# Guimbal Cabri G2 - Flight Test

IN OUR August issue of KiwiFlyer we profiled the new Guimbal Cabri G2 which was then due to arrive for NZ Distributors, Pacific Aircraft Sales in September. Two aircraft were imported, one for the first Australasian customer in Christchurch and the other as a demonstrator and for use by sister company Pacific Helicopter Training. In December, your KiwiFlyer Editor visited Pacific Helicopter Training for a test flight and in the course of a very enjoyable summer's day in Canterbury hosted by Director (and A-Cat Instructor) Terry Murdoch and Instructor Chris Hollands, also obtained a

rating in the aircraft.

## **First impressions**

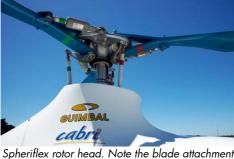
It's difficult to approach the Cabri without some pre-conceptions, though with the aircraft still relatively new to the market (these are serial numbers 24 and 25), there isn't a great deal of informed commentary available to review in advance. The company's marketing speaks of technology and safety but how much of this would

be specifications on paper and how much would come through in the feel of the aircraft and what it is like to fly? Those who choose to be critical speak of price, though inevitably this is without ever having seen or flown one. Competing aircraft are obviously the Robinson R22 and Sikorsky (was Schweizer, was Hughes) 300. So the expectation was for a modernised cross between a 300 and a 22, priced at the top end of the two seat helicopter market. What you get for your money though, is actually a lot more than you might expect. The Cabri has all the essence of a small Eurocopter built to the very latest standards, perhaps creating a new market all of its own. It's not necessarily an aircraft that is directly comparable to either the 22 or the 300 at all.

Walking up to the Cabri, you'll first notice that it is genuinely attractive and that the rotors seem low (about 13 inches less than an R22). Walking around it you'll notice that it is exceptionally



The two NZ Cabris outside Pacific Aircraft Sales' hangar at Christchurch.



forks integrated into the composite blades.



Engine access is very easy. Note the unobstructed oil filler and 4 into 1 inconel exhaust system.

180 to 145hp). It's a stark contrast to the modern technology employed everywhere else by Guimbal, though the electrical system does exchange the magneto for an electronic ignition unit on one side. Access is delightfully easy without any bending required and the oil filler is right there in front of you and free of obstructions which is just one example of how all the little niggles that R22 or S-300 pilots are familiar with have been addressed. The cowls are latched and include a safety lock that permits safe flight if the latches have not been closed properly. Also worthy of note are the engine baffles which can be removed in half an hour if maintenance happens to be required, which is quite a contrast to Robinson's arrangement.

Also in contrast to Robinson and Sikorsky, the engine pivots to engage the clutch and the main gear box takes the belt tension, leaving the drive train in permanent alignment.

The fuel bladder (designed to F1 safety standards) has a capacity of 170l for up to a 5 hour endurance.

A 4 into 1 free-flow tuned exhaust made of inconel (commonly used in gas turbine blades and in formula one exhaust systems) exits through the top of the tailboom to help reduce the aircraft's noise signature which is already very low thanks to the Fenestron tail rotor.

Which brings us to the tail. Guimbal shares the patent for the Fenestron system with Eurocopter, Guimbal holding rights for use on aircraft below 1200kg and Eurocopter for heavier aircraft. The Cabri's system utilises low cost fail-safe injected plastic blades with high tensile stainless steel spars. There are no life limits on the blades and flight has been demonstrated with one blade deliberately broken in half along its chord. Of course the shrouding of the tail rotor also provides for significant bystander safety and greatly reduces the risk of tail rotor strikes in confined areas or during mis-judged approaches and landings. The shape profile of the shroud has also been designed to avoid tail rotor vortex issues

A rubber mounted undercarriage pivots like the EC120, intended in part to reduce the likelihood of ground resonance. As well, these two NZ aircraft are the first Cabris to be set up for hook attachment.

The doors which are held open by pneumatic struts, have positive and elegant latches and are dual pinned to ensure flush closing and a good seal. Locking is by a remote key. Access is easy and there is plenty of headroom for tall pilots

wearing helmets. Wide people are easily accommodated too, with the cabin having plenty of shoulder room (6" wider than an R22). Seats are comfortable and there are 4-point shoulder harnesses that are easily latched in one operation. Of particular note is that the seats have substantial crash protection, such that a 2000fpm vertical impact is deemed to be survivable. Guimbal estimates that half of helicopter crash fatalities could be prevented by the crash protection features built into the Cabri. Needless to say it meets the very latest EASA safety standards.

