

# GLOOM TO BOOM

While the helicopter industry has still a way to go before returning to the boom times of a decade ago, there are still some signs of growth



WRITER: PAUL SADLER

Australia's helicopter industry continues to fly through some rough air, but that turbulence is showing some signs of abating, suggesting a flightpath through the gloom that has challenged it for the past eight years.

In our June issue last year, we reported on a helicopter industry that was in a state of flux in the face of the Civil Aviation Safety Authority's (CASA) controversial regulatory reforms while coping with a marked decline in offshore operations supporting oil exploration and production.

Twelve months on the operating landscape has shifted slightly to the right, perhaps pointing towards the end of the cyclical downturn that has affected the industry since the turn of the decade.

While there is still a way to go before returning to the boom times of circa 2009, the current mood of those in the industry *Australian Aviation* spoke to seems somewhat positive.

"This is the longest downturn that I have ever seen in the 50-odd years that I have been in the industry," President of the Australian Helicopter Industry

Association (AHIA) Peter Crook says.

"The slump that we're in started in around 2009 and we've been wallowing down the bottom for about eight years. There are some signs out there that we're just starting to recover. Normally from peak to peak is about eight years. It's a long and slow process but this is the most protracted downturn that I have seen."

## Numbers are up

Amid the gloom, the number of helicopters registered in Australia has shown modest growth compared to



a year ago. At mid-April there were 2,194 rotorcraft registered with CASA, up almost two per cent in the last 12 months and up a solid five per cent on the figure for April 2014.

On the activity front, a look at Airservices Australia's Movements at Australian Airports – Calendar Year 2016 report shows civil helicopter movements at Australia's 31 tower-controlled airports totalled 405,132 in 2016, up by 43,646. While the report only captures movements during tower hours, the figure reflects a healthy 12 per cent increase in total helicopter

✦ Rotorcraft numbers registered with CASA are up almost two per cent in the last 12 months.

PAUL SADLER

movements compared with 2015.

The makeup of the national fleet comprises 274 twin-turbines (13 per cent), 577 single turbines (26 per cent) and 1,342 single pistons (61 per cent) out on the helipads.

North America remains the largest source of Australian-registered helicopters. The two-seat Robinson R22 is still the most popular helicopter flying in the country with 594 on the VH register, up 17 units compared to April 2016. The R22's bigger sibling, the four-seat R44 comes in second with 496 (+9) machines, while Bell's 206/206L/407 family takes third spot with 238 (-10) units. From Europe, there are 186 (+18) examples of Airbus Helicopter's AS350/H130 Squirrel series registered locally, while there are no fewer than 46 Leonardo Helicopters AW139s now registered (+18).

Queensland is still home to more helicopters than any other state with 776 (+63) machines registered there. Following behind is NSW with 455 (-66), Western Australia with 338 (+48), Victoria with 279 (+5) and the Northern Territory with 179 (+5). Helicopter numbers in Tasmania, South Australia and the ACT combined total 160 (+41).

### Pilot numbers

On a licensing front, CASA's 2015-16 Annual Report shows that as at June 30 2016 there were 849 ATPL(H) holders, down by six (or 0.7 per cent) on a year earlier. Other categories showed modest increases, with CPL(H) numbers up by 1.5 per cent to 1,881 (+28) and PPL(H) holders up 3 per cent to 917 (+27).

Perhaps most concerning is the fall in student pilot numbers. The total number of recreational licence holders (with the implementation of CASR Part 61 the student GFPT licence was recategorised as the recreational licence in September 2014) stood at 33, down seven, a drop of 21 per cent.

Erin Martin is one of those few currently training to become a commercial helicopter pilot at Caboolture Airport on Queensland's Sunshine Coast. Like many others, for Martin, 23, it has always been her dream to fly.

"My initial fascination began with fixed-wing, but as I spent time in the industry I felt that I would be more suited to flying helicopters – it's the type of flying career that I wanted," said Martin.

"I would love to eventually end up in some form of air work that operates for

a greater humanitarian cause. Luckily in this industry there are a number of options such as EMS, firefighting and aerial work to name a few."

Martin says she is hopeful of scoring a commercial job at the completion of her commercial training. "First jobs can be hard to find when you have minimum hours. Pilots have got to be willing to give enough time to the ground work and to understanding a company's operations before they may get time as a line pilot, which I am committed to do, so fingers crossed. It's also important to find the right job for the type of person you are and I believe everyone finds that place eventually."

