



WALKING IN THE AIR

LOW FLYING WITH THE RAF: THINK YOU CAN NAVIGATE OUR HILLS?
THESE GUYS DO IT AT 300MPH. LISTEN AND LEARN...

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Total silence was created in a room at Orfield Laboratories, Minneapolis in January 2004. It happened in something called an anechoic chamber, which looks like the interior of a beehive. Inside it's so eerily quiet that your breathing is deafening and you can hear the blood moving through your veins. If accounts are to be believed, this level of silence will completely freak you out.

The hills, then, are really not that quiet. Breeze, birds, water, your own wheezing – by comparison, it's an ambient opera. Nevertheless, there are some sounds

which, by sheer incongruity, cut through this soft sonic breeze like a scalpel through paper. The *beedle* of a phone. The clink of climbing gear. Or the scorching thousand-horsepower scream of a low-flying fighter jet doing 500mph.

The movements of Her Majesty's Flying Finest in the British hills divide walkers – but often not down the classic furrows of opinion. I know carbon-footprint-measuring leaf-huggers who get damp with excitement at the sight of a fast jet's black arrowhead slicing through a valley, chased by that distinctive chalk-on-a-board

chafe. I also know bolshy people who are happy to shatter the tranquillity of a hilltop with their garish mobile ringtone yet spit poison about the RAF's low flying. The subject is like militaristic Marmite for the ears, with a plethora of key rants habitually popping up. Where do they go? How low is too low? And are they just showing off?

So when **Trail** got a call from RAF Linton-on-Ouse to come and see exactly what low flying was all about, for many reasons – including several that had nothing to do with Feeling The Need For Speed – saying no wasn't an option. >

Familiar landscape, new perspective: an RAF Tucano passes Great Gable on a low flying exercise.

"The British are the best in the world at low flying," Flt Lt Robin Manisty should know, having flown Tornados in some of its scariest places. "It's an anti-radar technique. Stay low, stay safe. And it's a very perishable skill. If you don't get out for a week, you're out of practice."

Robin trains pilots at Linton, the Yorkshire RAF station that's home to planes which patrol the bits of the Lake District that are higher than most cars but lower than many walkers. He meets Tom and me at the gates, beyond which an odd shift takes place among the square buildings of red brick and ruffled steel semicircles. Suddenly, it's 1944 again.

Linton is first in a chain that includes RAF Valley on Anglesey, home to Snowdonia's Hawk jets. But proto-pilots initially flex their wings here, in the Tucano. As an ex-Air Cadet, I was familiar with flying in planes without stewardesses – though not like this. Today, weather permitting, we were going for an airborne duck and dive to see some familiar hills from a pilot's perspective. But first, I wanted to gain an insight into how much planning really goes into such a jaunt – and also establish how much my movements mirrored that of a recent high-profile trainee. Did Prince William use this simulator?

"Yes."
Did Prince William sit in this ejector seat?

"Yes."
Did Prince William walk through this door?

"Hard to say."
Did Prince William fly in the plane that we're going to fly in soon?

"No."
Then we go to the map room. Look at an aviation map, typically a 1:250k sheet (these guys can get across a 1:25,000 map in about four minutes) and you start to get a grasp of just how little room there actually is in British air space. Carefree

"Showboating? You'll be lucky. Flying in the UK is like wandering blind through a 3D, super-fast version of the M25"

showboating? You'll be lucky. Flying in the UK is like wandering blind through a 3D, supersonic version of the M25 on a Friday night: commercial jet corridors, gliding hot spots and no-fly zones are articulated in a dazzling web of runged flight paths, arrows, warnings, restrictions and one-way systems. And, among it, a few disconcertingly straight lines: our route. That aside, navigationally speaking there isn't that much difference between low flying and walking. Really.

"Navigation when you're walking is a matter of map-to-ground. In the air it is clock-to-map-to-ground," says Robin, as we regard a huge map of northern Britain. "When planning, every scale of map is studied. We use collecting features, or 'stop' features, in the same way – using something seen from the air as a turning point." This is an understatement: some trainees are sent 200 miles to find a phone box using a compass and a clock.

More straightforward is the 'unofficial' aircrew map of Britain. This cheekily depicts aviation no-go areas around airports ('shark-infested custard'), attractions of an iconic nature (Harry Potter Viaduct, Dambuster Valley), more ambiguous locations ('Sally's Tits', 'Biggus Dickus') and something named simply 'Aaaaaarrgh'. Today, we wanted mountains.

"We'll head for the Lakes – if we can get into it. We can't low fly if there is cloud cover." ▶



Top: concentrating hard in the map room.

Above: the Tucano's stopwatch and G-meter. One you stop, the other stops you.



The RAF's anti-cannibalism measures were legendary.

The pre-flight briefing, given by Flt Lt Jan Janiurek, swiftly established that he was not the only thing capable of soaring clear overhead.