Something else to delight R22 and S-300 pilots is the 200 litre boot (with a 40kg capacity), accessible from a panel on the right side of the fuselage and also from inside the aircraft, meaning that a camera or AIP, etc. can easily be stowed and accessed in flight. There is also a small compartment in front of the instrument console for storage of dual controls.

There is a normal suite of standard instruments, except for RPM and engine monitoring which are all cared for by the Electronic Pilot Monitor (EPM). This is a digital display panel that most interestingly also includes a Multiple Limit Indicator which combines several critical performance indicators (engine speed and power setting, fuel flow, oil temperature and ambient air pressure) into one instrument for the pilot to monitor. Automatic calculations drive a dual indicator to show how much throttle is remaining and how much more power (in %) is available at any time. A read out of % of throttle turned on start-up is given, helping to reduce the likelihood of an over-speed on start. And the EPM also displays fuel and flight time remaining as well as carburettor temperature (which is monitored and controlled automatically). It is also a flight logger. Should the EPM fail, there is an independent backup system for rotor rpm management which consists of 3 lights to show low, normal and high speeds. The controls are all nicely engineered and fall to hand as you would expect. A trim hat is incorporated on the cyclic. Mixture and magneto switches are located in an overhead console. Pilot side pedals have an elegant two position adjustment available. There's also a cup or i-pod holder, an auxiliary music input and a 12V

accessory outlet.

### **Pre-Flight**

There's nothing especially unusual or difficult about the pre-flight, though you will need a torch if you want to check the

**KiwiFlyer** Feature

Cabri G2 in the Waimakariri River. There are good reasons for it looking like a small Eurocopter.

Eurocopter. (Guimbal has worked both for and with Eurocopter for over 20 years and received technology development contracts from them that directly supported the Cabri project itself). Blade attachment 'forks' are integrated into the blades. The system is exceptionally strong, proven when Guimbal manufactured a blade with all possible defects then deliberately impacted it until there was a large divot at the root. They then fatigue tested it for months before inspecting it for integrity - and it was fine. They also failed a main hub and then demonstrated 200 hours of safe flight. The main rotor driveshaft is milled from a billet of stainless steel, and Terry explains that there are no cast parts anywhere on the Cabri as Guimbal was not satisfied with the ability to control quality in a casting process.

nicely built and that there has been a great amount of effort put

towards attention to detail. The impression is akin to that you get

well, another country. Everything looks exactly right, both from an

We started with a guided tour of the Cabri's features by Terry.

The composite rotor blades (which are not symmetrical in profile)

look like they

could have come

straight out of the

Eurocopter factory,

so it's not surprising

to be told they

are manufactured

with Eurocopter

their patented

rotor head is

on the EC120

and Super Puma

which again is not

that patents for the

design are held by

Bruno Guimbal and

surprising given

processes including

bonding methods

leading edge caps.

The Spheriflex

equivalent to those

for the stainless steel

from closely examining a European car, versus something from

aesthetic and an engineering point of view.

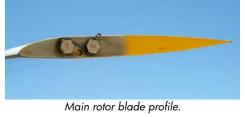
An introduction to the Cabri

Behind hinged cowls on either side (held open by pneumatic struts) is the venerable Lycoming O-360 engine (derated from





What looks right, often is, and the Cabri does.





The Electronic Pilot Monitor with automatic display of power available and throttle position, plus fuel burn and flight time remaining.



Bruno Guimbal shares the Fenestron tail design patents with Eurocopter.

main rotor gearbox oil level. A LED such as on the R66 wouldn't be a bad thing here, but if the oil wasn't in the gearbox, you would probably see it everywhere else anyway. Fenestron blade pitch range and alignment is easily checked according to markings on the tail shroud.

# Start-up

Start-up is a straight forward process. So straight forward in fact that if you begin with a warm engine, you can have the clutch fully engaged and be off the ground in 15 seconds. There are the normal checks for mags, carb heat, clutch, and rotor horn, plus observation that the backup rotor rpm warning lights operate correctly, then gauges green, caution lights off, power limit checks (displayed automatically on the MLI), and ready for take-off on what is a hot clear day in Christchurch with a about 15kts of wind on the ground.

