Operation OKRA – A Commander's Perspective by Air Commodore Steve Roberton

An Air Power Seminar given at Canberra on 15 April 2015

Air Task Group 630 was rapidly established and deployed to the Middle East in September 2014 as Australia's air response to the threat to Iraq from the Islamic State of Iraq and Levant (ISIL) organisation. The deployment was notable for being the first all–air power, ADF task group to be deployed for kinetic operations in over a decade. Furthermore, it marks many milestone achievements for the Royal Australian Air Force, introducing three new aircraft weapon systems into combat operations for the first time: the F/A-18F Super Hornet, E-7A Wedgetail and KC-30A Air-to-Air Refueller.

Air Commodore Steve Roberton

Air Commodore Steve Roberton is Commander of Air Combat Group (ACG), responsible for force generation and command of Australia's air combat operations. Air Commodore Roberton is a Category A Fighter Pilot with over 3000 total flying hours, mostly in F/A-18A, B, C, D, E and F fighters. He graduated from No 153 Pilots Course in 1990 and F/A-18 conversion in 1993. He flew fighter tours at No 3 Squadron, RAAF Williamtown, an exchange tour flying F/A-18s with the US Marine Corps at Beaufort, South Carolina and as A Flight Commander at No 3 Squadron until 2000.

Air Commodore Roberton then completed a joint staff tour in Capability Development Group in Canberra and Australian Command and Staff College. He commanded No 75 Squadron at RAAF Tindal from November 2003 before returning to Canberra to stand up the Air Combat Transition Office and lead the transition to F/A-18F Super Hornet. He commanded No 82 Wing at RAAF Amberley and then completed the UK's Higher Command and Staff College in 2012 before returning on promotion as Director General Aerospace Development. He was the initial Commander of Air Task Group 630 in the Middle East in September 2014 prior to returning to RAAF Williamtown to command Air Combat Group from January 2015.

Air Commodore Roberton: For this forum I'm going to talk about the lessons, as I see them, from a very Air Force–centric view, from deploying the Air Task Group and how that worked and what could have been done better. I welcome any points or areas of differences as we get into the question period at the end, if there are any.

The situation and the context is really important. We went over [to the Middle East] this time at the invitation of the Iraqi Government and it was actually about helping Iraq counter and defeat or deter that ISIL threat within Iraq. Words are important. Our legal documentation from an Australian perspective, the targeting directive and Rules of engagement that we were legally bound to, was about ISIL. Even though they are referred to now as the 'Daesh' and 'death cults' and other nomenclature, actually ISIL within Iraq was the Australian context.

It's worthwhile noting that everything we did over there was, and remains, about the judicious use of air power. It's no small issue to be given that legal authority for lethal effect. But to do it at the invitation of a country, working in a large coalition, wasn't exactly smooth the whole way through. And that's what we'll explore here today and I'll welcome any of the points on that at the end.

It's worthwhile noting too, that our forces were under the operational control of CFACC, the Combined Forces Air Component Commander, Lieutenant General Hesterman there, in the Middle East region under CENTCOM [US Central Command]. And that was the case for all Coalition aircraft.

So for those of you who are going to lose attention pretty quickly, that's pretty much the bottom line there. We went a long way; we did it at pretty short notice, well inside the ADF Preparedness Directives, and we commenced combat operations. We did it in 19 days but I reckon we probably could have done it in about ten, except we had challenges with some of the logistics insertion.

But that's not a bad effort for a small nation like ours. And what's more, we did it within our own resources. We self-deployed, having an air package that had a really decent command and control element, the strike element, of course, but also the tankers that enabled us to get over there.

The goal is combating and disrupting ISIL and that ISIL threat in Iraq. The caliphate ambition - if I could point it in the centre of the screen here guys – for those that can see it – it really is about ISIL trying to establish that caliphate state in the eastern part and the northern part of Iraq and Syria. That's important. We got told to go over there as a contribution to air power to defeat ISIL. Actually, that's beyond air power. This is Iraq's fight. We're going there at their invitation. Our role is to help facilitate Iraqi security forces as part of a coalition to fight and disrupt ISIL. I would argue, up front here, that air power has been very, very successful at that. There's no way, at the moment, that ISIL can actually form a caliphate state, because every time they gather in any mass, Coalition air power is and pretty much disrupting them and breaking them up.



That is not the same thing as ISIL not being a threat. As you know, I think it would be a little bit arrogant and ambitious of us to think that we're going to solve this problem when it's really centuries old. There are cultural and religious divides here between the Shia and Sunni sects, the tribal lines and so forth are well beyond what we can initially solve.

The ISIL areas that are into Syria ... I know you're roughly familiar with this; I'll try not to belabour the basics. So we'll go over this a little bit later. But because they're looking at those cultural lines, those geographic borders that were drawn up nearly 100 years ago were irrespective of tribal lines. ISIL doesn't respect those national boundaries and it would be ambitious for us to think that we should actually acknowledge them as well. But it becomes really important because within those areas are road networks between Syria and Iraq, and the other nation states in and around, are fundamentally shaping the sort of campaign and the way that it's being conducted.

There's also Afghanistan and that has had a massive, pervasive influence on everything that is happening over there in terms of the way that it's being conducted. Back here in Australia the way that we are supporting and enabling that operation are also influenced. Make no mistake—12 years in a six-kilometre-an-hour ground war in Afghanistan to suddenly swing into a 600-knot air war in Iraq has been a massive shift for everybody, including CFACC and CENTCOM. The way that they're doing target engagement, the rules of engagement, the way that they are supporting it, the Australian ability to understand, even the command and control. It's not good or bad. It's just quite understandable that the Afghanistan experience has had a very large impact on the way that the conflict has been conducted.



In a very glib and shorthand sense, I'll leave those points up there. This is Iraq's war. It's been helped and facilitated by Coalition air. There was no initial campaign plan. There was no 'Op Plan' that they pulled off the shelf with, 'Here's your list of 2,000 JIPTL [Joint Integrated Prioritised Target List] targets in support of the Iraqi ground forces'. That doesn't exist. That's been built as we move along and this methodology has had a massive shaping effect on the deliberate targeting and the use of air supporting the Iraqi security forces and the Peshmerga.

Air/land coordination is a most important aspect about this campaign that's being conducted. It is all about the fact that we don't have our people—US, Coalition people— on the ground, in the fight, that are coordinating air through a command and control system, for the timely prosecution of ground targets. That doesn't exist.

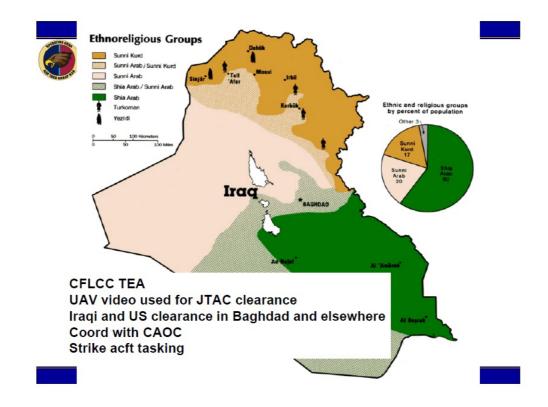
So how is it happening? Forgive me, those who actually know this fairly well, but I'll be fairly quick about it. Largely, what's happening is US forces [personnel] sitting next to Iraqi commanders in Baghdad, and in other areas. They are getting feeds from Iraqi security forces in the fight, or there are unmanned aerial vehicles that are putting this video feed back. They [US personnel] see where the targets are and what's going on. Those targets are then generated and the Coalition has to clear every single target with Iraqi leadership. Every single weapon that's dropped gets an OK from the Iraqi Government. It's their country.