"Outlook is a sixteen, with an uncertain ten and a sticky six. Cloud cover is disgruntled, with a gelatinous ratio – but the biscuit's thin. Recipe is good, with a sideways Oliver on the forks and a questionable chopstick, though improving above 8,000ft. Side winds are schizophrenic but taken with caution there shouldn't be any need to medicate but, er, take care with the wickets, chaps. [Rueful chuckle from all.] The pattern should be two on one, but with a fast three should we lose the four. Overall then, good – but with a small chance of a seven."

This isn't verbatim, of course. But I was bewildered enough to air a loud "Sorry, but *pardon?*!" in a room full of *They Who Very Coolly Dare*. Part of me suspected this was all code for 'Right, chaps: we've

got a couple of lilies with us today, so do your worst,' but the studious scribbling of notes around me suggested this extraordinary verbal schematic was indeed a flight plan.

Tom and I were then suited up, and – after sniggering at each other's helmets and hoses for a while – led by Robin and Jan to the runway.

The Tucano T1 is built for training fast jet pilots, but it isn't a jet. It's got a turboprop, which makes it look like a heavy metal Spitfire and is the reason why the noise you often hear in the Lakes is more a Battle of Britain *neeeeeeeeeow* than the scratchy sizzle of a jet. But it's every bit as manoeuvrable, can scud along at 310mph, and can pull itself up to 30,000ft without a sniff. Anything faster than a Tucano can't handle the turns of the tighter valley-to-valley flying in the Lakes. According to Jan it's "more than fast enough".

So here we go. I'm sat in the front seat, having

things clipped and tightened around me. It's like the interior of a 1950s racing car: purposeful gunmetal, black-on-white dials with zebra-striped insets, use-polished knobs and serious-looking levers. Between my legs is a yellow loop – a reminder that I'm sitting on a bang seat filled with enough gunpowder to shoot me out the plane like a shrill green firework. There's no radar. Instead, looking at me from the most prominent position on the dash is a Heuer stopwatch. It's technological, but comfortingly mechanical – more like a lawnmower than a 767.

The engine coughs. A sputter, it catches, a rising, stiff rumble. The cockpit shakes. The instrument numbers softly double with vibration. Hissing oxygen chills my mouthpiece, compressed conversations fill my ears. The cooling system kicks in, turning the air white with ice mist as we taxi out. Beyond the transparent disc of the spinning propeller

is the runway, and the hills of Yorkshire.

And then, with a muscular pull from the front and a light waggle from the rear, we're up, the fields scrolling a few hundred feet beneath us.

Flying at 250ft – the minimum height for general low flying, and lower than even the weediest Lakeland fell – is odd. It's not like looking down from a hill: you are detached from the environment, and seemingly omnipotent over it. Cars, houses, bridges – you feel *bigger* than them. It's like being in a normal plane, but a few trenches closer to the action – close enough to feel the heat and smell the fumes.

We're on a straight-line course to celebrated northern nipple Roseberry Topping. Soon its profile spears from the skyline. We fly alongside, outlines of people on its crest standing surprisingly tall. A few wave. Like every fraudster flyboy I respond with a theatrical salute. I didn't care if they thought it was

cheesy: I was the coolest plonker on the planet.

On our second orbit, Tom and Jan's plane banks sharply away from us to some lively radio chatter.

"They're off home."

"How come?"

"Your photographer's poorly."

Poor Tom. I watch them leave, hoping he made it to his sick bag. Looking at the crannies around me in the cockpit, the alternative was too horrific to consider. Now alone, Rob and I head for the Lakes.

We fly along the Ribblesdale towards the barrage of cloud. Low flying demands as naturalistic an approach to reading and moving across the land as walking – only bigger. Where a walker might use a gully or a stream as a handrail, planes use something slightly chunkier, like Wharfedale. The valleys are your paths, low clouds your uncrossable rivers, the sky your bail-out. Your speed makes everything

dizzily dynamic. A lone figure treks up to the summit of a hill, walker and mountain static against a spinning backdrop. The sun's sharp glint doesn't linger leisurely on rivers but smelts transiently along them, a streak of brilliant, molten silver catching my eye from all corners as we scythe along the valley, roads and railways intermittently aligning beneath us before peeling off. Like walking on a knife edge or summiting in a gale, it's an utter thrill.

Walkers have an advantage, though. They can navigate the cloud that hugs a mountain, with diligence and measured skill. A plane is far too clumsy an object moving too fast even to consider a zero-visibility attack on the Lake District, which was what we were faced with as we reached the western wall of Wensleydale. For today, the Lakes was a no-fly zone. "We'll go up to 10,000ft and head home."

Disappointment is brief. Robin eases the

LOW FLYING BY NUMBERS

250ft Minimum height for normal low-level flying.

100ft Minimum height for tactical flying, only allowed in certain areas: not Snowdonia or the Lakes.

276mph Speed of typical low-level flying in a Tucano (240 knots)

345mph Maximum speed of the Tucano T1 (300 knots)

483mph Typical low-level speed of fast jets over UK (420 knots)

630mph Maximum tactical speed

of fast jets over UK (550 knots)

761mph Speed of sound (650 knots). Pilots aren't allowed to go supersonic over land. It occasionally occurs, but is a serious breach of discipline.

