

WAVE AT WESTON!

I'm not enjoying this, I told myself, lurching around in a vicious little thermal that sent the vario into a frenzy one moment, and felt like flying a grand piano the next. Even turning tightly at speed it was difficult to get a sustained climb, but I thought I would be able to sort out some more coherent lift higher up. Or maybe not. I'm used to being wrong, and this day didn't disappoint in that respect. Even approaching cloudbase at 4000ft the thermal was a complete rough-and-tumble of confused gusts that flicked worriedly at the controls and tugged at my stomach.

From the start, the weather on this day hadn't looked promising. Ragged low cumulus, brisk wind from the west, and evidence of grey top cover especially in the north. Howard and Simon had discussed a possible 300km task around Malvern and a big lake "oop north" but I didn't think that was going to be possible.

And now, from the top of my choppy thermal, the distant sky looked muddy and grey, and the clouds in the foreground were broken and just a different shade of grey. The upper layers were letting through some hazy sun, but the prospects for cross country flying were not good. The Standard Class National competitors at Aston Down were grumbling about dropping water on each other, and placing bets on whether anyone was going to finish the task. Mike Randle had been relaying cloudbase height to the competition Director earlier, and I could hear him reporting wave at 6,000ft.

I wonder...

That made me think. Locally there were no signs of wave in the upper cloud, but some cumulus had interesting slopes on their west-facing sides. But for an hour and a half I rattled around in the convective layer trying to make headway towards Enstone, and wishing I could locate my soaring hat (turns out I was sitting on it). The air was continuously rough, even between thermals. Perhaps the lift was being spoiled by wave systems above, especially in the Enstone area. Several times I pushed forward into an empty sky, fell earthwards and hung on to weak lift, eventually finding myself back at Heyford. There, more or less over the end of the runway, there seemed to be a substantial cloud most of the time.

Unfortunately there was nothing but cobblestone turbulence at cloudbase around the upwind edges. That method of thermal to wave transition clearly wasn't going to work.

I looked at my watch at 2pm and gave the weather another hour to improve. If I'm still fed up at 3pm, I thought, I'll land and do something more constructive, like gardening. I bounced around – I went south – I went north – nothing worked. Clouds formed and dissolved with disconcerting speed. And yet, whenever I arrived back at Heyford there was a decent cloud and good lift. The valley profile here may give thermals a boost when the wind is right. Blundering about in my usual desperate fashion, I found a small but surprisingly strong gust some distance in front of the cloud, not underneath it. By dolphining in and out of this gust, cranking the flaps up and down with steep turns and plenty of speed, it was possible to climb up the front of the cloud, above the base.

Close to the cloud face

This was really promising. It was rough and exciting, but my head began to work in Feshie mode – *when rotor squeezes the thermal tops to narrow points, get as high as possible, then fly close to the cloud face looking for smooth air.* And the air was settling, not immediately, but the turbulence subsided and the air began to move in larger packets. I was cruising in weak lift through the wind blowing over the upper slopes of the cloud. Absolute magic, this feeling, rounding a corner and finding the north-facing slope was even better, three to four knots of increasingly smooth lift with the flaps down and the airspeed pulled back to about 39 knots. The Mini-Nimbus won't turn at that speed, but after reversing the beat and slowing down again, the return track was almost as good, and still quite calm. I was in a different world, sailing serenely through castles in the air. Compared to the stomach-churning turbulence below cloud, this was sheer bliss.

At 5,500ft the wave petered out, level with the top of the cloud. I was still drifting with the wind, because Croughton was now down below. The wave was definitely associated with the cloud, not stationary with respect to ground features. Anxious to avoid the Hinton DZ, I returned to Heyford where another cloud was forming. This one had an interesting vertical buffer on its upwind edge, with a cheeky little tail wagging from the top of it, as if the convection below was straining against the upper wind. It produced another wave climb to 6,200ft. Meanwhile, Simon was attempting to contact the wave in the Croughton area, with some success.