Earlier on in the campaign, any target also got cleared back through CENTCOM in Florida, through the CAOC [Combined Air Operations Centre] and the approval then gets received. As you can imagine, this is a long and convoluted process. But that does not to make it wrong – that's the fight that we're in. It is an extension, perhaps, of what we had seen the Coalition do, just a couple of years ago, in Libya. When you have a

proxy Ground Component Commander, air/land coordination becomes the driving factor for everything that we do.

So any argument about 'Can air power win this?' is a bit irrelevant - of course it can't. That's not actually the right question. The question is, 'At what rate can air facilitate the Iraqi security forces and the Kurdish security forces on the ground, to defeat and disrupt ISIL and facilitate a secure state within their country?' And the Iraqis are driving the pace.

The colour coding, for those that can't see, the green is the Shia Arab. This large, tan colour out here to the west predominantly, is the Sunni, and then the Kurd up north in gold. Why is that important? Well, for a couple of different reasons: (1) it's irrespective of national boundary; (2) this fight's being going on for centuries between difference forces; (3) this is the 'so-what' from a commander's perspective – the fight in the Anbar Province in the Sunni tribal held areas, is a completely different fight than the one that is happening in the push up north through the Kirkuk area and, and through Mosul—completely different dynamic.



There is limited motivation for a Sunni tribal leader in the western Anbar Province to align with the brand new, very fragile minority Iraqi Government that is Shia-led, as opposed to backing the ISIL Sunni extremists. The tradition in this part of the world, is to sit back and they wait to see who's going to win. Or, they go with the side that's going to provide the most incentive and that's often monetary support. This is a really, really complex problem and it is often simplified to the point of losing the meaning of the different fight that's going on in different regions.

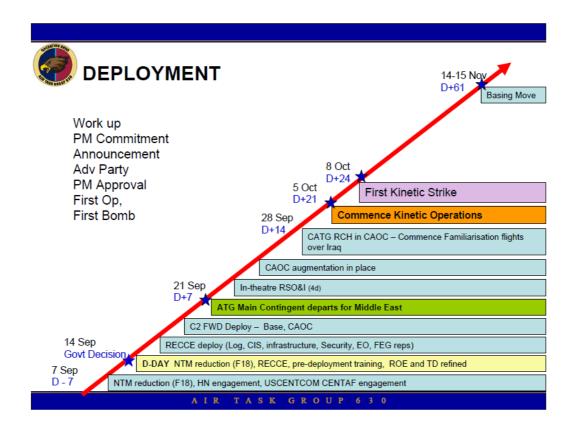
So what does that mean in the context of the campaign? I'm careful of making glib comments because oversimplification is the enemy of truth. But in the western Anbar Province, early on, it was akin to the Vietnam War. It was very, very difficult to hold and

retain ground. You could take it, you could defeat different pockets of ISIL, but very, very difficult within those Sunni tribal areas to hold it. Very different is the northern part of Iraq with the two different Kurdish factions – and remember they are two very different Kurdish factions: the KDP [Kurdish Democratic Party] and the PUK [Patriotic Union of Kurdistan] up to the north that had come together to fight this common threat.

An operational influence was that the Combined Forces Land Component Commander was the target engagement authority. What does that mean? In [Operation] Falconer, or Operation Iraqi Freedom, CFACC, the [Combined Force] Air Component Commander had target engagement authority and air had authority to engage targets in support of the Coalition Ground Component Commander saw fit. That air/land coordination piece again.

That's not the case here. The target engagement authority sits with CFLCC, the Combined Force Land Component Commander, as the agency coordinating and liaising closely with the Iraqi military and the Iraqi Government, on every single target. The unmanned aerial vehicle becomes the video feed. That really becomes the prime means used without coalition JTACs on the ground. For the most part, they're remotely watching the UAV full motion video feed.

That means you're limited now by your ISR. That is what drives the pace and the rate of this campaign – where that ISR is. When all the relative groups are happy that they've got the target identification correct and that there are no friendly forces in that engagement area, it is a much slower process.



This is the deployment timeline for our Australian forces. It really did happen at fairly short notice. The planning was stove-piped and we didn't know which way the

Government might wish to go. We formed up our forces and deployed at very short notice.

The rate of effort from the Australian forces and from our Air Task Group was quite modest. But this was appropriate to the missions that we had and the tasking that was available. We could have tripled the number of aircraft we had over there but actually, we would probably not have achieved any more kinetic effect as we were driven by the pace of the Iraqi security forces on the ground and that air/land coordination seam.

It's worthwhile noting, when you add the actual number of people that we had involved, if you include the Air and Space Operation Centre and the command and control staff, I had about 20 per cent of our fighter force over there.



- Tasking
- Crew rotations
- 25% Fighter Force
- 50% Wedgetail Force
- ~30% KC-30 force.



The Wedgetail force earlier on had 50 per cent of the Wedgetail operators in Australia over supporting one aircraft. Lieutenant General Hesterman is trying to support this AO with aging—but still capable—E-3 Sentry aircraft. He requested another Wedgetail intheatre. I responded to CFACC, 'I can give you another two E-7s, but you'll just be parking them on the ramp because we've got nobody else to fly and operate them.' We've actually got more aircraft than we have crews at the moment because of immaturity of that capability; likewise for the tanker force there.

Within the Air Force values—Respect, Excellence, Agility, Dedication, Integrity, Teamwork—my favourite RAAF value is Agility. Because Agility encapsulates everything that air power and the men and women involved in air power represent. Agility is not flexibility which is your ability to change direction. Agility is your ability to change quickly according to the environment and stay inside the decision loop and drive outcomes. A primary measure of the value of air power to any fighting force, is how agile it is.

We had several demonstrations of that. The Task Unit headquarters formed over there; was not stood up before we deployed. In fact, the people hadn't even met. There may be a few lessons there, I suspect, for the way the Air Force exercises.

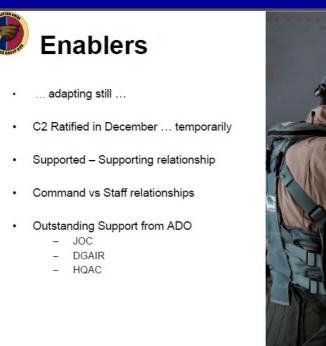
MiRC Chat is the secure datalink chat room we used on different networks and it was used a lot for tanker tasking, but it was also used in prosecuting targets. MiRC Chat was a capability looked at to get it into Wedgetail. It was going to be millions of dollars and probably years to bring it in. But when we got in-theatre, we acknowledged the need for MiRC Chat, and a couple of metal-bashers put up a couple of rigs with laptops, had it plugged in, and for a fraction of the cost, and a matter of days, MiRC Chat was running at about 80 per cent utility. Now, there's some limitations in its operational use, but, it works.

Isn't it nice to know that as an Air Force, we can still do that? As a Defence organisation, we still have that agility to bring in a capability. We probably need to ask the question 'why, if it was so essential, we hadn't done that earlier?