# Take-off and demonstrations

Having completed the start-up and checks together, Terry talks me through the take-off. With a few hundred hours in helicopters with rotors that turn anti-clockwise and about one in a Squirrel, I'm very conscious I'd better be adding right pedal with power and not left (the Cabri rotors turn clockwise). The technique in the Cabri seems to be to add in the amount of pedal you might expect, and then a good inch more. We hover in relative control as I adjust to the new aircraft for the first time and Terry arranges clearance for departure. There does seem to be a substantial pedals offset required (that said the Cabri tail has full authority in 35kts for all directions at sea level), and I'm not used to hovering right foot down but it all comes together soon enough and with clearance received, we're off and headed in the direction of the local low flying area. Naturally I'm being cautious and conservative but it all seems pretty effortless so far.

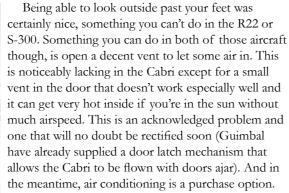
Having descended to the river for some fun (i.e. low flying demonstrations), Terry takes over to show how "it will do just about anything you ask it to". And it does. The Cabri is marvellously agile and a very great deal of fun to fly. You can flick it from one very steep bank to the other with no effort at all, climb and push over the top if you want to, and generally have a ball without feeling at all like you are approaching any limits of the aircraft. When I take the controls back and try a range of less docile manoeuvres, the impression is very much that you can point this helicopter wherever you want it to go, and if you happen to be not all that coordinated about it, doesn't matter - the Cabri feels very (almost disconcertingly) forgiving. I'm used to flying R22s and S-300s with a degree of respect for the limitations of the aircraft and this is different in a way that is difficult to describe. It feels very robust and very friendly, and not remotely like it's just waiting for an opportunity to get the better of you, which is probably how I expected my first hour in it to be. Terry was right when he said "you'll be confident enough to fly it home (to Ardmore) in less than an hour".

# KiwiFlyer Feature



Fenestron control is by cable.

6 inches wider than an R22.



The other possible niggle is a vibration that is predominantly prevalent on the pilot side of the

aircraft at around the 85kt mark. Time will tell if this diminishes once various systems wear themselves in, as HCS only had 50 hours on it when we flew. Terry pointed the vibration out to me in the first place and it is easy enough (at least for R22 or S-300 pilots) to forget about if you stop thinking of it. And it might be fair to say it is more noticeable because the prior part of the flight envelope was so smooth.

### The rating

What better excuse to fly for a couple of hours than to get a rating. So that's what we did (thanks Terry).

Following our low level exercises in the river and that realisation of just how agile and forgiving the Cabri appears to be, we headed to nearby paddocks

for some out of wind slope landings. I picked a spot and landed only to discover that the slope didn't seem so much at all until Terry pointed out that the Cabri pivots on the rubber mounted undercarriage so that the cabin wasn't leaning to the same degree as the skids.

Straight in and 180 degree autorotations to a power recovery required initial concentration as to which pedal was required, but were easy to execute without any drama. You do need to be quick with the yaw control on recovery though as the Cabri governor tends to snap the throttle open with a good deal of aggression - certainly more than the R22 version does. We only had a light fuel load but the high inertia rotors and wide rotor rpm range (yellow extends from 450 to over 600rpm) meant that there were no particular requirements for careful pitch adjustments

to manage the rpm throughout the descent or flare. After some quick-stops and running take-offs/ landings Terry suggested we try hover engine off landings to which I agreed with a slight degree of discomfort - they've never been my favourite exercise. That said, they turned into a non-event requiring no more than correcting the yaw, letting it settle, and then adding collective to cushion the landing. Admittedly we had some breeze in our favour but there seemed to be no chance of running out of collective to pull and it was very easy to hold the Cabri just off the ground before a gentle touchdown.

We returned to the airport for lunch, then in the out again with the Cabri and an R22 for some more

200 litres of luggage space accessible from the cockpit.

afternoon and now with 20+ kts of wind, we headed

# COLOUR VISION AVIATORS



Are you or do you know of a person with colour vision deficiencies (CVD)? Are you a current holder of a CAA medical certificate with restrictions due to colour vision? Do you want to train for a pilot licence, but have CVD that may affect this?

Colour Vision Aviators is a group established for:

- Research into colour vision deficiencies affecting pilots or those wanting to be a pilot.
- Establishing a representative group to provide a voice for people affected with CVD.
- Lobbying to explore a balanced approach to standards required by authorities.

Colour Vision Aviators believe there are opportunities for CVD persons to qualify to hold a pilot medical certificate, with a balanced approach to testing, such as used in Australia and the USA. If this affects you or someone you know – please feel free to contact us and join the group. We welcome all enquires.

