



Inside this issue:

- An epic day 1
- A journey through space and time 1
- Changing the task 3
- Reducing work-load while gliding 4

An epic day

July 6 turned out to be an epic day for pilots at Portmoak. Although the wave forecast was mediocre, there were 4 500k flights, a 400k, a 300k and numerous flights up to and above

10000ft.

Not only that, but Sant decided to go around again and flew the 500k task twice.

Date	Pilot	Glider	MoP	Task	Cmts	Dist. km	Time	Actual Speed kph
6-Jul-20	Santiago Cervantes	DISCUS	MoP	STF - FET - LLT - *SA1 - STF (1292)	3	501.9	04:49:36	104.0
6-Jul-20	Santiago Cervantes	DISCUS	MoP	STF - FET - LLT - *SA1 - STF (963)	2	501.9	04:58:31	100.9
6-Jul-20	Tony Spirling	DISCUS W	MoP	MZI - LVE - FET - LVE - FET - MZI (883)	1	499.3	05:38:57	88.4
6-Jul-20	Phil Dolan	VENTUS 2CX (18.0)	MoP	CAD - EDZ - ABL - FET - CAD (802)	1	504.0	04:29:39	112.1
6-Jul-20	Kevin Dillon	DG 100	MoP	MZI - EDZ - MZI - EDZ - PCS (785)	1	333.9	03:40:12	91.0
6-Jul-20	Alastair Mutch	DISCUS 2C (18.0)	MoP	CFF - FOD - CRI - FIN - CFF (757)	1	436.3	03:36:56	120.7

A journey through space and time

The Skysight wave forecast was poor and RASP was mediocre but what of it, we were all desperate, I'd not flown in wave since 2019! Sant said there was a chance so we were all rigged and ready with a tug and tug pilot ready to go by 6:00 am.

Task setting at Portmoak is easy. If Sant is out but not Z it's a wave day and you set a minimum of 500km. If Z is out it's a thermal day and you set a minimum of 300km.

Keith the tug pilot is a master of the art and dropped me in lift at about 4000ft.

The lift was weak and patchy and it took a lot of searching and some time to gain sufficient height to set out under the airway, P600, towards my start point at Monzie.

Time in the air before you go through the start gate is very valuable. This is when you establish the characteristics of the wave lift and its relationship to

the patterns in the cloudscape. This knowledge should then enable you to progress quickly and efficiently around your task.

Wave days are easy when the wave is strong and the convection is weak or non-existent, this was not one of those days. In the inversion the wind was relatively light for a wave day and the lift weak. In the unstable layer beneath the inversion instability was high with a fair amount of moisture so clouds were building big early on. These clouds would move like giant galleons through the wave system, being enhanced by the wave momentarily and then drifting on down wind. Thus you would fly to what looked like a wave bar only to find sink and then fly into wind into the blue to find lift. You were flying according to an image of the wave system that was out of date. As the day progressed the clouds would build higher and spread out under the inversion.

My declared task was to start at Monzie and to fly along a line between Loch Venachar in the south west and Fettercairn in the north east finishing at Monzie. My choice of task was dictated by the met

the meadows by the river Teith, a playing field and a large rectangular cluster of houses, Deanston! Home to my daughter and the grandchildren. So close and yet so very far away. I hate this lockdown.

Wave flying is perhaps a little like a possible vision of life after death, so close and yet so very far away. Wave flying, whilst often serene and beautiful always increases my love of and longing for being on the ground, to enjoy the warmth and the life.

Approaching overhead Kirriemuir I looked north and I was just able to make out the white cottage in the hills above Kingoldrum where I stayed 25 years ago when I moved to Scotland. I sometimes imagine landing out by the cottage and finding that nothing has changed and that I have travelled back in time.

Close to FL 100 I crossed under P600 again and chose to go south of P600 where it descends to FL85. Up ahead the clouds were thinning out with very few clues as to the location of lift. I pressed on largely relying on my imagination and by

visiting locations that had given lift on previous flights.

As I turned Fettercairn in lift near 10000 feet my pes-



forecast including wind velocity and the geology of Scotland. It was going to be cloudy and showery over the mountains with in inversion and a NNW flow. So there could be wave but also a lot of cloud over the mountains and increasing amounts over the flat lands as the day progressed.

The NNW flow means that the wave line will correspond to the geological fault line that runs across Scotland from Loch Lomond in the SW to beyond Fettercairn in the NE. With mountains to the north of the line and low flat land to the south of it.

As I progressed north towards Monzie the wave became a little stronger and more clearly organised and the chaotic cloud patterns that I had experienced over Glenfarg became more clearly structured with an avenue of clear air along my task line.

There were very few wave bars to mark the lift so it was really a question of flying along the downwind edge of the gaps in the clouds and hoping for the best. The lift was generally weak, interspersed with a few hotspots, some of them marked/caused by extensive vertical convective cloud development.