The air refuelling clearances tested our process agility. Our KC-30 was cleared to refuel Australia's F/A-18 Classic Hornets and Super Hornets—that was it. Our DMO SPO people—uniform and civilian—worked night and day over weekends to work clearances for seven other fighter types from five other different nations. It was really good to see that agility wasn't just about the operators. It was actually about the organisation's ability to react quickly.

The UK has always been excellent at that, as evidenced if you've ever seen crazy photos of Jaguars with AIM-9 [missiles] on top of wings; or the Falkland Islands campaign where they turned long-range transports with refuelling probes at short notice.

And the rate of effort I have discussed.





AIR TASK GROUP 630

The enablers, however, we're still adapting and has been a real challenge for us. Overall, I would have to say we had amazing support from across the Australian Defence Organisation. When we deployed, it was very encouraging to have real and timely responses.

I'm going to go through each of the aircraft types, really quickly, and just talk about it. I'll do it in the Task Unit numbers.

The Super Hornet, to my mind, was probably the best tactical platform in-theatre at the tactical strike role. Now I would say that, wouldn't I, as Commander Air Combat Group? The two-seat concept was absolutely validated—the ability to get the platform over there, deal with the initial complexities and employ operationally was excellent. It was very different by December, when we were working with the larger coalition of 13 nations. When we arrived, the Brits had just started dropping weapons, so we were about the third nation to drop weapons. The French had done a couple as well, but as a coalition, we were very much at the forefront of the campaign.

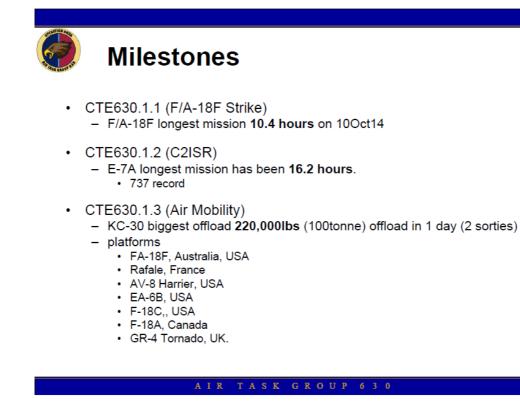
The processes were very immature. Having a pilot and WSO able to work through the rules of engagement and targeting directive matrix, be sure of combat ID and give that assurance was second-to-none. I would argue that, unlike our Classic Hornets, the Super Hornet's ability to generate CAT 1 GPS-guided weapon coordinates off the aircrew's helmet proved very flexible. Our ability to quickly react and deliver weapons accurately was borne out. We measured that and it compares very favourably with all the other strike capabilities there.

The Wedgetail is a very immature capability but certainly sought after as a command and control system. Its capabilities are outstanding. Every senior officer that came over to visit was exposed to the Wedgetail and fly a full combat mission. It was outstanding how much the crew adapted and how effective they were. The first two hour period on a Wedgetail sortie was a transit, getting the systems up and running and testing them. And then the girls and boys on them would tell you that getting in-theatre was very much like an Exercise RED FLAG, Tier One level of intensity, except it wasn't a 90-minute VUL [Vulnerability Period] window—it went for nine hours.

Now I did a few flights on Wedgetail and I can tell you, there were people who did not get up out of their chair for nine hours. Some got up once and went to the bathroom or had a drink. It was amazing—the intensity and the operation effectiveness of this platform once it was up and running.

The KC-30 tanker was again, a first time for us to deploy in-theatre. It was offloading around about 80,000 pounds of fuel to different fighter aircraft every single mission. Our tankers were prosecuting a target up north near Sinjar and the Super Hornets were having to hold a bingo fuel [minimum fuel to get to a base] to be able to land somewhere other than around Mosul-not a safe place to land. It was a long way away but they're in the death throes of trying to prosecute this target. The friendlies were being overrun and the Super Hornet pilot was able to call up our own tanker. We didn't always tank with our own aircraft, obviously, but it was highly desirable because of their flexibility. Unlike most tanker crews, our crews always listened to the Joint Terminal Attack Control frequency and they had repositioned themselves 85 nautical miles closer and they're sitting over the top of the fight, watching the bombs go off, eating their muffins and drinking their coffee—it's amazing! But they actually put themselves there and the strike crews called up and said, 'Hey mate, I'm really going to need some fuel here. Where are you in your tanker leg?' And the tanker crew was able to come back and say, 'No, we've got your back. We've listened to what's going on. We're right over the top of you and we've got fuel.' So he [the Super Hornet] literally went it, dropped his bomb, peeled off, went safe, plugged in [to the tanker] and was able to get home.

That level of force multiplication doesn't sound that gee-whiz, but that was actually the difference between getting bombs away and not. It was the difference between hitting a very high value target in the Sinjar area and missing it.



The longest sortie in a Super Hornet that we've done— I'm just talking during that initial tenure—about 10 hours. That obviously means strapped to the jet for nearly 12 hours because by the time you do the checks and take off and then about 30 minutes when you get back. That's a long time. I've done 11 hours in a Classic Hornet and I had to be pulled out of the cockpit. The girls and boys would tell you that actually after four or five hops, they did get used to it. But, it's uncomfortable. There's not a lot of storage area for food and drink and other ablutions. It ain't *Top Gun*. That wasn't a documentary. It was hard going.

The E-7—16.2 hours. I think that's a world record for a 737 because no other 737 can air refuel. I personally was on a mission that did over 13 hours on an E-7 through air refuelling—about 12 hours more than I really wanted, to be fair. Anybody been in a large aircraft when it's done air-to-air refuelling, like an E-7? For a fighter pilot it's absolutely horrible. It's like two whales mating at 30,000 feet - it's absolutely frightening but an amazing force multiplier and [we are] at the very beginning of our KC-30 capability.

The KC-30 Tanker. There was one day with the tanker, where [over] two sorties—often they pump early with two sorties—offloaded over 100 tonne of fuel across those two sorties in one day. That's a significant amount and within the campaign itself, as ever, fuel availability was what was driving the number of on-station CAS [Close Air Support] stacks and the assets that were available for all the tasking.

The ROE [Rules of Engagement] and targeting directive, from an Australian perspective, were a real success story. It took a lot of work to get there. We had some aircrew in ACG who have flown on exchanges and were involved in the Libyan campaign. It helps that you've got a Chief of Air Force and a Chief of Defence Force who know a thing or two about fighter flying, ROE and how we did it in [Operation] Falconer. And that meant that it really was an operational document. Targeting directives and rules of

engagement – they are command documents, not a legal documents. And having that influence early was absolutely vital. Clearly for us, like most of the countries, trying to keep a close alignment with the US is a key to success there as well because we're under the same command and control system. But that was a real success story and in fact, our changes, our ROE requests, were really timely dealt with when we pushed them back to JOC for the legal folks. And I can't speak highly enough of the support that we got from them, to enact that.

The red card holder piece was my secondary role after command of the Task Group. The red card holder was really more of a target engagement authority within the bounds Australian approval for every strike. In blue font there is the guidance that I gave all the crews on several occasions. There was a lot at risk here. No single bomb is going to win this conflict. But one badly placed bomb can certainly do irreparable damage to the strategic and operational nature of the Coalition. CO 1 Squadron would tell his folks that the best bomb of your career is probably going to be the one you decided not to drop. But that balance between what you're seeing on the ground and the complexity of that scenario is really difficult.