P: 09 299 3377 M: 021 978 939



KiwiFlyer Issue 20

January / February 2012

4 point harnesses connect

with one easy click.



E: info@colourvisionaviators.co.nz P.O. Box 118, Clevedon, Auckland 2248 www.colourvisionaviators.co.nz



For all swaged or nicopress cables from 1/16" to 3/16" Cables and fittings in stock. Same day turnaround - Competitive prices

Hand splicing service available. Piper Cub trim cables a specialty. Ph 09 298 6698 Fax 09 298 5225 Contact John Geary Email: johng@slingshot.co.nz





flying and our photo shoot. Chris Hollands and I flew the Cabri and once at the river I got into the 22 with Terry to take pictures. It was a good contrast to experience and I still really do like the R22 a great deal, but it felt smaller, older and more vulnerable to be in, by a fair margin.

Photos taken, Chris and I flew back in the Cabri again, after a low level play and some confined area approaches. From one, Chris demonstrated a vertical climbout at 2000fpm to 1000 feet, then with the fuel countdown on the EPM showing 30 minutes remaining, we headed back to the airport.

## **Drawing Comparisons**

If you took all the desirable characteristics of the R22 and S-300, eliminated the niggles, and then added latest technology and safety measures as well as the look and feel of a Eurocopter, then the Cabri is the result. It sits somewhere between the two in terms of size and useful load, has the spacious cabin of the 300, and exceeds the cruise performance and Vne of the 22.

Using claimed empty weight figures, the 22 offers a 519lb useable load and the Cabri 597lbs, meaning you can carry a good deal more fuel with you in the Cabri than the short hops that a 22 allows for with two average people on board. The 22 however, wins the competition for IGE hover performance. With that 519lb on board, the 22 offers 9400 feet and the Cabri offers 6000 feet at ISA. At 20 degrees C, the 22 is down to 8000 and the Cabri to 5000 feet.

Of course the Cabri wins massively in any comparison for technology and safety features, though these do come at a cost. The Cabri is priced about US\$100k higher than an R22 putting it at about the NZ\$500k mark and pretty much on par with an R44 Raven I which of course has 4 seats and a faster cruise speed. However, Robinson helicopters require full overhauls at a very substantial cost every 2200 hours and the Cabri does not.

The Cabri in fact has no fatigue life limited components, with all components including blades and flight controls being maintained on condition. The engine and two gearboxes have 2200hr TBO lives specified and the fuel bladder has a 15 year finite life limit. Whilst that isn't to suggest the Cabri is likely to be maintenance free, it does also mean that there is no '12 yearly' full strip and inspection required as with Robinsons which also means that there should be negligable devaluation of the aircraft taking place as time passes, regardless of whether it is used or not. This has to be a huge advantage for private owners who aren't likely to fly according to the Robinson formula of 2200hours every 12 years, diligently saving \$90+ an hour to fund the pending overhaul. The disadvantage though is that there will never be 'cheap' Cabris on the market such as there are for entry level R22 owners buying nearly timed out machines.

Further to the R44 price comparison, if you don't really need the extra two seats then you probably don't want the extra fuel burn and hourly cost that the bigger aircraft requires.

It all adds up to make direct comparisons difficult to construct in a meaningful way unless they are very application specific. It's fair to say that the Cabri isn't likely to be produced in Robinson volumes but this is not Guimbal's intention. Their present output is in the order of two aircraft per month with a plan to grow that to four or five per month over the next two years.

For owners who are willing to spend more to get more, who place fair value on the technology and safety that the Cabri offers, and who want to avoid a traditional maintenance cost regime, the Cabri is likely to find a new market niche all of its own.

**Other Opinions** 

Terry gave us a list of some of the people who have flown the Cabri in New Zealand and we spoke to a few of them as well as David Cooney, who is the first Australasian purchaser. We asked each person to describe their experience in, and opinion of the aircraft and made the following notes about what they said.

# Regan Graham:

Regan is a utility pilot with HeliPro and has amassed near to 6000 hours over 17 years of flying. He is rated on 12 different types from the R22 to Dauphin.

