

Commander's Perspective

Commander's Reflections - Tornado GR Force

By Wing Commander Matt Bressani OBE and Wing Commander James Heeps

Biography: Wing Commander Matt Bressani joined the RAF in 1997. Following completion of Navigator training, his operational flying career has been exclusively with the Tornado GR Force initially spanning 2001 to 2011 and, more recently, 2016 to 2019. He has completed 10 operational tours flying over Iraq, Afghanistan and Syria and completed one out-of-area deployment with 83 EAG as National Approval Authority where he cleared targets for kinetic strikes by UK aircraft. His flying career culminated when he fulfilled the role of the final Tornado Officer Commanding 31 Squadron, 'The Goldstars', where he commanded the last ever operational deployment of the aircraft.

Biography: Wing Commander James Heeps was introduced to the RAF in 1996 as a Volunteer Reserve member of Cambridge University Air Squadron and began regular service in 2000. He piloted the Tornado GR4 on front-line squadrons from 2004 to 2012 and, again, as Officer Commanding IX (Bomber) Squadron from 2017 until the Tornado's retirement in March 2019. His operational experience stretches to more than 200 sorties over Iraq, Afghanistan, Libya and Syria and includes a long-range attack mounted from the UK. He currently serves as the capability manager for air-launched weapons in the Strategic Programmes Directorate of the Ministry of Defence.

Disclaimer: The views expressed are those of the authors concerned, not necessarily the MOD.

Introduction

The Tornado GR Force (TGRF) ceased to exist at midnight on 31 March 2019, ending the service of an aircraft renowned as the bedrock of the Royal Air Force's fast-jet fleet for over one-third of the Service's existence. Having held quick reaction alert in the nuclear strike role through the latter years of the Cold War, the Tornado Force was then deployed on operations continuously but all for three weeks between 1990 and 2019. After such a lengthy commitment, it was appropriate that combat operations were sustained until 31 January 2019, just 59 days before the aircraft's withdrawal from RAF service. Wing Commanders Matt Bressani and James Heeps reflect on their commands of 31 and IX(B) Squadrons (respectively) at the culmination of this remarkable aircraft's 37 years of front-line service.

Planning

Before discussing Tornado's final months of service, we need to go back a few years to set the scene. In mid-2014, the Tornado Force had reduced from five to three squadrons ahead of the impending termination of Operation Herrick and was planned to reduce further to two squadrons for its final five years of service. However, following the swift rise of Da'esh and the deployment of Tornados to RAF Akrotiri at the beginning of Operation Shader, the third squadron received a short-notice stay of execution (and a new number, its previous identity as II(AC) Squadron having already been assigned to a new Typhoon unit). Thus, the Force would consist of IX(B), 12(B) and 31 Squadrons until early 2018, when 12(B) Squadron would disband and leave two squadrons for the final year. There remained some uncertainty as to how long Operation Shader would endure but by late 2016, as Matt assumed command and James began his refresher on the GR4 Operational Conversion Unit's penultimate course, it seemed more and more likely to go the distance.

Such predictability aided the setting of priorities for our tenures, 'deliver Operation Shader outputs effectively and safely; release personnel for reinvestment in an under-manned Service while minimising risk to Force output and maximising retention; and take our historic squadrons and iconic aircraft out of service with due ceremony and reputations intact. From such simple objectives, many useful deductions could be drawn, and these guided the addition of detail to existing plans. We had both previously worked in the Force Headquarters, and quickly established close working relationships that set the tone for all that followed. In lockstep throughout, our alignment simplified planning and leadership tasks within the Force and management of relationships with other agencies.

People

It is often said that 'people are our most important asset' and that 'command is about people,' and sure enough a key deduction from the three priorities above was that people were central to each of them. The crucial insight was that sustaining operational flying until the end could only be delivered safely and effectively if enough personnel remained in post and were focussed on the task at hand. Averting distraction required follow-on assignments and

associated arrangements to be confirmed at the earliest possible stage. In turn, this would allow for predictable release of personnel and create time for unsatisfactory assignments to be addressed, with a view to maximising retention. Effective management of the assignment process would therefore be critical.

Notable early success came with the notification of follow-on assignments to all junior officer aircrew over two years in advance of Tornado's retirement. Their Career Manager and the Force Headquarters had been engaged from the earliest stage of drawdown planning, mapping individual aspirations against the Service need and agreeing ways ahead. Issue of assignment orders so far in advance allowed aircrew to focus fully on their Tornado duties until their individual departure dates. While some assignments were later changed as new opportunities arose and personal circumstances changed, the overall impact was hugely positive. However, with only around 70 individuals to consider, this was always going to be the simplest part of the puzzle. The big challenge facing the Force Headquarters and our squadrons would be to achieve a similar outcome for the 1,000 technicians spread across squadrons, engineering wings and bays at Royal Air Force Marham. For a variety of reasons, including uncertain manpower requirements and course availability, it would not be possible to achieve the same degree of notice that the aircrew had been given. We needed to work hard on our technicians' behalf to avoid creating a perception that aircrew were being 'looked after' at the expense of other personnel.