The gaps in the clouds took me to Loch Venachar where I turned and retraced my path back toward Monzie. Whilst passing Callander I looked down through a gap in the cloud to the south. I could see



simism evaporated and I began to think that my declared task was achievable. Lacking in confidence and optimism earlier, it had taken me over two hours to turn Fettercairn. I retraced my steps back to Loch Venachar in a little over an hour where I turned and headed east again towards Fettercairn.

Upon reaching the A9 from the east a second time a very different prospect appeared ahead of me, almost total cloud cover! With the advancing day the inversion had lifted so the cloud tops were higher leaving very little room below the airspace at FL100. I could not climb high to get a better view of what lay ahead.

I was just about to abandon the task when I heard a colleague on the radio announcing that he was turning Fettercairn and completing his task. So being the mature and sensible person that I am I now had no choice but to complete my task. I duly set off skimming over the cloud deck towards half glimpsed gaps and mounds of cloud.

What I did not know at this point was that my colleague, armed with a transponder, has been cleared to fly through the airspace at a higher altitude to the turnpoint. The drama unfolds. So I had gone from a state of caution and pessimism to wreck-less determination on the basis of partial information and thus an inaccurate interpretation of events.

Eventually just before Edzell the cloud thinned out and I could see where I needed to go. Reaching Fettercairn was relatively easy. Again I turned the turnpoint in moderate lift. Looking back to the west, however, I noted that the cloud deck had become both denser and higher, I was faced with a wall of cloud.

For the amateur pilot flying into cloud is initially akin to a non-swimmer falling into deep water. As you become immersed in this opaque substance your senses reach out and cling desperately on to any stimuli that might prevent you from drowning. The sound of the slipstream, variations in light level or the sensation of G. At first the artificial horizon is just

another instrument on the panel. Slowly you remember that here in the water the chaotic information provided by your senses is of little use and you must force your focus toward the instruments. Eventually you are drawn towards the order provided by the artificial horizon. It appears to be enormous and fills your consciousness, other sensations becoming peripheral.

When all else is chaos you are comforted by the predictable and linear relationship between your movement of the controls and the movement of the image on the artificial horizon. You recite your mantra, pitch steady, roll steady, heading constant, at least 500ft below airspace, relative calm descends. (Remember, apart from descending to avoid entering airspace, to a large extent your altitude is in the lap of the gods.) Heading into wind now you will either emerge into a wave slot and climb above the cloud or descend and drop out of the base of the cloud deck over the flat lands. Nothing to worry about?

Eventually I emerge into a wave slot and climb, metaphorically gasping for air and drinking in the light and the sun's warmth the artificial horizon quickly forgotten. Things did not improve very much until I was about 30km from Monzie at which point the clouds opened up a little and I set off on final glide to the finish.

Tony Spirling

Changing the task

Sant had spotted the day developing a few days before and had organised an early tow (thanks Keith). He was launching as I turned up at 6:30am so I got online and launched just after XX at 7am.

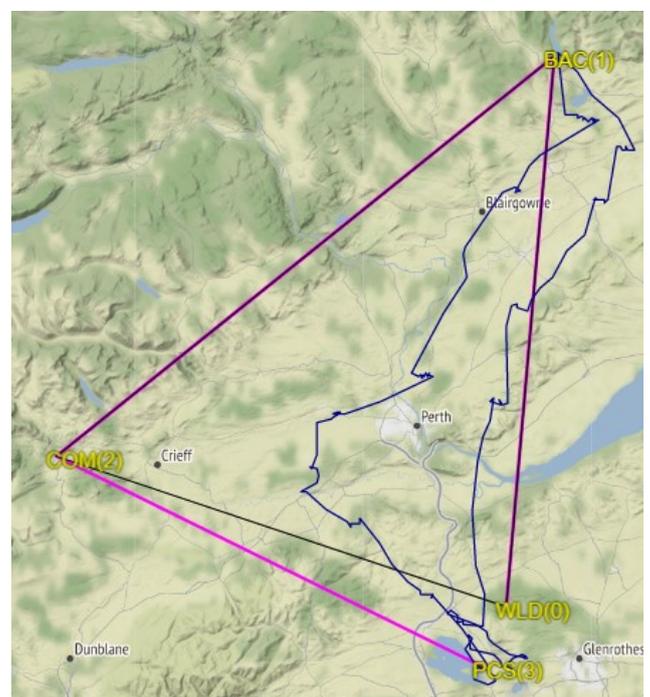
It was easy enough to get established in the wave at Dunning and I pushed forward to Crieff for the start of my declared task: CFF-FOD-CRI-MOS-CRI for 510km. It was working well at Crieff so, rather than climb, I started the task at 5000' intending to climb on the first leg. The forecast showed the wind backing and wave dying out by about 2pm and I wanted to get going as soon as possible.

East of Perth I lost the energy line and couldn't find the expected climb at Blairgowrie. Unable to find anything working I dropped back off the hills, found a field and then had to start the engine. Tail well and truly between legs I headed back to Portmoak using wave and the thermals under the thick cloud between Perth and West Lomond. At this point I looked at my watch and decided that 8am was perhaps a bit early to give up on the day.