5,000 Litres of aviation fuel burned by a fast jet (i.e. Tornado) on a typical sortie. A Hawk will burn about 1000; a Tucano about 300.

5 Days a week the RAF are out in the hills. Weekends are avoided, as are bank holidays.

5km; the lowest visibility allowed for low flying.

Roseberry Topping by plane: an illuminating experience.



STEAL THE SKILL! TIMING

DISTANCE TRAVELLED	SPEED (kmph)			
	5	4	3	2
1000m	12min	15min	20min	30min
800m	10min	12min	16min	24min
700m	9min	11min	14min	21min
500m	6min	7.5min	10min	15min
400m	5min	6min	8min	12min
200m	2.5min	3min	4min	6min
100m	1.25min	1.5min	2min	3min

The key to navigation in the UK's skies is timing. If you know how fast you are going, you can estimate how long it will take you to get somewhere and where you are to a fair degree of accuracy. You can apply this to hill-walking too, using a combination of this table, and Naismith's Rule: allow 1 hour for every 3 miles (5km), plus one minute for each 10m of ascent.



Flying like a walker.
Walking like a pilot.
Grinning like a plonker.



Tucano lazily higher, the altimeter starts to get out of breath, the oxygen flow increases into my mask. My head prickles. Then, as we break above the grey murk of the ground-level morning, I see a sight which walkers never see: cloud-covered hills, from close above. It is awesome.

I can recognise the outlines of the mountains. But they are covered in pristine white, hugging their curves and making it appear as if we are looking down on a snowy Arctic plateau beneath a navy-black sky. I look down and see our silhouette, a haloed Brocken spectre against the cloud. You can keep your hillside-strafting: if I had a Tucano in my garage, this is where I'd go for a spin.

"We're going to do a loop. You'll feel some G..."

"I don't really want to do a loop."

"Yes, you do. It's sort of obligatory."

A dip. Then an upward twist. The G-force dial twitches to 3, then beyond. Suddenly it feels like my face is being pulled off from below. My body paralyses, my limbs, eyes, legs and head go heavy and unresponsive: the plane is accelerating away. My body is trying to stay behind.

The horizon slides into view again, from the wrong direction: fluffy white and brown above, deepening blue below. Then a wozy tip, and the ride down starts. Neeeeeow.

"Did you like that?"

"Mgah." I had visions of my face unrolling like a rubber bib when I pulled my mask off.

'Fun' over, we turn for Linton. Through compass headings, timing and sheer nous, even above the cloud Robin knows where we are. As we begin to descend, the cockpit's glass canopy turns white again – this time not with air conditioning vapour, but with thick cloud outside. Tellingly, my first

thought is not of descending into Heathrow in a normal plane; it is of walking in a white-out.

"This is the point where, if you didn't know where you're going, it could all go wrong. Hang on, I'll just look at the map."

I have a sudden mental image of Robin – the man with the fate of a hurtling, expensive plane and, to a lesser extent, my continued existence, wiggling between his legs. This is scary. According to the altimeter we don't have a whole lot of thinking time before being forcefully reintroduced to the ground. But the man flying the plane is a rather deft navigator to say the least, and we soon break the cloud and spot the trapezoid lines of the base ahead.

Say what you like about low flying through our hills. But there's no doubt that to see a plane weave at speed through a tight valley is to see someone wield almost godlike mastery of navigation. However unsavoury the eventual application, the RAF – which, incidentally, turned 90 this year – needs our hills to train for places considerably less friendly than the Lake District.

You may adore them for it, and many do. You may think they are noisy, unnatural additions to the hills which shatter the serenity of your escape – and if that's your view, you wouldn't be alone.

From what we saw, these guys aren't philistines or show-offs: they use the uplands like walkers do, and are a part of our enviably unique, proudly patented British Mountain Experience™ – for better, or worse.

As for me, on the way back home from Linton I downloaded a fighter jet ringtone for my mobile. Now when it goes off on a summit, I won't feel quite so out of place. And it'll be fun to see everyone up there with me hopefully scanning the valleys for that noisy, magnificent streak. **T**

LOW FLYING: YOUR SAY

Trail asked forum users on www.livefortheoutdoors.com what they thought of RAF training in the hills...

"When on the way to Cadair Idris last weekend two of them went low over our car as we were going through a valley. Wow! Keep up the good work lads and lasses..." Hightops

"I'm all for it. Imagine if the havoc there would be in actual combat if they weren't allowed to practise first." *Pie Bear*

"They add to a walk, I see them in the Lakes regularly. Wonderful!" Ades

"Pilots act dangerous to the public: flying too low along motorway stretches over the roofs of travelling cars, etc – my answer is a huge NO. We go to the hills for peace." *Irvine7*

"Walk at the weekends – the pilots don't train then. The only downside then is having to share the mountains with lots of other people. I know which I prefer!" Balalake

"I hate them. I don't go into the hills to see big noisy machines going very fast. ." *AndySay*.

THE VERDICT

88% Thumbs up

12% Buzz off