programme to work. And this point is key. P1Eb is all about technology and we talk a lot about that in the RAF.

But our true capability is absolutely in our people. Technology will only take you so far and as we have seen across the Middle East and in the Ukraine, the threat is evolving and hybrid, and high-end technology often plays little part. We succeed because we have good people, with an outstanding ethos, who work exceptionally well as a team, and who innovate and develop novel solutions to complex problems. This teamwork and culture is essential for a fighter squadron and in that regard little has changed in the 75 years since the Battle of Britain. ◉



RAF Lossiemouth houses, from front to back, 6 and 1(F) Sqn on the Typhoon, and XV(R) Sqn with the Tornado. Flt Lt Harding/© UK MoD Crown Copyright 2015

A 1(F) Sqn jet taxis out for an Exercise Trident Juncture sortie in October 2015, with a Typhoon marked for II(AC) Sqn waiting its turn to roll. SAC Robyn Stewart/© UK MoD Crown Copyright 2015