However, Crook is a little cautious about the outlook for employment within the industry, certainly for the foreseeable future.

"There is no guarantee for any work once you get a licence at the moment," said Crook. "In the past 12 months we've seen a number of flying schools close because there is no work out there as there is no substantial increase in helicopter activity and no need for more pilots."

As part of its efforts to support all sectors of the industry, the AHIA will soon be offering free memberships for trainee pilots.

"We are formalising this right now to assist them the best we can at no cost," said Crook. "They will have full access to all our resources and to their peers of the industry for support during their training and updates on what the industry is doing. We all need to support the new blood as they embark on a career in such a challenging yet vitally important industry."

But it's the motivation of this 'new blood' that needs to be supported and encouraged to ensure there won't be a shortage of skilled helicopter pilots, and maintenance engineers, further down the track.

For Martin, her dream of becoming a helicopter pilot began 18 months ago while working as ground crew for a scenic helicopter company at Sydney Airport. Her tips for aspiring entrants thinking about a career in the helicopter industry?

"Make sure you are committed and passionate about flying and about the aviation industry as a whole and be willing to move around for work," she said.

"It's also important to have family and friends in your world who support and encourage you. Helicopters are exceptionally unique machines with

the ability to go anywhere and land in normally impossible places. Their versatility provides what I believe to be much more exciting and challenging work and this is what inspired me to become a helicopter pilot.”

### 457 pilots

CHC Helicopter’s regional director, Asia Pacific Vince D’Rozario says since starting with the company in January he’s recognised early on that the helicopter industry needs to band together and see what it can do collectively to improve the amount of young pilots, like Martin, coming through the system.

“I’m trying to figure out how to build – for want of a better term – a ‘factory’ that can develop younger pilots into becoming suitable for first officer positions then bringing them along into becoming captains,” said D’Rozario.

“We all need to start to try and give back to the industry. A lot of our pilots, and a lot from our competitors from what I’ve seen, are quite senior in experience and in age. And where is the pipeline of people to replace them coming from? We need to look at that as an industry. We need to fix it before the gap gets too big and then you’re looking at employing 457 visa pilots.”

The federal government announced on April 18 it was ending the 457 temporary skilled worker visa scheme, replacing it with the Temporary Skill Shortage (TSS) visa.

But as part of that change the government eliminated scores of occupations that will be eligible for the new visas, including pilots. This removal only applies to new applications and does not affect existing visa holders.

“We tend to use a lot of local pilots – if not all our pilots are Australian,” said D’Rozario. “We do use overseas pilots for what’s called ‘global touring’. We hardly bring in any 457s and prefer to hire local and keep the business here.”

According to the Department of Immigration and Border Protection, 62 457 visas were granted to helicopter pilots from July 2007 to December 2016, including four granted between July 2016 and December 2016.

### Accidents are down

One downward trend that is most welcome is the helicopter accident rate and the number of fatalities in helicopter accidents.



In 2015, the Australian Transport Safety Bureau (ATSB) said there were 36 accidents involving Australian-registered helicopters, of which six were fatal. However, in 2016 there were 27 accidents – down 33 per cent – with only two being fatal.

“Borrowing the line from the Helicopter Association International’s president Matt Zuccaro, ‘zero accidents’ is the only statistic that is acceptable,” said Crook.

“I think it’s probably awareness that any accident or incident is not acceptable and the people within the industry are more connected now and getting more [safety] information. As they’re becoming more aware of what’s going on they are taking steps to reduce risk based on that information.”

### A year in reflection

The price of resources like oil and gas is critical to the health of the industry. With some resource prices, including crude oil, increasing marginally in the past year, some companies have started to put on additional helicopters to support new or expanding contracts in oil and gas exploration and production.

“There are [encouraging] signs with some of the resource prices coming up this year,” said Crook. “Copper and oil are up slightly – as is gold. So the resources are looking like they’re

It is critical for the industry to encourage student pilots to help prevent a lack of skilled pilots coming through. PAUL SADLER

Low resource prices has seen a number of offshore-capable machines spending more time on the ground. SIKORSKY

crawling their way back and I think if that happens this will obviously promote exploration activity and away we go again.”

Oilfield service providers have been heavily affected by the low price of oil. Exploration and production companies aggressively cut costs, impacting suppliers including their helicopter service providers.