The net civilian casualties of zero is a severe limitation ... zero civilian casualties; that clearly makes sense. That wasn't just an Australian thing—that was across the board. But gee that's hard to enact. That's not your guidance—it's an order, "No, as in, zero civilian casualties." And balancing that proportionality is a very, very tough problem. With the crews that we had and the training they had, I was very happy to devolve those decisions to the cockpit, wherever possible.

The two sort of strikes that we did were dynamic and deliberate strikes. [We] didn't do that many deliberate strikes. We dropped fewer weapons on deliberate strikes, maybe

about 20 per cent. Like I said, we didn't have an extensive JIPTL list to build upon and support the Ground Component Commander. It was really more ad hoc yet processdriven than that.

The dynamic strikes meant that we were largely keeping several on-call CAS stacks around the AO—'we' being the broad Coalition. And Australia would fill their timeslots in different ones of those. The dynamic stuff then—and I'll talk about it a little bit later—becomes constrained by that process of clearing for strikes. We make sure there's no Iraqi or Kurdish security forces in there that are at risk ... certainly no civilians. Are we positive about the ID, the collateral damage estimates and so forth? All that work in between the CAOC floor staff, myself (or my secondary red card holder) and then ... cleared with the JTAC and the approval authorities.

[We had] pretty good legal support throughout the entire process and that was real-time fed back to Australia. So the air crews that came over after the first few months had already practised for over a month, under the contemporary rules of engagement and in very realistic scenarios. So they were up and running fairly quickly.

We've gone over with that heavy Intel footprint, especially in the Air Operations Centre. That was deliberate, just to handle the potential deliberate strike opportunities. It turns out there weren't that many. It has a real Raise-Train-Sustain perspective for Australian employment and I think our Intel community is far better placed because of our use of PSTL [Precision Strike Targeting LAN].

Air Task Group 630 (to 01 Jan 15)				
FACTOIDS	F/A-18F Super Hornets TE630.1.1	E-7 Wedgetail TE630.1.2	KC-30 Tanker TE630.1.3	Total
Missions Completed	223 (2 msn CNX - DIPCLR) (2 msn CNX - no tanker support) (2 msn CNX - weather)	54 (1xCNX due to MNT) (7xCNX due DIP CLR)	105 (2xCNX due DIP CLR)	382
Flight Time	1740.2hrs	635 5hrs	814.3hrs	3190hrs
Av. duration	7.8hrs	(11.7hrs	7.7hrs	
Mission Success Rate	97%	87%	98%	96%
Weapons / Fuel offload	103 x GBU38 34 x GBU12 154 x 20mm		8,280,563lbs	
WPN/Fuel Rate	0.61 bombs / mission	(78 863 lbs / mission	
	ALR TASK	GROUP	6 3	mission

There are a few stats up there on the number of target packs and again, this is just that first little snapshot. But you can see roughly there the strike aircraft are averaging about eight hour missions. The Wedgetails averaged nearly 12. The tanker is pushing off about 80,000 pounds of fuel [per mission].

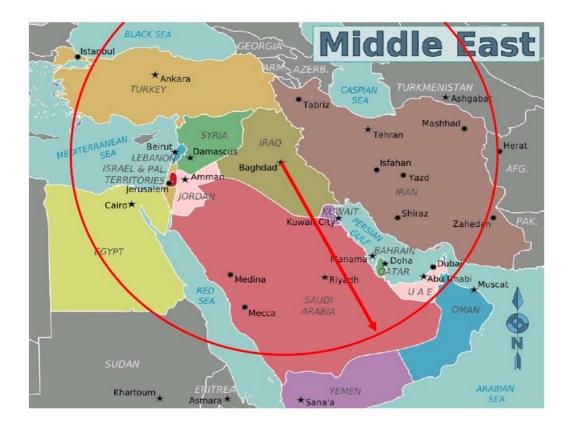
In terms of the mission effectiveness, or the mission success rate, the Wedgetail is shown there a little bit down at 87 per cent but actually most of the failures were because we couldn't get diplomatic clearance. If you take those out, every single platform type was up over 97 per cent mission success rate. And I'll come back to diplomatic clearances because it becomes a driver.

It's important that we do measure mission metrics when we're over there. We consider what success actually looks like, such as weapons use over time. When we got to the Sinjar campaign mid-latish December, the process had sped up quite a bit and so the amount of weapons going off on-time accounts for that.

How long does it take us to engage? When we first deployed, that convoluted process I was talking about with different clearances across the AO, [passing through] CENTCOM back in Florida, with CFLCC, the JTACs and then back to the CAOC, delivered slowly. The Coalition improved that process and got the time-to-engage [right down]. So that's the time from when we've got a target to when a weapon impacts the target. Then what happens on the graph? Well what happened was the US Army element in Iraq changed over. The Big Red One comes in, takes over, and now we've got an entirely new relationship, with new key people and new processes to work out. And as you see it, the right-hand edge of that black circle up there, we got frustrated with it, did face-to-face briefings with them and then very rapidly, sped the process up. By mid-late December, the campaign had really picked up its own rhythm. We had a lot more Coalition countries on board and the processes were really being ironed out. I once again push that air/land integration being such a fundamental piece of the successful use of air power in this sort of campaign.

And the time of day? Well, we're in support of the Iraqi and Kurdish security forces. They've got a long fight and limited night fighting capability so a lot of our weapons were dropped in the afternoon/early evening. And that's the engagements for per hour onstation where higher is better—so we got better.

I'll finish up there and focus now, perhaps, a little bit more on lessons and what the risks were. But I would point out that there were a massive number of Coalition entities all around the Middle East area and that ring represents around about 1,000 nautical miles. It's a couple of hours' transit. And there's people coming from all around the Middle East, filtering into this fight. So for us, that is a long transit.



What does that mean for us here? Well in our environment, that's Canberra to Townsville or Canberra to Western Australian border to get on-station every single day, and that's a long haul. It means quite a few things—more than just fatigue. It also means weather and certainty of how the weather is, emergencies, diverts. It turns out that not every country in the world is like Australia. And actually, there's a whole bunch of countries out there that share borders. And some of those countries, we don't want to land in when we've got a broken airplane. So there is a level of complexity there which we're well aware of and have done the practice drills. On one or two occasions, we had to execute the plan as we had to put aircraft down for safety reasons, and deal with the issues.

Risks, as I saw them, were really strategic, operational and tactical. Out of all the strategic risks, [the major one] was about that Coalition fracturing. It was absolutely fundamental to the success of the campaign that the Coalition came together, held together and that Gulf state countries—especially Sunni countries—were involved in trying to defeat the threat that ISIL represented to Iraq, in our case, but also to Syria.



Of course, we've also got the potential for fracturing of the Iraqi Government and the Pesh. So the Kurds up to the north have not traditionally been supported by the Iraqi Government and to be given weapons is a very sensitive issue. We're there at the invitation of the Iraqis and these forces have come together to combat that common threat. The Pesh fracturing into their different components or having a large break from the Iraqi Government would be a strategic risk for us as well.

