

CAUTION: ZEBRAS!

Tim Hardy visits South Africa to fly The Airplane Factory's
Sling 2 and 4 aircraft and take in an aerial safari

“**M**adikwe West Traffic, Foxtrot Zulu Foxtrot, Sling 2, turning left base for Runway 08, any traffic?”

“Foxtrot Zulu Foxtrot, caution zebras crossing the threshold of Runway 08.” This from a recently landed Cessna Caravan of Federal Air, a South African regional carrier.

“Err, roger, understood, Foxtrot Zulu Foxtrot.” So now we were on the approach for 08 at a game reserve’s dirt airstrip, looking out for this mobile FOD. We’d flown for two hours from Johannesburg over the most incredible and unfamiliar terrain, descending from Johannesburg’s lofty 5,500ft elevation to ‘just’ 3,250ft with temperatures heading towards a midday 40°C.

After landing, we were packing up the aircraft and securing some thorn bushes around the tyres (hyenas chew the tyres apparently, especially if they have picked up dung on the runway) when the driver of one of the vehicles

Caution Zebras! They look cute enough here but you wouldn’t want to have an argument with one in a light aircraft. Gives ‘runway incursion’ a whole new perspective.

sent out to collect passengers asked which lodge we were staying at.

“Ahh”, he said, “I think you have landed at the wrong airstrip.”

“Ahh”, we said, and rapidly removed the thorn bushes and aircraft cover, and secured our bags for an expeditious departure fully aware that the passengers from the Caravan had been anxiously waiting in their vehicle whilst this exchange was going on... and, of course, who knows what was anxiously waiting in the bush for an opportunity to inspect these strange visitors up close!

Bags stowed, engine turning, we swiftly backtracked and departed for the right airstrip, Madikwe East, just 10 flying minutes away but

90 minutes by rough track. This airstrip turned out to have a hard runway and we were able to see our lodge as we turned left base for Runway 11.

As we lined up on our approach, there seemed to be some activity halfway down the runway with the game reserve rangers ushering some wildebeest across the strip into the bush. Luckily, as with all the runways we saw on our visit, this one was quite long so a judicious burst of power saw us safely over the game to a long landing with plenty of runway to spare to be met by our lodge hosts – phew!

It all started with an enquiry to The Airplane Factory (TAF) back in November about their Sling range of aircraft, both aluminium, blind riveted, conventional low wing structures with Rotax engines. I fly an RV-4 which I repaired following a ground incident at the 2011 LAA Rally, so I feel comfortable working with aluminium. The LAA course on the subject was great preparation.

Whilst I really like flying the -4, it’s a little anti-



We went on several game drives in the Madikwe Game reserve and were fortunate to see a wide variety of animals, often at very close range.



A Sling 2 nears completion at The Airplane Factory's facility at Tedderfield. In SA they are able to build ready to fly aircraft as well as sell the aircraft in kit form. The company is planning a Build Assist facility in the UK for both two and four seat variants.

social, not least because of the rather cramped accommodation for the passenger and the close attention you need to pay to the C of G when two-up. I was looking to build an aircraft from scratch that would seat two people side by side, would be fun to fly for both me and any members of my family or friends who would like to experience flying, would be economical to run and hopefully not take too long to build.

The most obvious choice would have been the RV-12 but frankly, I don't like the looks and the design can only accept the basic Rotax 912 UL unless you want to do some real experimenting.

I had looked through the TAF website material, along with that of other manufacturers, and had taken a look at a number of interesting YouTube videos TAF had posted. Why interesting? Well, three times around the world including a 6,000km crossing of the Atlantic is my sort of interesting and demonstrates the faith the team at TAF have in their products.

So I sent my enquiry in on that fateful Friday evening in November and by 0630 the following

Monday, 0830 South African time, I had a comprehensive answer to my questions on performance, price and of course where they were in the LAA approvals process. It was clear they wanted to get kit-built Slings flying in the UK as the next part of their strategy, having successfully launched in the US, Australia and New Zealand as well as their home country.

The TAF team had already visited Turweston with a Sling on one of their return flights from Oshkosh to talk to Engineering and the approval process was underway.

VALIDATE EASA PPL

Following exchanges of at least 10 further emails, still on the Monday, I was invited out to South Africa to fly the aircraft, to which the only possible answer was, "Yes!" As my wife, Sarah, a teacher, had her half-term in February, it was decided that a visit then, albeit a little brief, would give me the ideal opportunity to find out about the Sling and decide if the aircraft would meet my needs. I also found

out that by February, the pattern of afternoon thunderstorms during the height of summer usually abates and more predictable and clear weather starts to establish.

During the ensuing weeks, Sarah and I met with TAF's Mike and Mariana Blyth on a visit they made to the UK over Christmas to do some ground work for the Sling launch, as well as becoming our key contacts and hosts for our trip to SA. A certain amount of planning was needed to achieve what we wanted in a relatively short space of time.