He describes the Cabri as a blend of the 300's stability and R22's speed, with a modern feel. Regan's first comment was that "it just seemed to want to fly". He says that it was very smooth and stable and that he liked the wide rpm range and ability to recover from low rpm quite easily. Regan says he thinks the aircraft is very well thought out and that it answers the need for a desirable cross between the 300 and 22. From a training point of view he





Bottom right: New Zealand's first Cabri owner, David Cooney with his family.

says that "you could send students solo with a lot of confidence", and he thinks that the Cabri is a fantastic private owners machine, particularly in regards to safety, speed and endurance. Regan says that the controls felt very like a H500 or BK-117, that the aircraft was "very responsive" and that "wherever you point it, it goes". He says it was very stable on slope landings and that he was having a great time in it after just half an hour at the controls.

# David Cooney:

David Cooney is a PPL holder with about 200 hours in his logbook. He owned an R22 before signing up to buy one of the first two Cabri's imported into New Zealand. David says that there



were several reasons behind his purchase. The first was to do with safety. He says he still thinks the R22 is a magnificent aircraft, but was always very conscious of his inexperience and (lack of) currency, and wondered whether, if he got behind the aircraft, he would be able to safely recover from that. He feels better that the margins for error and recovery are much wider in the Cabri than

Bottom left: Toby Wallis took the Cabri into the mountains west of Christchurch.

they were in his 22 and he says that in a world where cash in the bank isn't earning much, the decision to spend the extra money wasn't too difficult. David says that he takes his two and a half year old flying and feels very comfortable. He also liked the maintenance regime of the Cabri and as a private R22 owner flying a small number of hours, says he could 'feel' the calendar time ticking away on his 22 every time he walked past it in the hangar. David says that the adults he has taken for a ride in the Cabri have all been very at ease whereas he used to get comments from some about the apparent smallness and perceived fragility of his R22.

We asked David why he didn't buy an R44 Raven I instead. He says that he was happy to trade the extra two seats for the features and operating economy of the Cabri, pointing to research and his own experience of just how infrequently those extra two seats are used. He says that 25% of the time, it would be just him and his wife going somewhere, 25% of the time he might be taking friends for ride – and they can go one at a time – and 50% of the time it would be just him in the aircraft, flying for the fun of it. And on the rare occasion that he did need the extra seats, he was better off to hire a 44 than to operate one all the time himself.

It's hard to argue against any of those sentiments and we at KiwiFlyer congratulate David on his purchase.

# Hon David Carter:

While in Christchurch we spoke to the Hon David Carter who is an R44 owner. He flew a Cabri for an hour and loved it, saying that it was akin to "driving a sports car instead of a sedan", being "quick and easy to fly, and entirely different to his R44; more responsive and nimble".

# Toby Wallis:

Toby Wallis owns and operates Alpine Helicopters in Wanaka, a company needing no introduction in New Zealand, having been started by Toby's father Sir Tim Wallis in 1972 and now specialising in commercial and recreational charter work. Toby has more than 11 years of experience in a range of aircraft including R22, H500, and AS350 and holds both fixed wing and helicopter commercial pilot licences.

Toby flew the Cabri up the Waimakariri River into the mountains west of Christchurch, so gained some experience in rougher conditions at altitudes above 5000 feet. He says he was very impressed with the Cabri's stability, noting that "it felt like a very solid machine to fly" that he would "take it anywhere he would take the 500", that "the manoeuvrability was fantastic", and that "wind and turbulence just weren't a problem". He says that with a passenger outside and "leaning way out on the skid, you could trim it and take your hand off the cyclic". He was also particularly impressed with its rpm range and low rpm performance, and mentions an exercise he and Chris performed in a full throttle out of ground effect hover at altitude, whereby as they deliberately reduced rpm from 530

towards 510, the Cabri actually climbed. He says the Cabri can easily be recovered from a low rpm situation and that its operating margins allow plenty of time to do so at low risk, a trait that is ideal for low time pilots.

Toby mentions that the cabin easily accommodates two 100kg, 6 foot plus occupants and says that the Cabri should be ideal for taking the abuse of commercial work, being robust and having an "over engineered" appearance where it matters. It is his intention to replace the R22 used on their Station with a Cabri once the 22's



hours are run down further, saying that the "extras offered (by the Cabri) are worth every cent". He's also looking forward to seeing what it can carry on a hook.

**KiwiFlyer** Feature

Toby also mentioned the points we have raised regarding poor cabin ventilation, pilot side vibrations above 80 kts and the slightly unfamiliar feel (for some) of pedals attached to a Fenestron tail, as

well as a concern for low time pilots who don't have any experience of clockwise turning rotors having to retrain their feet. In the same sentence though, he says that these negatives don't even come close to matching all the positives that the aircraft offers, especially for training. In his opinion, "even with the bit of extra cost there might be when you're learning to fly, choosing the Cabri should be a no-brainer".