“I think we’re seeing the oil price stabilising now,” said D’Rozario. “It’s not quite as erratic as it was six to eight months ago. I don’t think we will see the US\$140 to US\$150 per barrel that we saw in 2008. I think it will stabilise in the US\$70 to US\$80 range, eventually, but that will take some time.”

With that outlook, D’Rozario said there is some light shining on the offshore horizon with a number of drill rigs being mobilised. “It’s not in hundreds like we saw before, but this bodes well for a slight uptick in work, so that is good.”

That will be good news for OEMs like Airbus Helicopters. Despite seeing a five per cent increase in sales for the year ending 2016, chief executive Guillaume Faury described last year as “probably the most difficult of the last decade, the recent increase in oil price has yet to filter through to further sales of its offshore products with confidence.”

That sentiment was echoed by Airbus Helicopters vice president sales and customer relations for Asia Pacific Fabrice Rochereau during a media briefing at the Avalon Airshow in March.

“Although oil prices have risen recently the increases are still not enough to see the market grow unfortunately,” he said.

“We are seeing a very difficult market worldwide including in the Asia Pacific. Offshore is still a difficult market. In terms of numbers they are



stable when compared to last year. We are optimistic for the future.”

Reflecting just how challenging conditions have been for the wider industry, over the past 12 months, two of the world's largest operators, CHC Helicopter and Erickson Incorporated, both filed for Chapter 11 bankruptcy. Fortunately for both, the experience was short-lived and they both used Chapter 11 to restructure their operations and emerge as leaner operations with refreshed balance sheets, and for CHC, a new corporate brand image.

“One of the things that we are really proud of is that we went through the whole of Chapter 11 and we did not lose a customer at all including in Australia,” said D’Rozario. “We managed to trade through it and provide a good, safe service and we are very proud of that.”

Another bright spot has been the growth in popularity of the Leonardo helicopter fleet in Australia with the number of AW139s operating in Australia increasing by 18 (to 46) for the 12 months to mid-April. In the past 12 months, a single AW169, a shorter version of the 139 also joined the register, with another of the new type on its way to Australia shortly.

“It’s a popular machine and we are in the top two largest flyers of them globally,” said D’Rozario of the AW139. “We have a lot of experience and data on how to fly those the best.”

That experience continues to grow with CHC recently adding AW139 VH-NVE to its local fleet. The machine, fitted with dual rescue hoists, came online in April to fulfil a new contract with Defence for the supply of an interim search and rescue (SAR) and aeromedical evacuation (AME) helicopter at HMAS Albatross, Nowra.

CHC also signed a 21-month contract last September to provide the Army with SAR, AME and crash response support for deployments throughout Australia including at 1 Aviation Regiment at Robertson Barracks, Darwin supporting Tiger ARH training with a Bell 412EP.

“From the ADF side of things we’re doing well and we’ve just picked up Navy, so we have all three services,” said D’Rozario. “All of our concentration is now on the ADF tender which is coming up.”

The current RAAF SAR contract, being operated by CHC, is due to expire on June 30 2018. The ADF’s



intention is to tender for the supply of a mix of SAR, crash response, and AME services for all three services.

“The scope of each of the contracted services is subject to further review and endorsement within Defence,” a Defence spokesperson told *Australian Aviation*. “However, the date for the approach to market has not yet been determined, as the scope of the requirement is still subject to review.”

That tender could see even more AW139s join the local fleet, but in the meantime Leonardo has opened a new service centre and logistics facility at Essendon Airport in February. Able to hangar up to eight AW139s, the facility will support the company’s expanding customer base in the region and improve the availability of spare parts.

In other news for Leonardo, the company brought a Malaysian-registered AW189 demonstrator to Australia in early April to show off the new super-medium to prospective customers and operators at Perth, Adelaide and Essendon airports.

Meanwhile another new type soon to be seen in local skies is the Bell Helicopter 505 Jet Ranger X, following its first customer delivery on March 7, with CASA issuing the type its Australian certification a week earlier.