This plan emerged as flight familiarisation with the Sling 2 at Johannesburg's Grand Central airport operated by one of the flight training schools, ATS, 'Aviation Towards Success'. This would then be followed by sitting a South African CAA Aviation Law exam, needed to validate my EASA PPL, and a flight test to establish that I was competent enough for them to hire me the aircraft.

Once validated, I would fly the aircraft from Grand Central in a north-westerly





The Sling 2 which I flew while in South Africa. Despite being used to a speedy RV-4 I was very impressed with the finish and overall performance of the aircraft.

direction to the Madikwe game reserve on the border with Botswana. From there, I would fly direct from Madikwe to Bethlehem, roughly due south of Johannesburg and the gateway to higher ground on the borders of Lesotho. We would stay for a further night before returning the aircraft to ATS at Grand Central during the afternoon before our flight home.

In between all this, I was to tour The Airplane Factory at their site on Tedderfield Air Park, some 20km south of Johannesburg's Central Business District. Meanwhile it was also arranged that Sarah would have a couple of non-flying activity days with guided tours of Nelson Mandela's home, jail cell, Soweto, the South African Constitutional Court and the Cradle of Mankind, all particularly apt for a history teacher.

For our trip out to South Africa, we chose to fly with KLM routing out of Heathrow via Schiphol, as this seemed to be best value, being at least £400 less than a direct flight with either South African Airways or BA. I should have felt guilty about this, having been Airside Director at Heathrow for a number of years. However, market forces being what they are, and capacity at Heathrow being so short in supply, I bowed to the inevitability that some of these competitor offerings are tempting, even if it involves a short stop at a European hub.

The trip we took involved a daytime flight, so we arrived in Johannesburg in the late evening and were quickly transferred to our hotel, courtesy of Mike and Mariana. Although tired, we both thought that the trip was much more straightforward and comfortable, involving only a two-hour time difference rather than the horrendous jet lag you get with flights to the US or Far East.

DAY 1: FAMILIARISATION

The following day saw me at Grand Central Airport for that first familiarisation flight in the Sling 2. ZU-FZF is a factory-built kit aircraft – they can do this in South Africa – with a Rotax 912 ULS engine and a constant-speed Airmaster prop. For our flight that day, we were operating out of an airfield with an elevation of 5,325 feet that, coupled with an outside air temperature of 36°C, meant that the density altitude would be nearer to 8,600 ft; this would be interesting indeed.

When you first see the aircraft in the flesh, it looks very attractive, from the nicely shaped cowl to the beautifully upswept winglets, the sliding canopy and a slightly rakish tail. The aircraft is fitted with separate flaps and ailerons, the latter deployed in three stages via an electric motor, indicated on the MGL EFIS screen.

The wings are fitted with standard tanks of 75 litres each side, giving an endurance of well in excess of seven hours. They can also fit additional tanks of 60 litres each side which provides unsurpassed range in an aircraft of this size, although the weight of the fuel means you would probably be flying that 14-hour leg alone.

The cockpit has two seats side by side in a spacious cabin, secured by a sliding canopy that can be kept open while taxiing, useful on a hot day such as this, but it needs to remain shut for take-off and at all times whilst airborne.

The instrument panel has a stylish carbon fibre finish with the throttle mounted on the centre console with a parking brake. To top this off are joysticks rather than yokes, with elevator trim and autopilot buttons on the tops.

Following the usual Rotax start-up procedure, we were off to the run-up area to make sure all was OK for the flight before being cleared for

take-off on Runway 35. With the constant-speed propeller in the take-off position, off we went with full fuel and two-up and after a remarkably short run we were climbing out at 70 knots. Impressive given the 8,600ft density altitude!

Cruise performance came out at around 105 knots, although the turbulence from the African summer temperatures made this academic and a more comfortable 98 knots was adopted for the familiarisation flight. I was concerned I might find this too slow. However, the aircraft is such a joy to fly with such great visibility that I didn't feel it was slow at all. Interestingly, TAF also offer the Rotax 914 Turbo in the Sling 2 if you ever felt the 912ULS was lacking.

During the flight to the general flying area, we passed a massive shopping centre, the Ernie Els golf course and a radio mast on a ridge to the north of Johannesburg; all very obvious reference points for VFR flight. Next it was on to the 'Brits' airfield for touch and goes, a practice forced landing at a disused hard runway and then back into the circuit at Grand Central for circuits at 6,300ft to pick up some useful ground markers for subsequent flights.

DAY 2: SLING 4 FLIGHT

The second day dawned bright and early with collection from our hotel by James Pitman, who founded TAF, and his brother Andrew. We were off to breakfast at Mongena, a small game reserve to the north-east of Johannesburg, in a flight of two Sling 4s departing from The Airplane Factory's base at Tedderfield. We would meet up with Mike and Mariana who were flying there directly in their Beech Sundowner.