Royal Air Force Marham may not be every serviceperson's idea of a dream posting, but many of our personnel had strong wishes to stay, typically due to being well-established in private homes with children at school and spouses in local employment. Early on it was clear that most would be disappointed: the incoming F-35 squadrons would arrive from MCAS Beaufort fully manned, leaving only a handful of Station positions for the fortunate few. Allocation of these posts had clear potential to become a lightning rod for discontent, making transparency and firm leadership especially important in their handling.

Transparency was addressed by regular progress briefings from the Force HQ A4 Manning cell, which for some years had managed the internal allocation of TGRF engineers. Frequent workshops were held to encourage individual engagement with the assignment process and demonstrate effective use of the career preference options within the Joint Personnel Administration system. Meanwhile the squadron warrant officers spent much of their time acting as career advisers, cajoling people to consider the opportunities available in parts of the Service to which many had given little thought. SNCOs with previous multi-engine or rotary wing tours were few in number but made a valuable contribution by demystifying alternatives to the well-beaten path to the Typhoon Force.

Deputy Commander Operations set a target of a minimum of six months' notice of follow-on assignments. Next came the requirement to formulate a programme to release tranches of people from the Force, which had to be closely mapped to the operational cycle.

Organisation

With Operation Shader showing no sign of ending, we needed to design a deployment cycle which would share the burden equitably while permitting the departure of personnel in tranches, aligned to the availability of onward assignments. Our decisions would frame the final years of the Force. If we remained as two distinct squadrons, deploying aircrew and engineers as formed units, any personnel remaining on the Force in 2019 would have accumulated substantially more separated service than those leaving earlier. The deployed squadron would also have been poorly placed to release personnel for any short-notice posting opportunities. These issues could be avoided by pooling our resources and managing individuals to optimise their time away.

We concluded that such a combined-squadron model was workable for aircrew and set about implementing it right away, with almost immediate benefit. Two short-notice opportunities for Typhoon crossovers emerged and the deployment plot was quickly reworked to release the most suitable individuals. However, we were concerned that combined working would present unwelcome supervisory difficulties for engineers, especially while deployed. Moreover, the disbandment of 12(B) Squadron provided a temporary uplift in engineer manning for our squadrons, giving us just enough flexibility to cope. The one change we made to engineering organisation was to scrap the traditional deployment rear party and its associated supervision requirements. Instead, any engineers remaining at Marham during deployments were managed by the other squadron.

Operations

Once 12(B) Squadron had returned from its final Operation Shader deployment in mid-December 2017, we divided the remaining 14 months evenly between our squadrons. This did not mean equal blocks of time, which would have meant successive summers or Christmases away for each squadron, but it did need to be equitable overall. A major concern was the RAF100 flypast, which would have fallen during a handover/takeover period and suffered from reduced engineer availability had the squadrons not agreed to plan deployment dates around it.

Safety was a leading concern for both of us, with supervisory pitfalls waiting in abundance during drawdown to closure. Awareness of likely issues was good thanks to the excellent courses delivered by the Military Aviation Authority's Centre of Air Safety Training, and lessons from previous aircraft retirements were applied. One key lesson already highlighted was the need for everyone involved to stay focussed on the task at hand. Aircrew needed to remain prepared for Operation Shader deployments, but this needed relatively little training due to familiarity with the required skills. The Force's continuing liability for contingent operations meant that other skills could justifiably be practised, but limits needed to be set and in so doing we had to tread the line between control and empowerment. The same considerations applied to supervisory decisions affecting ground crew, for instance on fatigue management.

With morale and retention always a worry, we considered it important for our personnel to feel engaged and respected by safety management processes: in other words, not to feel disempowered by diktats from on high. Getting people to put appropriate limits on themselves was the ideal, and for the most part we succeeded through openness over our concerns and trust in our supervisors. Far from the tenuous abstract it might at first appear, our goal of protecting the heritage and reputation of our squadrons (and Force) was in fact central to the safety effort. To adapt the Burkean model of society, it emphasised the metaphorical contract between those serving, those who had gone before and those who would follow, and this would help to prevent relaxation of standards as the end approached. It was also helpful for the future of our squadron number plates to be made public as it provided additional motivation to set the bar as high as possible for our successors.