Disappointment soon set in, however. There were more good-looking clouds to the west, and I pushed on towards Enstone from my exalted height with renewed purpose. I should have known better – the result was the same as before. I found myself back in the thermal layer getting tossed around with a vengeance. For the next 40 minutes I struggled to stay high, and briefly shared a thermal with about ten of the Aston Down competitors who were obviously heading east in a collective swarm. I was looking for that elusive point where the thermal tops become moulded and concentrated by the rotor, but didn't have any further luck. The textbook theory is OK when it works, but mostly it doesn't.

Plan B

How about cloud flying as a route into the wave? Some clouds by this time were working quite strongly underneath. I picked another one in the optimum spot, over the west end of Heyford runway. I did a few circles in five knot lift up inside the cloud, then straightened up gingerly to the west. Once again, that tell-tale feeling of the air moving in larger blocks as a prelude to the smooth laminar flow of the wave. Now I was determined not to fall out of it like before.

I played in the wave for the next half hour or so, achieving 6,200ft twice more. It seemed as if the cloud-induced waves all stopped at that height. I was flying at minimum speed in quiet calm air, skimming the slopes, brushing the vertical tails at the front edge of the clouds and getting to know the wave systems intimately. The clouds were continuously re-forming upwind, and I soon found how to skip through the gaps to the next working slope, to keep me from dropping into the maelstrom below.

But ... there came a time when there were no more clouds upwind, just a much bigger gap, extending for miles and miles. It had to be caused by something, I thought, but I also remembered what had happened on every previous attempt to cover ground towards Enstone. Moving cautiously forward at zero sink, I watched with intense fascination as the lift gradually increased, and the glider became totally still. No trace of wobbling in the air flow, it was completely and utterly laminar.

A happy noise

Once again I had barely 39 knots on the ASI. Flying the Mini Nimbus at this speed feels like pointing the nose at the sky while you slowly ascend. I felt completely relaxed, looking down on carpets of cumulus tops stretching away to the south. There were multiple streaks of layer cloud in the distance,

gradually blending in to the alto-cumulus cover overhead, which partly obscured the sun. The lift gradually improved to four knots for a while, producing a wonderfully steady peeping on the vario. What a happy noise! The beat was about half a mile long, one pointing at Blenheim, the other to the left of Banbury. It felt as if the whole world was frozen in time, the only thing moving being the needle in the altimeter. At the time I assumed this was classic standing wave, stationary with respect to ground features, but examination of the zig-zag trace on the logger afterwards reveals that I was still drifting south-eastwards, so this wave too was moving.

Nearing the airway at 8,300ft I broke off the climb. Lift at this height was still two knots, but by increasing speed and changing to zero flap I soon flew out of it, heading west towards the edge of the airway. By now Howard was climbing in the wave behind me, in the DG-505 with Nick Beloff. I arrived south of Chipping Norton at 6,500ft, where there were more clouds forming the edge of another wave bowl. At least, that was the theory. Disappointingly, I could find no useful lift after an extended search around Witney, Charlbury and Little Rissington. My dreams of a cross-country wave flight to Wales soon evaporated.

The DG-505 was making progress towards Enstone from the east, and I was approaching it from the south, but we couldn't see each other. For a while I found another wave that lifted me from 5,000ft to 6,000ft, but that was the end of it. The clouds around Enstone were filling in and becoming more fluffy, not wave-like at all. Howard was still dabbling with the wave nearer to Banbury, and eventually exceeded my height with a climb that scratched the airway's bottom, by virtue of the fact that he noticed his altimeter subscale at Weston QFE indicated 1013. Silly me didn't think of that.

It's a long time since I did a five-hour flight, and even more remarkable when I remember how bored I was after the first hour or so, but it just goes to show, you can never second-guess the weather. This was the best wave flight I've ever had from Weston, but I'm sure it happens here more often than we think.

Phil Hawkins, 24 July 2004.