I was intrigued how this larger Sling would fly with additional seating for two, albeit with the more powerful Rotax 914 Turbo. Even with



The very 'electronic' panel of my hired Sling 2. I was glad I had a paper chart and my SkyDemon when the EFIS froze, albeit recoverably, in the African bush.

115hp, it just didn't seem it would be powerful enough to get us all off the ground, even if only three of the four seats were occupied.

Just like the Sling 2 though, it didn't seem to matter a jot as the aeroplane took off from Tedderfield with the same eagerness. This time though, the Sling 4 platform seemed more stable, despite the beginnings of the day's turbulence, and Sarah was quite happy in the back on one of the generous seats.

We were in ZU-MJL along with James Pitman and the other 4 was ZU-TAF, the original four-seater which took James, designer Mike Blyth and Jean D'Assonville around the world to Oshkosh in 2011, with the notable 6,000km return leg from Rio to Cape Town. It still has the three fuel tanks in each wing that they used for endurance; however the fuselage tank that replaced the rear seats has been removed.

Forty minutes or so later we found the Mongena airstrip and parked the aircraft ready for our breakfast. The return journey consolidated my views about the Sling 4 and included some low level manoeuvring around Johannesburg to see where James lived and the location of the zoo. A fleeing burglar had recently and unwittingly entered the zoo at night, foolishly taking a short cut through an animal enclosure where he was apprehended by one of the inmates called Max the Gorilla, who was promptly awarded the 'Man of the Year' award by a South African newspaper!

DAYS 3 & 4: SA LAW

The Monday and Tuesday centred around sitting the SACAA's Aviation Law exam at Grand Central Airport, successfully thank goodness, followed by the official flight test in the Sling 2.

This flight was marked by an EFIS failure

when the screen froze, necessitating a return to the airport using the simple back-up, as we were done with the test. This was no hardship as we were VFR anyway and I was becoming quite familiar with the landscape.

Once the paperwork for the licence validation was completed, I was then collected by Tristan, TAF's Head of Sales and Marketing, in another Sling 2 to fly down to Tedderfield to have a good look over the factory. This particular aircraft was fitted with the 914, which made it a very spirited performer compared to the 912 equipped version. For the remainder of Monday and Tuesday, I was given free rein at the factory to look at aircraft at various stages of build and paint, and could talk freely with the staff all of whom were overwhelmingly friendly and helpful.

The aircraft structure is all pre-drilled so you can cleco the kit together easily before going in with the blind rivets to permanently construct. Some people have built Slings using the dimple, deburr and solid rivet method. However there is quite a time penalty and more opportunity to get things wrong, so I reasoned that it didn't look like a good idea.

As it happens, a Sling 4 was being built in the factory when I visited using countersunk rivets but the supervisor, a Malawian called Runwell Gondwe, talked me out of attempting it myself if I should buy a kit.

I could have spent many more days looking around but the highlight for me on the Tuesday evening was another flight, again in the two Sling 4s, to Welgelegen Manor. The Manor is a replica of a country home nearer Cape Town that the builder and owner was prevented from buying by his would-be neighbours who thought he wasn't posh enough. So he decided to build his own. Today the Manor is a hotel and

restaurant way out in the countryside, with its own grass airstrip. This was a very atmospheric place to visit with the smell of the newly mown grass runway and the sounds of African birds roosting in the trees nearby, all framed by a majestic sunset.

DAY 5: GAME PLAN

The plan for Day 5 was our trip to the Madikwe Game reserve in the hired Sling 2 for a couple of days of animal sightseeing. We managed to get everything packed into the baggage compartment of the Sling for a 0930 departure. The folks at the game reserve wanted an ETA for reasons that became obvious.

We set off in slightly poorer visibility that day, the weather conditions being a precursor for an afternoon downpour. Luckily the further we travelled away from Johannesburg into open countryside, the better the visibility became, particularly when height above the ground increased as the terrain fell away beyond the ridge of hills to the west of Rustenberg, when I could see at least 40km.

The Sling 2 we were flying came with a sunshade that I forgot to install before our departure and now we were paying the price, not so much in terms of cockpit temperature but the shutting down of Skydemon on our iPad, as the screen temperature had apparently reached 61°C. I was still reasonably confident of our position as the EFIS tracking was operational and we had drawn our track on a paper map that was still consistent with what we were seeing out of the window.

We pressed on with the flight and our descent into Madikwe, making blind calls on the South African safety frequency 124.80. Five minutes of shade in the footwell saw the

FLYING IN SOUTH AFRICA



A typical lodge – not exactly roughing it is it! My wife and I were very impressed with the friendliness and hospitality we experienced throughout our visit.