On Operation Shader, as in so many previous operations, the TGRF had very much settled into life in its deployed second home and the teams were well accustomed to delivering two pairs per day, six days per week from RAF Akrotiri. During our tenures we saw the end of the battle for Ramadi, the battles of Mosul, Raqqa and Tal Afar and, by the time of final operational sortie, there were only a few hundred metres of the Middle Euphrates River Valley in enemy hands. Hundreds of Paveway IV 500lb bombs and Dual Mode Seeker Brimstones had been employed, progressively driving ISIS from the battle.

Despite the familiarity of the domestic aspects, it would be wrong to characterise Operation Shader sorties as 'routine' and the need for leadership could emerge at any time. A change to the targeting directive during a phase of intense urban combat unsettled some aircrew, being unlike anything a generation raised on Herrick had seen. The traditional 'do your duty' approach would have been one way of responding to the unexpected leadership challenge, but an impromptu ethics seminar drawing on Staff College teachings put the issue straight to bed, at once maintaining discipline and preserving individuals' peace of mind. You never know when those academic nuggets might come in handy.

On reflection, having moved to staff roles well-removed from the front line while preparing this article, perhaps the most important reflection on Tornado's final years is the underlying reason for their success. Working sustainably, the squadrons achieved over 95% sortie dispatch rate across the last four years of service, an outstanding figure for an aircraft that had been in service for almost four decades and had once been renowned for its unreliability. To explain this, we could of course look to the quality of our teams, the quality of the support agencies, and the fact that they shared a mature understanding of Tornado built upon years of experience. While true, that alone cannot explain the broader successes described here. Fundamentally, success was due to having enough resource to complete our tasks.

Manpower was a critical aspect. In 2015 and 2016, when plans were being put in place for the final 18 months of activity, the Tornado Force HQ calculated the manning profile needed to sustain the Operation Shader deployment, convinced manpower agencies of its accuracy,

and secured resourcing to the necessary level. While career managers across the Service were typically unable to man units to 100% of standing requirements, our lower requirement could be met, and this meant that we were set up to deliver everything that was needed for our primary task in a sustainable manner.

The second critical aspect was spares. The Tornado Force had been reducing in size since 2014 and, on average, one aircraft per month was being retired and stripped of parts in the 'Reduce to Produce' programme. While this sometimes led to the disappointment of components being found 'unserviceable on fit', the shelves were generally well-stocked with Tornado spares and any delay was typically due to a part being stored elsewhere rather than being entirely unavailable (which had often been the case in earlier years).

This combination of spares availability and an appropriate level of suitably qualified and experienced personnel meant that the serviceability of Tornado during its final few years was exceptional. This was no better illustrated than during preparation for the RAF100 flypast. For weeks beforehand, IX(B) Squadron (as the non-deployed unit) had pulled work forward to ensure as much preparation as possible had been done. When the two squadrons then swapped location with only three weeks to go to the flypast on 10 July 2018, 31 Squadron arrived back at RAF Marham to find practically all of the 16 aircraft serviceable. Despite having just returned from operations and needing to take leave and fly large formation practices, the UK team was able to reach the evening before the flypast with 100% of the UK fleet serviceable and ready. It is readily acknowledged that other fleets do not have the fortune of being fully manned and certainly do not have an abundance of spares, but the Tornado experience suggests that if resourced correctly, our exceptional people will achieve what is asked of them.

The end of Operation Shader

Whilst the final operational mission itself, on 31 January 2019, was the same as thousands that had gone before during Operation Shader, the feeling on the day for both of us acknowledged the fact that something was different. For everyone from the ops staff, intelligence, engineers and the aircrew, it was obvious that this was something of a momentous day: there was something almost palpable in the air. Almost two years earlier we had agreed that we would lead Tornado's final operational mission together as a crew, putting a 'Force' rather than 'squadron' stamp on the occasion. Three sorties together during the preceding week successfully headed off the expected banter about NOTAMs being needed, and on the morning of 31 January 2019 we went into the Tornado Detachment at RAF Akrotiri to fly to Iraq and Syria for the final time.

The routine was well known, we had all done it many times before, and yet even as we went to breakfast people from other detachments were wishing us luck and commenting on how big an occasion it was. This continued as we went to the Met Office for a weather brief, and on into the intelligence brief, where even though there was no new information from the previous day, everything felt a little different. Cameras were pointing and clicking at us as we walked for the

aircraft and completed our pre-flight routine. The Tornado always seemed to know when it was a big occasion, and both aircraft were ready on time and departed Akrotiri without any issues.

The mission itself was something of an anti-climax, appropriately taking in both Iraq and Syria but offering nothing more exciting than a last-minute complication on the final air-to-air-refuelling bracket. Back at RAF Akrotiri, we were welcomed by what seemed like the whole Station coming out to cheer us home. We were met at the aircraft steps by the Combined Forces Air Component Commander (US 3*), Air Officer Commanding Number 1 Group (UK 2*), the UK Air Component Commander (UK 1*) and two lowly group captains. That is the only time in our careers we ever want to be met at an aircraft by such senior officers; however, they were all smiling. Phew!