And at the operational level, the Iraqi security forces' willingness to fight and engage is a fundamental driver for us. This should not in any way be seen as disrespectful or a slur upon the fighting abilities of the Iraqi security forces. That's not what I mean. When you witness what these people have been doing for a long time and how they've been fighting and trying to bring this country together, it is admirable. But I think it would also be fair to say that there was a proportionate level of cooperation from the Iraqi Government when Baghdad was initially under serious threat from the ISIL forces. Now that they're dealing with this threat day-to-day and they're establishing themselves as a government without that imminence of threat to the capital. So it's not about how fast and how broadly the air power component would like to fight this war. We're there in support of the Iraqi ground forces themselves.

Obviously Australia is based there at the good graces and hospitality of the host nations over in that region. They've been fantastic. But we could not afford, at an operational level, to annoy them or disrupt them because we are working with them as part of the Coalition and we needed to respect their desires.

The risks at the tactical level are unforeseen incidents. Low risk is not zero risk. A piece of shrapnel, one lucky shot, a bad emergency are all risks. This was certainly brought home during the Jordanian F-16 loss. The best mitigation that we had to those risks at a tactical level for us, was just the quality and the training of our people. I talked at the

beginning about how I honestly believe, very proudly, this deployment was the best prepared, trained and equipped air power force we've ever sent on operations.

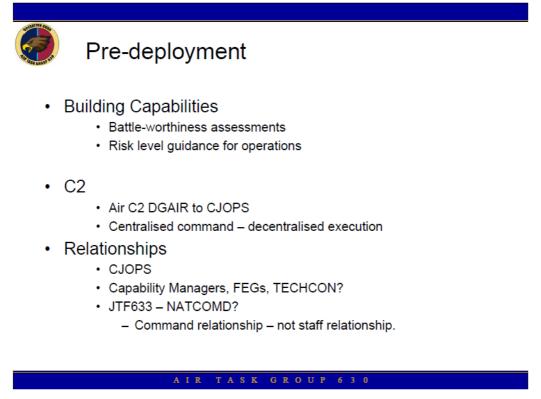
Our three air platforms, not including the very capable C-130 and C-17 that were over there as part of the Australian effort when this began, those three platforms were the best of type. They didn't go over with any caveats. Twelve years ago for [Operation] Falconer, Australia deployed with F/A-18s but there were caveats about how we could use them. Some of the capabilities were 'fitted for but not with'. That wasn't the case this time. We deployed with all our systems fully up to speed.

So, we were well equipped. But I also think we were the best prepared because we, as an ADF, have been on combat ops now, pretty much for 15 years straight. The processes and the understanding and supportability all worked well. Somebody standing in my position 15 years so, would not have seen the number of ADF people with operational ribbons on their chest. I was on staff college in '02 and pretty much the last word on operations was Timor.

We have been unable to accurately predict the nature and scale of operational service demanded of our Air Force; however, the ADO is well prepared to flex to the task. There's no way in '02 that we expected we'd be in a full-scale conventional war in the Middle East within six months. I was the Air Task Group Commander and I didn't have a clue in July last year that we would be over there as part of a broad coalition, executing this mission in the defence of Iraq against this ISIL threat. I just tell you that's important because our people are used to being on operations and they are well prepared and certainly the tactical level training has been borne out, as it does across the Army and Navy forces, in the ADF.

Begging your indulgence, I'll just flick through some lessons as I saw them. They're personal views; very RAAF-centric because this was a RAAF Air Task Group deployment. There's some things which I probably won't bring up [while I'm on the] floor;

but you're welcome to have a crack at them in questions.



In pre-deployment training, building those capabilities is really important. One of the things that we are much better at now than we were six months ago in the Air Force, is battle-worthiness assessment. It was done differently in different platforms. Air Mobility Group did it one way but that didn't transcribe very well for Air Combat Group, which I have stewardship of at the moment. I know that the Navy does this pretty well; they always have. And I know that the Army have a battle-worthiness process as well but I'm not sure about the consistency of how that's executed or the relevance [to Air Force]. All I would say is that we're a lot better at it now than we were six months ago and at getting that risk level guidance.

The command and control is still in dispute. I refer to this as being Clausewitzian because, like Clausewitz, a lot more people quote it than have ever read it and understood it. I guess it has ever been thus. Air is different and that centralised control has worked really well; but it hasn't been without its hiccups. The relationships were key. CJOPS, Vice Admiral Johnston is a fantastic leader and was a massive support to me over there. All the support we got from TECHCON, from [TU] 633 and from the Capability Managers here.

The Coalition became that strategic focus of effort, at the expense of operations. It was more important that we form the Coalition, acting coherently, getting the Gulf states involved, than it was to prosecute two more targets today than we did yesterday. We would only go at the pace that the Iraqi security forces required us, or when they needed us to be involved. But actually, it could never be at the expense of keeping the Coalition together. I'll come back to that because there's a few subtle points that come out of that.

Having embedded staff at the CAOC machine was at the good graces and hospitality of the US. The CAOC machinery, which we have been part of for a long time with

permanent people over there in 5-eyes positions, is almost unrecognisable. Every single nation was on the CAOC floor. The value of sharing the information was good but not great, trying to establish separate LANs. I would say at the senior national representative level, one of our agreed principles was, 'Let's at least take the good stuff out of ISAF: but let's not be ISAF'. I don't mean that disrespectfully for what ISAF achieved. It served its purpose but it was seen as being quite a constraint, especially amongst the European nations.

There were different priorities between CENTCOM and CFLCC and CFACC. Probably not entirely relevant for the broad audience here.

Building the battle rhythm was quite difficult when JOC and CDF and Australia were eight hours ahead. We were dealing with CENTCOM who were eight hours behind. Trying to get a rhythm that was coherent, that worked, was difficult. I'd wake at 4:00 every morning—I was lucky, I had a DSN terminal in my bedroom—and I would work 4:00 through to 9:00 dealing with Australia, just before Australia went home. Nine o'clock in MEAO, depending on daylight saving, would be 1700 or so at JOC. Then I'd go to the gym for an hour and then go and start work at 1100 and work through until 2100 or whatever time it took.

Handing off theatre responsibilities is something I don't think we did well; understanding what that actually meant. The Joint Personnel Recovery was especially highlighted during the Jordanian F-16 shoot down but we had ours well understood. We knew what those responsibilities were, where the assets were. But it's very important for us to understand that, as an Air Component Commander, what you're responsible for. The datalink management, the security aspects of that, even airspace control was a major issue as we were operating in Iraqi civil airspace.

The reporting – I've put down the SITREPs—the power and the pain. It is amazing who reads the SITREPs that come out everyday. It's also amazing, from an Australian perspective, who thinks they do. There's also a third group of people who don't read the reports but make comment anyway. And that battle rhythm piece was really interesting because we would put something in the SITREP which seemed to be fairly non-controversial. But I'd go to bed, Australia east coast would wake up and they'd stew on it all day and by the time I woke up at 4:00 am and it was early afternoon back in Australia, either it had burnt itself out and had been dealt with or it had reached a level of crescendo and I wore one from fairly high up. But reporting is absolutely fundamental to what we do and it was something that I would regularly discuss with ADF Commanders in Afghanistan.

Administration and rotation planning from an Air Force perspective is being addressed now, but was pretty poorly done. A part of that was because of the level of manning that we have. We haven't had to deploy on that scale within Air Force for so long. I think it's certainly something that we gathered from the way that the Army does it and working it through JOC.