What can you say about African sunsets?
Absolutely beautiful.



Our two Sling 4s at Welgelegen Manor, a hotel and restaurant with its own private grass strip. The performance of the Rotax 914 powered Sling 4, three-up and at 8,000ft plus density altitudes, was very impressive.

iPad and our trusty Skydemon back on song with an accurate fix on our (wrong) destination airstrip! Loading the South African charts on Skydemon was a breeze. I deselected UK charts, selected the SA ones and all the familiar functionality was there.

After we landed, the rest of that day and the following day were spent on early morning and evening game drives around the reserve, spotting wildlife only seen with a David Attenborough voice-over. This time they were for real and in some cases just a few feet away. A life affirming experience.

DAY 7: EFIS FREEZE

Time to leave the reserve for our flight south to Bethlehem after the final game drive of our visit. The departure from Madikwe was uneventful and we cruise climbed our way to over 7,000ft to watch the landscape unfold, firstly typical African bush on very red soil, followed by farmland as far as the eye could see.

Thirty minutes in, however, the EFIS screen froze. It's not immediately noticeable if you are in the cruise as you assume your steady hand is keeping accurate speed, height and track. I had been determined to keep the iPad cool under some papers as well as installing the sunshade, so maintaining awareness of our position was no problem. I just reverted to

Skydemon whilst we tried to sort out the EFIS.

A chance conversation on the day of our departure from Johannesburg with The Airplane Factory's test pilot, Sean, revealed this problem had occurred before. The only way to fix it was to deselect all the power supplies to the EFIS and its back up, turn the master switch off and then power up again in reverse order.

Thankfully it all came back but repeated itself again a little while later. I found that selecting a different page on the EFIS to see flight instruments and the moving map on a split screen was the culprit. This time, when I powered the EFIS up, I left everything alone and that sorted the problem.

Soon, the waypoints I had planned came and went as we neared Bethlehem Airfield, with both a hard and grass runway option, a circuit over the town, framed by a lake and high ground to the south. Mike met us at the airfield, hoorah-no landing fees. We were off to Clarens, some 20 miles away, which at 6,500ft has a different climate again from Johannesburg, milder this time and a break from the heat.

DAY 8: BACK TO JO'BURG

The day broke with low ceilings and rain, with a promise of improvement after lunch. This was the day we were to return to the UK but our flight was at midnight, so there was plenty of

time for the weather to improve...

We set off for the airfield at Bethlehem just before midday and certainly the clouds were breaking up as we left Clarens. When we got to the airfield, the instruments said we had at least 70 litres of fuel left but I couldn't see any fuel when I opened the fuel caps. This is the downside of having such large fuel tanks – they contained plenty of fuel but all out of sight.

In all honesty we could have made the two-hour flight back to Johannesburg with at least 90 minutes reserve but it didn't feel right that after four and a half hours flying with no fuel visible, it was OK to launch. Fifty litres of avgas were taken on for peace of mind.

The trip back went well with no further problems from the iPad or the EFIS and we arrived back at Grand Central Airport at around 1500 to hand back the keys and make our way to Johannesburg Airport. Lucky we arrived when we did, an hour later another fierce thunderstorm arrived, forked lightning and all.

The Sling 2 had looked after us very well for the eight hours or so of flying that I had accumulated. I enjoyed the flying and now have a picture of it on the ground at Madikwe as my desktop background... oh yes, and the empennage kit is on its way as Francis Donaldson has given the OK to make a start on the project ■

FLYING IN SOUTH AFRICA

I CAN THOROUGHLY recommend flying in South Africa. Not only can you experience some truly wide open spaces but also the aviation culture is alive and well offering many unique landscapes. If that wasn't enough, fuel and therefore flying, is much cheaper than in the UK. I spent approximately £500 to hire the Sling 2, and that included my checkout, Aviation Law exam and licence validation.

Although the weather for our various flights was compromised by the threat of afternoon thunderstorms, the mornings were great if a little

bumpy by midday. The South African winter on the other hand offers wall to wall CAVOK and is a more comfortable time of year to fly.

In order to validate your EASA PPL licence you need to arrive with the original document, a current Class 1 or 2 Medical Certificate, and two passport photographs – and then pass the exam, although this needn't be too difficult.

There are differences with the UK. However, there are a number of online mock exam providers with whom you can subscribe to get you match fit. Be warned though that failing to

achieve the pass mark of 75% means kicking your heels for another 72 hours before you are allowed to do a re-sit.

Food and accommodation in South Africa is also very good value for money, given current exchange rates. We used a specialist tour operator whose knowledge proved invaluable. We were aware of problems for tourists in downtown Johannesburg but stayed clear of it and never saw any signs of trouble. Rather we were left with an abiding impression of friendliness, warmth and vitality.



The sheer enormity of the landscape is something that blows you away when you fly a small aircraft in Africa.