

THE MAGNA CARTA RUN

Did you know that a straight line from Salisbury cathedral to Lincoln cathedral is 254 kilometres long? Moreover, this line passes quite close to Oxford. To aspiring pilots at the Oxford Gliding Club these facts are important because a triangular flight around these two magnificent turning points is a tempting 500km Diamond Distance task.

The idea for the Magna Carta Run came from Jane Randle, one of my instructors during my *ab initio* period some 19 years ago. Almost since that time I have been fascinated by it. Apparently there is no "original" Magna Carta in existence, but four contemporary parchment copies survive, including one at each cathedral, hence the almost mystical name for this noblest of triangles. Another copy is in the British Museum, but where is the fourth?

I had piloted my glider to Lincoln once before (in 1987) and had also flown to Salisbury a number of times over the years, but the attractive thought of visiting both on the same day cropped up repeatedly each summer, and wouldn't go away. A glider flight of this length requires exceptional weather, and those days when I could have done it have been very limited in number. Not only must the weather be right, it must usually be a weekend day so that the Gliding Club provides launching facilities, and it must be my turn to fly the glider (I have a partner and we take turns and share costs).

July 7th 1985, for example, was such a day, but unfortunately I was otherwise occupied in defending the Club's honour at a local League meeting. I had to be content with a 300km flight around Stratford, Frome and Basingstoke. The weather was so good that I later obtained a satellite photograph taken on that day, showing all of the south and east of England scattered with lovely regular cumulus clouds.

Shallow cumulus of the "fair weather" type are the glider pilot's stepping stones on a long distance flight, since each one is caused by, and marks the position of, convection currents of rising air. These are called *thermals*.

Well, this year I've done it at last. I've done the Magna Carta Run, and it happened on a Friday. Once a year for two weeks, the RAF take a break from parachute training operations at Weston-on-the-Green, and the Gliding Club can use the airfield every suitable day during that time.

For some reason I woke at 4.30am on this remarkable day, August 13th 1993. I already knew from the tv weather forecast on the previous evening that a small ridge of high pressure was crossing the country, with light winds expected. The still dawn sky looked absolutely perfect. A clear Mediterranean hue right down to the horizon in all directions, without even the smallest trace of cloud, and even jet contrails were dissipating as quickly as they formed. The air was quite cold, another good sign since the afternoon temperature was forecast to be over twenty degrees. These are ideal conditions for vigorous atmospheric convection! The combination of all these factors gave me a tangible pang of excitement in that early dawn as I gazed from my roof-light window, but I made myself go back to bed for about three more hours.

By 10am preparations were well under way. I had packed my lunch of marmalade sandwiches (sugar for energy) with an apple, banana, lime juice and mint humbugs. I had called my employers somewhat apologetically, but luckily they understand my gliding mania and make allowances. I drove to the airfield in high spirits after checking I had other essential items in the car such as camera, film, sunglasses and hat etc.

By the time I launched at 11.15am the sky was well scattered with good-looking clouds, as I knew it would be. The winch wire dropped away, I raised the undercarriage and latched on to the nearest thermal at a height of about 1400ft, flying in continual circles to gain height in the rising air. We humans didn't invent this technique, of course. Birds such as buzzards and eagles have been using it for millions of years.

Nor can we congratulate ourselves for being quick off the mark in copying them. It took us at least 4000 years to realise that we could do it too. Although my glider is made largely of carbon fibre which is a very modern material, there are plenty of gliders made of wood and fabric. Theoretically, the ancient Egyptians could have made a wooden glider and launched it by human effort from a hilltop. If only they had wondered why vultures in the desert spend all day circling with outstretched wings. Where would the science of aviation be now?

After reaching a good height in that first thermal (about 3000ft) I timed my start line

*crossing at 11.30am and headed south towards the City of Oxford. The visibility was sparkling and the English countryside was nicely dappled with small cloud shadows. I picked my way carefully in a zig-zagging path to go underneath as many clouds as possible. Between the thermals I was flying quite fast (80mph) and then slowing down to about 45mph in the thermal under each cloud. This is called *dolphining* because it results in a rising and falling track through the air reminiscent of a dolphin skimming through the ocean waves.

The thermals were so strong and so closely packed that I could maintain and even increase my height purely by dolphining, and I knew that it would not be necessary to stop and circle again for a long time. This is a fairly unusual situation, especially for a small glider like mine, and I made the most of it. Oxford was soon passed, and I dolphined happily southwards over Wantage and the Downs. By the time I reached Hungerford the thermals were, if anything, stronger still, and the tops of some of my dolphins were exceeding 4000ft.