But, but there are some fundamental differences and one of those I would offer is that from an Air Force perspective, as Commander of Air Combat Group, my operators are currency-based operators as opposed to straight competency-based. Which means there's a big difference between somebody that deploys for four months as opposed to somebody who deploys for six months. [If] you deploy for six months, suddenly we need to put a six-week refresher into you at \$20,000 an hour on F/A-18 time plus the resourcing etc. The overheads are massive. So actually, it's not about the time in-

theatre—it's trying to minimise the lead-up time and minimise the extraction time. We've been set up on a cycle that has been appropriately being focussed on our Afghanistan experience, and prior to that, Iraq; but probably it is less responsive to the needs of a sustained air campaign.

I mentioned stovepipe planning and the TUHQ [Task Unit Headquarters] on-the-job training and another challenge was force preparation and the ROS&I [Reception, Staging, Onward Movement and Integration] in-theatre. Clearly we need to get that designed to be for the task. So the insistence that an F/A-18 pilot has to go and do a weapon shoot in body armour to comply with decade held land-centric views is frustrating. 'You know what? I don't wear body armour in an F/A-18.' 'And I've just done a weapon shoot—twice in the last two weeks but I've got to go and repeat? ...' 'Yeah, but that's what they do in Afghanistan.' 'Yes, I know—but I'm not likely to clear IEDs when I'm running around in a g suit ...' It turns out that [TU] 633 and other organisations have set contracts and so it's not easy to just change. But what it does mean is that Air Force should have foreseen that and offered some tailored courses for both getting people in and out of theatre. I believe that's happening now.

The visits I mentioned were quite an overhead. We hosted about nine senior officer or political level visits over the last nine weeks. We weren't resourced for it, nor were [TU] 633. To their credit, they supported us with major visits like the Prime Minister and the new Minister. But visits come at a cost that we should have foreshadowed.

This was an information operation and it's one that largely, the enemy is very, very good at. They're very good and very fast at the data and the information going onto Twitter and social media. Having our own embedded PR people and the ability to process material; having the ability to put people on aeroplanes that are flying over combat areas and seeing that and being able to film it, is a massive force multiplier—properly used.

We did a base change when we were over there. We were driven by some other factors for our host nation. I use the analogy that, for the Australians, we deployed to the equivalent of RAAF Base Wagga. It's a difficult base to start combat ops from. Later on, we moved back to the equivalent of RAAF Base Williamtown. It actually made it pretty easy operationally, but, it was fantastic and massively facilitated by both the US and the host nation, who were just wonderful.





But standing up the Air Task Group, going into theatre, starting combat operations, nearly getting it right for two weeks and then upping stumps and then moving again and then setting it up from scratch was very hard. The site was literally a dirt paddock, a few weeks earlier. The combat support folks in the FSUs were amazing. They did an absolutely amazing job. There are some real lessons there, especially in Air Force and Commander of Combat Support Group certainly has got that message.

The Combined Air and Space Operation Centre. Many of you in the room have been there and seen it. It is a big weapons system and it is the central node so having our embedded folk in there, was a massive force multiplier. A couple of key people, Senior Operations Duty Officer, Flight Lieutenant Intello in the Target Effects Team— had an absolutely amazing influence in their roles.

Communications, of course, was driving this campaign even more than normal. The reliance that we have today as an Air Force, on comms, can't be overstated. And the 'so what' is initiatives like Jericho and the new capabilities that are coming online absolutely has to factor in communications. It's being looked at and I'm comfortable now that it's being addressed.



AIR TASK GROUP 630

It's difficult when you're working at multi-level security. So, with the Super Hornet, we're operating in the compartment and Top Secret level and that's very, very different from operating down at the normal Secret level. Then there's the Australian Eyes Only level. For those of you who have been at [TU] 633, I put in there the business tools and Lotus Notes.

The logistics piece is really interesting in as much as it was fundamentally different. I talked about that Afghanistan influence and that land war [experience] but of course, to broadly characterise it. A Land Component Commander in-theatre, will set the stockholding policy and how many bits and widgets they need to provide and hold for them. But we don't do that in Air Force, do we? In fact, that happens back here by DMO. DMO determine the usage rates and the spare rates and they help supply us. So those linkages [back to DMO] are absolutely vital. But understanding, through all the links in the chain, that that one aircraft part that we've managed to quickly get from [Australia] to overseas, somewhere [in the Middle East], it's only got 100 kilometres to go now to reach us, but any decision to delay is vital... 'That can't be that important. I'll just send that tomorrow.' But what that means is that an aircraft now is not going to fly; that the US are going to have to backfill for us. When you've only got one E-7 or one KC-30, it means the US are now going to have to backfill your mission slot. Any delay in logistics has significant effects.

We broke a KC-30 throttle quadrant, which apparently breaks about once every 20 years. It just so happened, that was the one widget we broke. More amazingly, we happened to have one in stock back in Australia. But waiting for that thing to actually get there, just because of well meaning but ill-advised decisions, caused delays, was frustrating. That has follow-on effects. That is the criticality of Air and resupply and it is different to what we have been experiencing for the last 15 years.



Operational Issues

- Diplomatic Clearances
 - Getting into theatre
 - Overflight DipClr = Landing Dipclr for Aircraft rescues
- Weather
 - Long transits
 - Fatigue
 - Forecast reliability
 - Diverts planned vs fuel diverts
- Iraq ATC
 - Restricted Operating Zones (ROZ)
 - AAR
 - Coordination
- ROC Drills
 - Diverts
 - Notifiable incidents

AIR TASK GROUP 630

Going into [Operation] IRAQI FREEDOM or going on Operation FALCONER 12 years ago, we didn't need to ask questions of the country that we were going to bomb. We're there in support of the Iraqi forces and we need to get diplomatic clearances, not just from them [Iraq], but other nations around that we want to overfly or that we might divert into with an emergency. And those dip clearances become quite a rate-limiting step. You also need to understand that some of the nations over there are actually quite small and so they don't have many people. It only takes one member to not be at work that day, and they may be the critical point for processing your dip clearance. I would argue that other bigger coalition partners than us, would tend to just treat it as 'Oh well, they'll just process this'. Well actually, the host nations are very constrained by the number of people they have to process requests.

The weather is a big deal. There are long transits as I've already discussed; more than just fatigue but how reliable is the forecast and where are the divert airfields. Iraqi air traffic control was one of the top two issues to manage for crews in a strike aircraft. Most of the time, they're thinking, 'Where's my next fuel going to be?' Once was organised, the focus becomes 'Am I going to bust a ROZ [Restricted Operating Zone]? Am I going to make sure I'm not in confliction?' and dealing with air traffic control and getting that de-confliction right, in a semi-permissive environment, is quite interesting.



Patience

- · Strategic what losses / incidents is there political will to absorb?
 - How long will public support be maintained?
 - How long can they wait for the first bomb?
- Operational the Afghanistan legacy and use of air
- · Tactical no single bomb will win this conflict.