So off I went again using the engine to get back up to 3500' near Glenfarg and then pushing forward until I reached the front of the wave bar near Monzie at just over 2000'. It was all looking a lot nicer than

the first start and I quickly climbed to 9000' before restarting my task just before 10am.

It was a fairly smooth run up to Fordoun although the wave wasn't marked very well in places - I was mostly



between 5000' and 8000'. On the return going past Perth I was looking for a route North to get onto the Loch Tay system and the height to run along to Crianlarich but it wasn't looking great that way – solid 8/8 cloud and no obvious bars or even peaks in the cloud. I decided to go up Loch Earn which then presented a route to the NE, a good climb and enough height to dive North onto Loch Tay.

It felt like a long time going the wrong way but from Fearnan there was a good bar some of the way along to Crianlarich and plenty of height to get back. Heading NE towards Mossat it was obvious that I had set completely the wrong task. I had hoped that the day would gradually dry out, the cloud burn off and the wind back as forecast but instead I was faced with a solid 8/8 north of Pitlochry, no gaps to be seen and with the tops over

8000'. After an appropriate amount of cursing I decided to give up on the last turnpoint and head up towards Fettercairn instead.

At Finavon the route ahead looked a bit difficult and, having already done a close inspection of a field, I decided to turn there and finish the now undeclared task at Crieff. It was a great run back – mostly at 115kt+ from Perth to Crieff along a classic wave bar which was fun. Of course once I finished the day seemed to get better and better. I should have followed Sant's example and gone around again.

So a good day out, stupid task selection and way over confident on first attempt. Plenty for me to learn from - as always.

Alastair Mutch

Reducing workload while gliding

Airliners fly in a complex environment which demands the use of sophisticated aids, an autopilot and two pilots trained in two crew resources management. Single pilot operations are allowed in public transport aircraft and at its heart is the use of the autopilot and work load reduction procedures.

We, in gliding however, do not have the luxury of an autopilot. How much do we consciously think about managing our resources with regards to gliding?

When we are gliding 90% of our brain capacity is taken up by controlling (flying) the aircraft which leaves a paltry 10% for everything else.

The key to all this is to *reduce your work load*.

Becoming a glider pilot is about being educated, acquiring knowledge and experience thus becoming skilled in the operation of a glider. The more we do of all three the better we become.

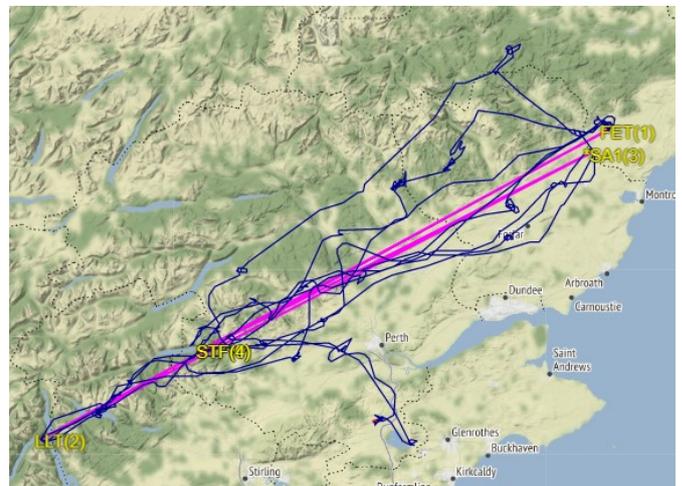
Another big one is *preparation*.

Take a glider aerobatic pilot for example. Have you noticed how they perform that strange ritual dance before flying as they delicately tip toe around on the grass playing out their aerobatic routine in their minds? As a student do you actually think and read about what you are going to be taught before you arrive at the airfield? It definitely would make your progress faster..... *preparation!*

I'll use my double 500km flight on the 6th July as another example.

I had been looking at the weather, which looked poor, but because of my *education, acquired knowledge and experience* reckoned a 500k was in the day. The conditions were not good with high cloud tops posing problems as the wave ran under the airway P600. So, I ran the flight through my mind. It would save a lot of hassle

if I could get airways crossing clearance, the key to the flight. I decided that I would talk to air traffic as



soon as I got going, tell them what I was doing, what I wanted to do, establish a rapport and get them working for me rather than against me. All the radio frequencies are preprogrammed in the radio, the airway waypoints are in the moving map and I visualised how I would cross the airway. Effectively I did the flight the day before and all I did on the day was actually execute it. When I finished the first 500k conditions were still OK(?) so I thought I'd have another bash, *being opportunistic*. That one was a bit more difficult.

Lastly, the day before I *prepared* the glider and equipment. Everything was done, water, sarnies, tug pilot arranged so all I had to do in the morning was get in and fly. So to sum up, who said gliding is simple? To reduce your workload..... *Prepare* yourself to free up that 10% for *unknown eventualities*.

Sant Cervantes