West of Andover the airspace restrictions are a slight problem, and I navigated carefully past the Tidworth ranges, Porton Down and Boscombe Down. Salisbury could easily be seen by this time, with the slender finger of the cathedral spire rising above the clutter of rooftops in the midday sun.

I reached it at 12.34pm and took some photographs before heading north again. Next stop - Lincoln! It seemed an awfully long way away, but the thermal conditions were still excellent.

However, due to the fact that I had been following ground features rather than following the clouds, I had now descended to about 2500ft. A glider is always descending through the air in which it flies, of course. The trick is to find air which is going up faster than you are going down. I picked a fat juicy cloud about two miles north of Salisbury, near the circular mound of Old Sarum, and began to circle underneath it to regain a respectable height. These were the first circles I had done since I left home base.

The return from Salisbury was virtually a copy of the outward journey. I didn't need my map during this part of the flight, because I could see on the far horizon an incredibly small Power Station which I knew was at Didcot in Oxfordshire. I just aimed a bit to the left of that, and

kept going. The visibility must have been in excess of 50 miles.

The wind, although light, was now behind me and adding to my speed over the ground as I dolphined purposefully northwards. After crossing Oxford and my home airfield again, I found that I needed another circling climb to regain height. By Northampton the clouds were bigger and further apart, and the cloud base was also rising steadily. These things are to be expected and I switched to a different mode of flying. Instead of dolphining, I was taking circling climbs perhaps once every ten to fifteen miles, punctuated by straight glides.

After Kettering and Corby came the vast horse-shoe shaped reservoir near Oakham, then the conspicuous runways of Cottesmore airfield. There are a large number of airfields in eastern England, most dating from the Second World War and many are largely disused. Saltby airfield near Grantham has another gliding club operating from it. I flew directly over their heads, watching some of their gliders circling much lower than myself. I wonder if anyone has ever done a Magna Carta Run from there?

After Grantham came more military airfields to avoid; Barkston Heath, Cranwell and Waddington. My excitement was mounting, because I could see Lincoln in the distance, with the unmistakable square tower of the cathedral on high ground north of the river. I reached it and turned at 2.53pm with the weather still glorious and my spirits high. The weather towards the north looked particularly good, and I felt a momentary urge to abandon the Magna Carta Run and head for Scotland instead. But I didn't have a support crew organised on the ground for such a marathon flight, so I took my pictures and headed for home.

Against the wind, and still flying in climb-and-glide mode, my average speed over the ground suddenly became much lower. For one thing, every time I stopped to circle in order to gain height for the next glide the wind was drifting me backwards. River boat enthusiasts will identify with this problem. You don't take a punt or a rowboat downstream unless you are absolutely sure you have the strength and stamina necessary to get back again.

In these conditions, soaring experience gained over many years is all important. Circling in a weak thermal against a headwind is clearly a waste of time since you can find yourself back

where you started, or even worse off. So I was pressing ahead, looking all the time for a stronger thermal and accepting a higher risk of getting too low to find thermals at all.

In a glider, there are no second chances if this happens. You pick a suitable landing field, again using experience gained over a long period of time, and you land. You must not choose fields containing livestock, 3ft deep crops, ridge-and-furrow surfaces or electric fences. Any number of hidden traps await the unwary. For example it is surprisingly difficult to assess the slope of a field from the air, and it can be most embarrassing to find yourself trying to land the glider downhill.

Having said this, most unscheduled landings are relatively uneventful whether it may be on a school playing field or on hay stubble or whatever. Most landowners are friendly, even quite interested in the whole thing, providing you haven't done any damage or frightened the horses etc. The really boring part of the day then begins. You telephone back to base and wait for someone to drive out towing the glider trailer in order to rescue you. This can take many hours, depending on how far away you are.

Fortunately, luck was with me on this Friday the 13th. The Grantham area was quite difficult – at one point I had a fairly close look at the truck stop on the A1 just northwest of the town. Eventually I managed to get through this tricky patch and made some better climbs towards Melton Mowbray. This improved my frame of mind no end for a while, but soon afterwards I noticed that the weather was inexorably changing for the worse.

From the south, a pale white sheet of high cloud above the cumulus was getting progressively thicker, robbing the sun of its heat. This was potentially serious, since the sun's heat on the ground is what causes convection and thermals in the first place. Without it, the thermals might soon stop.

But although the sunshine became rather grey, the air was still cool and the ground was still warm enough to generate lift. Basically it is the differential between the air temperature and the ground temperature which makes good thermals, and on the whole the conditions were still acceptable for making progress into wind. Although the climbs were slower, the bases of the remaining ragged cumulus clouds were now very high – over 5000ft. That's a mile high, and a

modern glider will go a long way from that sort of height even with a headwind.