Initial Stand-up

- Compartmented planning
- · Mitigate with quality people
- Risk
 - · Low risk is not zero risk

AIR TASK GROUP 630

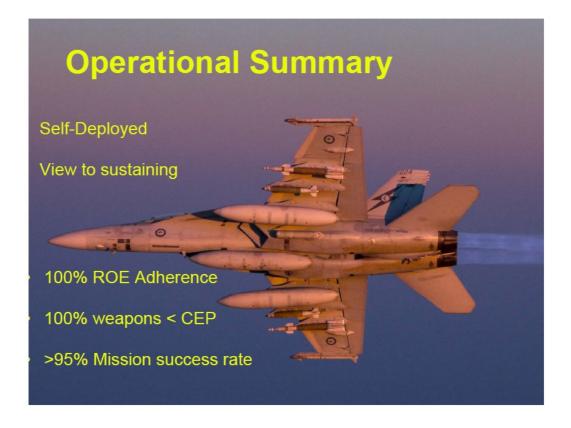
And so that's my lesson summary - it's good to be patient. At the strategic level, it is important for us to understand the political will to accept losses. Low risk is not zero risk. It's important to remember that we were very reliant on public support. But how long could they wait for the first bomb? The deployment was ordered by Government, there were media releases, we deployed, we were cleared for kinetic ops. It actually took us four days before we were on task, at the right time, at the right area, with the right people in play and we were able to employ a weapon.

The initial stand-up of the air operation was crazy because there was no organisation. We formed the organisation on the fly over there. I guess the picture I'm trying to paint is, it was very different by December when it was just down to busy. But September, October, November – moving, standing up the task group, starting ops, and then moving bases and doing it again – that was, busy. In mitigation, we had some seriously high quality people.

The patience required an understanding of the pervasive legacy of Afghanistan. Not from an Australian perspective alone, but actually how CENTCOM had been running operations. I don't think CENTCOM had authorised the release of a weapon drop without pervasive, full-motion video for nearly 10 years. Actually, it turns out Bernoulli and Newton still work when you're not filming it. You can actually still prosecute targets without the video. The timeliness got a lot better as the graph shows—things improved, things got faster as the Coalition came on board. But there's some lessons for us if we go and do this again.



Future challenges – we're on second rotations over there now. From an Australian perspective, we have Classic Hornets in-theatre. I can tell you that they are relatively old aeroplanes. Amazingly new avionics, great jet, doing a really good job in-theatre already, but the heat alone is a massive influence and come June, July, August—it is going to be hideous. Cockpit temperatures above 70 degrees is what I would expect and that is pretty hot when you're shrink-wrapped in G-suits and all the other life support gear that we wear. The heat, let alone the sustainment, keeping quality people and quality leaders going across the tanker, the Wedgetail and the strike forces is going to be important.



And that's my operational summary. We managed to self-deploy. It was and remains a fairly modest, but very important, contribution. And the fact is, I don't think the RAAF could have done this, at this scale, and this packaged level, ten years ago. I'm incredibly proud of the women and men that went over, incredibly proud, and not only those that went over, but also those who were at [TU]633 or back here at JOC and supported it. But there's still a lot of lessons for us and I'm very happy to see that many of them have actually been folded back into our training and our deployment systems here already.

I'll reiterate that these are my perspectives alone. It's only about those first few months and the initial stand-up. Thank you for your attention.

I'm happy to take any questions until it's time to depart.

Speaker #1: Sir, I have a question about legal support and I'm guessing that's to do with ROE [Rules of Engagement] and that problem and all that kind of stuff. How much of that did you have and would you say you had enough and would you need more of it if you went again?

Air Commodore Roberton: Don't ever tell a lawyer that you don't have enough of them because that's going to cost you. When we were on the Ops floor my Legal O was never more than probably two metres away. I had outstanding support, both here and in Australia, regular connectivity was really good. It is interesting that the legal fraternity is like the PA fraternity. They have their own TECHCON chain. It was really good. It was enough. But it was about the application and effects [of the weapons]. I guess I would offer that I went over with the expectation that about 80 per cent of the weapon releases were probably going to be follow the recipe; 'yes, it's within guidance or it's not'. And then about 20 per cent of them were going to come down to judgement. In reality, it was

almost the inverse. In reality, I'd say about 80 per cent of it came down to your judgement and a thorough understanding of the current guidance from CFACC intheatre but also our own government, our own CDF and JOC. And that played itself into the legal advice that we would get as well. The legal advice was good and it was necessary.

Speaker #2: Can I ask a question? What about education and training for the actual operators in regard to the ROE [Rules of Engagement]?

Air Commodore Roberton: Yes, that worked well, absolutely. And that was because we got operators involved early on shaping the ROE and feeding that back. We're talking about a week. But then that was constantly fed back from in-theatre for those that were still [preparing for deployment]. So we now have a very coherent and comprehensive package of work-up training on the current ROE and its application under the current commander's guidance over there. So, that's working pretty well.

Speaker #3: Sir, noting that most of the targets were dynamic targets, do you feel as though limiting Australia's operations to Iraq, rather than in Iraq and Syria, hindered the application of air power, noting they probably couldn't tell that it was a border that you could not cross?

Air Commodore Roberton: No, it really didn't, for a couple of reasons. The US and the Gulf state countries were operating in Syria as well, so they covered that area. We were not alone. Most of the other Coalition nations, at the time—I don't know what the current state is—but at the time, most of the other European and Coalition nations and Canada were similar to us. So it was not a constraint on both the conduct of the overall campaign nor was it a constraint on the Australian application.

Speaker #4: You covered the area of rules of engagement and targeting directives. But the PowerPoint at that point said that the ROE were aligned with the US, however the exception was self-defence. I apologise if this is a 101 question for most people in the room, but can you explain that a bit?

Air Commodore Roberton: Yes. The US has a different application of their rules of self-defence than Australia and, in fact, a lot of other nations—but I can't speak for them. They apply a different temporal caveat to self-defence. So for us there is a timeliness issue, there has to be an imminence of a threat. So there is only a period of time where if someone is pointing a gun at you, then in self-defence you can [shoot] ... but if they put the gun down and walk away, well, we know they're bad but has she just stopped being bad or has she avoided combat? That temporal aspect is different in its interpretation.

And there are some other nuances in the US's application of self-defence toward property, rather than just life. But, you know, those are issues really for them. In a practical sense, I think that should answer your question though. If we were in a self-defence scenario—say self-defence of Iraqi security forces on the ground—then we would be constrained by the amount of time after an incident that we could actually prosecute an ISIL threat.

Speaker #4: But does it mean the threat to one of our pilots ... even to one of our Super Hornets, for example, would need to be greater or less for us to use weapons in order to counter that?

Air Commodore Roberton: No, no it doesn't.

Speaker #4: Right.

Speaker #5: In your list of stores expended, you mentioned 154 [rounds] of 20 mm. Where did you shoot that?

Air Commodore Roberton: A target, on the ground.

Speaker #5: I thought everything ... all the kinetic activities ... involved dropping bombs.

Air Commodore Roberton: Nearly all, yeah, nearly all. One hundred and fifty-four rounds goes pretty quickly. There was the need on one particular target for the gun to be employed. And really, any other detail is an issue for JOC, which is why I'm being cagey about it.

Speaker #5: Just one aircraft, was it?

Air Commodore Roberton: Again, you'd have to talk to JOC about that.

Speaker #5: Sure.

Air Commodore Roberton: I don't really know, to be honest.

Speaker #6: On one of your slides about command and control, you had CJTF question mark and you said you might come back to that. Could you expand on that one?