Heading Home – and the beginning of the end

After a couple of days of preparation, it was time to bring the aircraft back to the UK. We had to split the recovery over two days due to tanker capacity, with five aircraft returning on Monday 4 February; the remaining three followed a day later for a media event at RAF Marham. The Tornado Detachment block, our second home for the last few years, felt eerily quiet as we left it for the last time and once again the tension (or was it self-induced pressure?) mounted throughout the day. After some notably poor weather around the first refuelling bracket and a hydraulic failure for us to contend with on recovery to Marham, all eight aircraft had been returned at the first time of asking. Ground crew followed over the next few days and everyone from the TGRF was home by 10 February 2019. With this, the final chapter of combat operations for Tornado was complete...and then it got busy again.

The whole TGRF team had discussed for months what should be done to mark the end of Tornado and, following the example of previous retiring types, we decided upon a 'FINale'¹ flypast tour of UK locations associated with the aircraft. Given the size of the TGRF at its peak and the sheer number of sites involved in industrial and logistic support, the list of 'core' locations quickly swelled to over 30. Three separate routes were devised and promoted via social media. One took in the South, Southwest and South Wales; another the Midlands, North Wales and Northern England; and the third Scotland. This saw the Chief of the Air Staff, Air Chief Marshal Sir Stephen Hillier, complete his final Tornado sortie by leading the three-aircraft formation through Leuchars, Tain Range and Lossiemouth. Crews reported seeing large crowds at several of the locations, notably RAF Cosford where traffic was gridlocked for hours afterward, and the BAE Systems facility at Warton, where hundreds of staff emerged to see UK Tornados' farewell to their birthplace.

One week later, the TGRF conducted the greatest spectacle of the disbandment with a series of large formation flypasts. Thirteen of the 15 remaining aircraft were serviceable, and all 11 of the remaining crews got airborne to provide a diamond 9 formation and two (unneeded)

¹The Tornado was known informally by many in the RAF as the 'Mighty Fin' in recognition of its large tailfin.

airborne spares. Despite almost being scuppered by the late February weather, we led the formation over a graduation parade outside College Hall at RAF Cranwell before returning to Marham for three banked passes and a missing man salute. An image of the formation taxiing back was intricately choreographed, expertly captured by one of the RAF's many top-class photographers and featured in the following days' newspapers. This amazing day finished with the Hangar Party which saw around a thousand people come to Norfolk to celebrate the end of an iconic aircraft. From there the hard work was almost done: just a few sorties to keep the last remaining aircrew current all the way until the end of March (when our contingent liability formally ended) and we would be ready for the disbandment parade. Those last few sorties were the final test of the supervisory preparation carried out over many months: every crew was trusted with a 'last trip', every crew repaid the trust in full, and we were delighted that all shared our pride in the safe termination of RAF Tornado flying.

The media interest in each of these events were beyond anything we could have ever imagined, and it was testament to the two-woman Media and Comms team at RAF Marham that each event was so well covered. Genuine, open and early engagement throughout the drawdown resulted in incredibly positive results across the media channels, achieving both the aims of the Royal Air Force and supporting parties; a testament to media training and clear direction of all engaged. From photoshoots with the specially-painted aircraft, to the FINale flypast sortie on which the BBC correspondent Jonathan Beale was flown by OC IX(B) Sqn, to the thousands of hits on the OC 31 Squadron and RAF Marham Twitter accounts, to the disbandment parade, everyone seemed to want to be part of the story. It was suggested to us that the Tornado disbandment had exceeded the whole of RAF100 in terms of social media engagement, which would have been quite remarkable for such an informal effort. Whatever the truth, we were satisfied that we had done all in our power to give Tornado a fitting end to its 37 years of RAF service.

The final disbandment parade was held on 14 March 2019 in Number 1 Hangar at RAF Marham, led by Wing Commander Kevin Gatland, Chief of Staff of the Tornado GR Force Headquarters. We had the immense privilege of leading representative flights of our respective Squadrons with Air Chief Marshal Sir Stephen Hillier as reviewing officer. During his inspection he presented Operational Service Medals Iraq and Syria, without clasp, to 12 personnel. Approved by Her Majesty in February 2019, the award is made to personnel assessed as making a significant and direct operational contribution while outside the Joint Operational Area and is fitting recognition for the efforts of TGRF ground crew since the inception of Operation Shader.

During his address, Air Chief Marshal Hillier said *"Today is a time to rightly recognise the truly exceptional achievements of the people who have been the Tornado Force. We reflect on the courage, skill and commitment and sadly sacrifice of those who have been at the heart of the Tornado story, from its inception through to the present day. All have played their part to the full in the success story that is Tornado."*

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