Gradually, Market Harborough came into view, followed by the three-fingered Pitsford Lake north of Northampton. Only 30 miles to go now, but the sky was very grey and the thermals were getting weaker and weaker. Every time I stopped to circle it would take longer to regain height, and I would drift further back in the strengthening headwind.

But I trust my little glider and I told myself to be patient. Hard work will get you home, I said. Hard work and the highly polished surfaces of your gleaming white wings will get you home. And so it proved. After spending an age in the Daventry area, circling, circling, and another century or two over Brackley only 10 miles out, at last I reached a height from which a final straight glide home was possible.

In the last two miles I pushed the speed up to about 150mph for a grand finish. Friends on the airfield were waving and cheering as I gave them a low fast pass just over their heads. I circled around, lowering the single undercarriage wheel and landed gently on the grass near them. There were many other successful cross-country flights on this day, but none as far as mine.

And so the Magna Carta Run has been conquered, in a little under 6¼ hours. I actually did my first 500km flight three years ago, so I didn't need to register for my Diamond Distance badge on this occasion, but the sense of inner satisfaction, of achieving an ambition, is considerable.

What next? Well, I haven't yet done a 600km flight, and for 750km there is a special UK Diploma. Very few pilots have won that so far, less than ten I think.

And of course there are other impressive cathedrals to be visited. Norwich and Hereford for instance. I wonder how far that would be? Must find my map....

PS: when I told Jane my former instructor about this flight, she jokingly asked if I had included Worcester cathedral as well, because "that's where he's buried." I assume she meant King John. Back to the drawing board! At least now I have a new goal, a super-impressive version of the Magna Carta Run, to aim for.

*Phil Hawkins, Oxford GC
13th August 1993*

Total Gliding brought forward

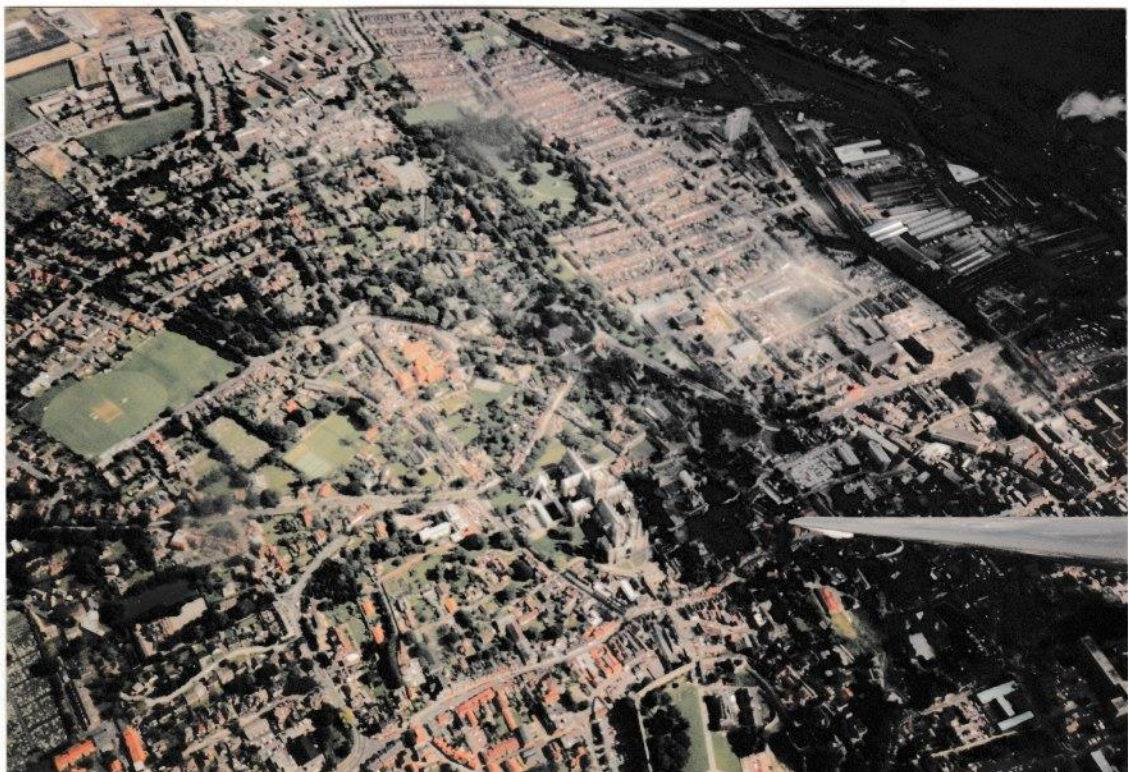
Total time carried forward

No. of flights _____

No. of flights _____

No. of flights _____

SALISBURY



LINCOLN