He pointed out that all the technologies used have already been proven on other aircraft and said that having flown the aircraft at altitude, he thinks that the Cabri performance charts are "simply being honest". Toby was also impressed by the glass cockpit and said how good it was to be flying at altitude and to know exactly what percentage of throttle was in use and how much power was still available.

# **Our Conclusion**

If you're in the market for a new two seat helicopter or even a four seat helicopter but you know you'll hardly ever use the extra two seats, go and try the Cabri. It's sure to be more than you expect. It is more expensive to acquire, but there's a lot more to helicopter operation than just the initial purchase price. And the safety and technology features aren't just

specifications on paper, you feel and experience them when you're flying. We hope to see more on the New Zealand register soon.

## For more information

To find out more about the Cabri or to arrange a demonstration flight, or for enquiries regarding training in a Cabri, contact Terry Murdoch at Pacific Aircraft Sales in Christchurch. Phone 03 359 6891 or 027 433 2647, email: terry@pacificaircraft.co.nz or visit www.cabri.co.nz



# For your Aviation Insurance

Contact your broker for a quote or phone us today

P: (04) 473-5593 F: (04) 472-6774 69-71 Boulcott Street, PO Box 10-027, Wellington E: admin@aviationcoop.co.nz

www.aviationcoop.co.nz



Specialist Aircraft Cleaning and Valet Service Leather Care - Anti Corrosion Treatment Fixed and Rotary Wing - All sizes big or small

# Corrosion



and in your own peace of mind. ontact Chris 021 262 2272 www.adnz.co.nz



• Work at your site or ours

Call Liviu on 021 048 7055 or (09) 268 1199 Email: liviu.filimon@liviuavionics.com



**THERE** are a lot of proud aircraft owners in New Zealand who want the very best for their pride and joy while at the same time keeping costs well under control. Whenever upholstery work is required, Shayne and Kim Forkert at Aviation Interiors offer a good deal more than traditional repair and re-trimming services.

Shayne and Kim head up a small team operating from modern premises in

Frankton, near to Hamilton Airport and Te Kowhai. Shayne has 25 years of experience in the upholstery industry and as well as aircraft,

owners who love

he specialises in boats, vintage and classic cars. He is very used to dealing with

their vehicle, want to be involved in the detail and want the very best outcome for their pride and joy. Kim is a trained Interior Designer and in her career has specialised in luxury boats and executive homes.

Some of Kim's clients own aircraft and During that time, the couple have

it was requests from a few of these clients to undertake work on their personal aircraft that led Shayne and Kim to establish Aviation Interiors a few years ago. developed strong working relationships with local aircraft engineers and others around the country. They are often called on to turn around repair jobs very quickly, something which is not a problem and all part of the service that is on offer. Shayne says they are happy to work directly

# IS YOUR AIRCRAFT INTERIOR IN NEED OF TLC?

From small seat repairs to full interior design and refurbishment. Aviation Interiors do it all!

- New aircraft seat covers
- Re-upholstery & repair of aircraft seats
- Floor coverings Curtains & soft furnishings
- Wall and ceiling finishes
- Interior design & concepts
- Call Shayne today 07 847 8049
- www.aviationinteriors.co.nz

30

# **Aviation Interiors Profile**

with aircraft owners or their engineers and can arrange removal or transport of aircraft components as required. They can also easily arrange engineering services if required as part of other interior refurbishment work.

Aviation Interiors breadth of service is wide. Starting with advice on interior (and exterior) colour schemes, they can assist with all aspects of upholstery and

upholstery

including seats,

carpets, panel

linings, exterior

covers, propeller

more. They have

access to material

comprehensive

suppliers and

undertaken to

A number of

CAA regulations.

all work is

covers, and

detailing



Shayne and Kim Forkert from Aviation Interiors

held, notably for Robinson R22 and R44 interiors which can be manufactured and despatched anywhere.

Their partnership gives aircraft owners the opportunity to work directly with an interior designer and the master upholsterer together in modern premises, with Kim and Shayne's aim being to offer "the perfect job at no additional cost". Whether the project involves a new interior for a proudly built microlight, repairs to a working helicopter or refurbishment of a corporate jet, Kim and Shayne are happy to help. For everything from small repairs, to complete interior design and installations (perhaps to match a new paint scheme or to include corporate colours), give them a call on (07)847 8049 or e: info@aviationinteriors.co.nz



template sets are