Air Commodore Roberton: So early on, in September, October and into November, CFLCC was not a designated CJTF—he was not a Commander of the Joint Task Force. So at that time, everything was going through CFLCC and back to CENTCOM and, I can't remember CFLCC's actual name at the time, I apologise. But he had had not been designated as a CJTF by Commander CENTCOM and the Coalition was still forming and so they were still working out whether they need an in-theatre JTF. That subsequently happened—but the reason I put it on the slide was that it was a real driver for the way business was conducted and there's others in the room that can probably talk to how that worked from an Australian targeting perspective as well.

Speaker #7: Can you describe how the Super Hornet sensors performed on those operations? Is there a case for an improved targeting pod? Is that one of the lessons that you've learnt from this, for example?

Air Commodore Roberton: So being a fighter pilot, if you offered me a better radar, better pod, more weapons, more fuel and something that goes faster, I'm going to say, 'Yes'. Clearly what we had over there is more than adequate for the job. But for operational application of things like the targeting pod, we're in lockstep with the US Navy at the moment and so we'll look and influence with them whether or not there are shortfalls in the way it's going. But what I can tell you is the targeting pod that we have on the Super Hornet did not prevent us or preclude us or delay us prosecuting one single target in the four months, that I was there.

Speaker #8: With the E-3, I think you mentioned there that there was a problem with diplomatic clearances in using it at some point. You said you were going to come back to that. Can you expand on that?

Air Commodore Roberton: So it was the E-7?

Speaker #8: Yes, E-7, pardon me.

Air Commodore Roberton: I did sort of come back to it, didn't mention it specifically. It's a nuance that I probably had not foreshadowed at the beginning of my career, that we would be seeking a diplomatic clearance to go into a county to employ weapons. But actually that was a driver at some stage and we were there at their hospitality. They were hosting us and so we needed to have the diplomatic clearance before we could fly that platform into theatre. Now, whether that was just a bureaucratic error or a slip-up, the diplomatic clearance did become a rate limiting step—but only for a short time. I think we dropped a few sorties that we would otherwise have planned to have flown. Does that make sense?

Speaker #8: Yes, and just one other thing, the recovery of personnel; you said that became an issue around the Jordanian incident. Can you ...?

Air Commodore Roberton: No, it wasn't an issue. It's just that it got highlighted in its importance. I think human nature is such that we had operated for a couple of months, things were going well and the Coalition had come together. Actually, we were starting to operate a lot more efficiently. And then we had a loss of one of our Coalition fighters and so that refocussed everybody on what are the assets in place, what are the timelines? And certainly we were always very comfortable, from an Australian perspective, of the assets that were there and our procedures and equipment and everything of that nature.

Speaker #8: Yes.

Air Commodore Roberton: I guess it wasn't so much it became an issue; it just highlighted it.

Speaker #9: Were you flying combined [missions] with other Coalition assets?

Air Commodore Roberton: Yes, yes, we were. The first big Coalition strike that we did, which would have been in October ... end of October, I think, or early November, Australia actually led that one. And I think there were five different countries involved. And then we rotated mission command leads between the different nations, so that often, nearly always, there was a combined nation push, which was great, just for the cooperation and understanding between the different nations.

Speaker #10: Sir, you very briefly touched on the Combat Support Group enablers. Talking about self-deploying, were there lessons learned in the combat support and security space about how we (a) support air task group and (b) then secure it in that environment?

Air Commodore Roberton: Yeah, and I suspect you know the answers already about that. But it wasn't done neatly. It's a bit complex, going to another nation and then providing a level of security with the carrying of weapons. You're in another nation so there's potential legal issues there.

But also, I think the broader lesson for us is that over the last ten or 15 years, Wedgetail, certainly tankers, but our strike fighters, they've been involved in Tier One exercises like Red Flag, which exercise you at the highest level of capability. And so operationally,

when we got over there [in MEAO], every single platform, not only was it just up to speed and running smoothly, but it actually was dominating from day one.

That is not true of combat support—and why is that? Well, it's not that combat support wasn't very busy through 2014 with MH370 and deployed. But in the 90's, we used to deploy to [RAAF Base] Scherger and stand up a bare base. So we'd deploy somewhere and stand up that kind of force. We haven't done that, in my view, for years. Now there's some reasons for that, but I would think that is a clear lesson for the RAAF in deploying that complex support. It could be to the end of the strip at Amberley, like just deploy across the road, but actually set up the bare base and face those challenges and I think that lesson has been clearly identified and will be applied in the future.

Speaker #11: Sir, the Coalition operations have been successful and your opponent reacted predictably on that. Are they adapting to the way you operate and does that make the future operations more difficult?

Air Commodore Roberton: They are certainly adapting to the way that we operate. It is more difficult to counter ISIL as a threat to the people of Iraq but I still argue that it's made still more difficult for them to form that caliphate. They're not able to do that. So we—the coalition nations involved—know a thing or two about prosecuting an insurgency war, learned over the last 12, 15 years. And it's not easy, but it's not like we haven't done it before. So yes, they are adapting but I don't think that means that we are having anything other than success in tracking them. But again, this is Iraq's war on the ground and we are there to provide that enabling force.

Speaker #12: You mentioned the support environment a little bit earlier and the training received by the new Super Hornet crews just over five years ago, as most of them were. Do you think that during that project we would have done it differently to prepare us better or prepare us differently for the task that we have to do?

Air Commodore Roberton: Not from an operator perspective. But I think the way that we did the combat support, the security support that got mentioned earlier; I think we'd do that a little bit differently. And that's happening right now, in fact. We're addressing the way some of that's done; some of the hardware that we buy and the focus on that. I'd like to see a bit more focus on the communications equipment as part of that as well, but largely, no.

And it shouldn't be the case, either, because the Super Hornet was brand new, but we've only ever acquired one platform that was actually off-the-shelf, and that was the C-17. 'And here's your platform, here's your training system, you've got a support package'. We didn't have that with Super Hornet. We're still building the support package now with that, like the other new aircraft. But having said that, we have operated strike fighters for several decades. The E-7 is a lot more of a challenge. We haven't operated in that [role] so that is probably going to be slower to mature. It's doing a good job.

Moderator: We might hold it there, Sir. Oh just one more question.

Speaker #13: The degree of advantage of already having a base over in the Middle East. Can you elaborate on whether that accelerated your deployment or was it just convenience?

Air Commodore Roberton: Yes, fundamental to us being able to go into that theatre and then operate. We could not have done it without it—not in that timeframe. And, it's an important caveat. But having an Australian presence over there, and a large part of that initial command and control [already set-up], enabled the logistic support [to begin immediately]. And the folks that were over there got absolutely smashed because we're just a part of OKRA. There was also the Special Operations Task Group and a whole bunch of others. We could not have done it [without them], certainly not in that timeframe.

Ladies and gentlemen, I really appreciate your time and your patience. Thank you for that. Thanks for the opportunity to come and chat. We'll have to clear the room here soon but I'll be outside if there any other queries.

Moderator: Thanks for that, Sir. I'd just like to say on behalf of the Air Power Development Centre, that it's been great to have you here today. We understand, as I mentioned earlier, that Operation OKRA is an ongoing operation, you've just come back from it, it's still going. There's lessons ... you're still reacting back home to what you've just come from and your time is obviously really valuable and your presence here has been very valuable to us.

So once again, thanks. And if I could just everyone to show their appreciation.

End of Recording.

Note: Words in square brackets [] have been added to the transcript during the editing process for clarity.