Hawker Pacific, Bell’s authorised

• A CHC Australia Bell 412EP on standby at 1 Avn Regt in Darwin supporting Tiger ARH operations. PAUL SADLER

“**We did not lose a customer at all including in Australia.**”

VINCE D’ROZARIO

• Leonardo’s AW189 being demonstrated at Adelaide Airport in early April. PAUL SADLER

Australian and New Zealand distributor, will soon deliver Australia’s first two Jet Ranger Xs to Queensland’s Nautilus Aviation, which will use the five-seat light single for endorsement training, commercial charter and tourism operations. Hawker Pacific has leased one of the 505s back for a demonstration tour of Australia later this year.

“Factory delivery [of the 505s] is on July 24 and we can expect to see them flying around Australia in September,” said Nautilus Aviation CEO Aaron Finn. “We currently operate three Bell Jetranger B3s and a pair of H120s. With the new model on the way, we can rationalise our fleet and lose a type. We see the 505 as having the benefits of the 206 history crossed with the Airbus’s comfort and performance.”

Nautilus Aviation has until now chosen to provide endorsement and specialist training rather than ab initio student training.

“The coming months will see us transition to Part 142 and provide all aspects of rotary-wing training to industry including twin-engine, NVIS and type training,” said Finn. “Our student intake is on the rise and we’ll have an exciting flight training announcement to make later in the year.”



## Lows and highs

High profile accidents and incidents last year have had an impact on Australian operators.

Most significant was the global grounding of the Airbus Helicopters H225 (EC225LP) Super Puma family following a catastrophic fatal accident in late April 2016 that saw the main gearbox and rotor head separate from the fuselage.

A year on, investigators from the Accident Investigation Board of Norway (AIBN) are still trying to understand why a crack initiated in the main rotor gearbox (MGB) and how it propagated. In its fifth updated preliminary report released on April 28, the AIBN said there were “many clear similarities” with this accident and the MGB failure that led to the fatal crash of an AS332 L2 off the coast of Peterhead, Scotland in 2009.

The AIBN said it is continuing its investigation into how and why two similar catastrophic accidents could happen to near-identical helicopters, but due to the scope and complexity of the investigation it was not feasible to estimate a completion date for the final report.

Another high profile accident last year was the July 6 loss of Bell Helicopter’s 525 Relentless prototype. The suspected inflight break up, which occurred as the helicopter was flying close to Vne, has set back the type’s certification by a year to the end of 2018.

Not to the same extent but Sikorsky’s S-92 too has had its issues. The global S-92 fleet was subjected to numerous inspections of its tail rotor pitch change shaft (TRPCS) and bearing assemblies after the Lockheed Martin-owned manufacturer issued an Alert Service Bulletin (ASB) on January 10 2017 requiring all operators of the type to undertake one-off inspections. Three days later the FAA issued an emergency airworthiness directive (AD) requiring urgent inspections of the tail rotor pitch change shaft TRPCS.

The inspections were prompted by three reports of operators losing tail rotor control caused by a failed TRPCS assembly bearing. In once such incident on December 28 2016, the S-92 lost tail rotor authority and spun while landing on an offshore platform in the North Sea. The CHC-operated S-92A landed safely and shut down with no injuries to the passengers or crew.

Sikorsky’s regional executive



Two CHC Helicopter (Australia) S-92As at Broome recently. Note the company's revised logo and colours. CHC HELICOPTER

Asia Pacific Christophe Nurit said the TRPCS and bearing assemblies inspections had not caused any major setbacks with confidence of the type by Australian operators.

“In fact, I can tell you that through our evaluation of HUMS data, we see continued heavy utilisation of S-92 aircraft in the region,” said Nurit.

“Safety is and always will be our top priority, and in situations like this, Sikorsky proactively communicates the need for action to ensure airworthiness of the fleet. We continue updating all operators via our webcasts and standard communication channels and we will further communicate findings to our operators in regard to safety or airworthiness issues that affect the S-92 helicopter fleet. Our commitment to transparency, communication, and customer support has given our Australian operators, and operators around the world, continued high confidence in the S-92 fleet.”

Another development program to have been affected by a fatal accident was Leonardo’s AW609 tiltrotor. Recovering from a fatal accident in October 2015, flight testing has resumed and Leonardo is now aiming for FAA certification in 2018 and first customer deliveries in early 2019.

Australia’s first two Bell 505s will be flying in our skies from September. BELL HELICOPTER



## Regulation reformed?

While manufacturers have grappled with technical issues, the industry locally continues to grapple with CASA’s sweeping regulatory reform changes to training (Parts 141 and 142) and licensing (Part 61), intended to internationally align the industry with ICAO and European EASA regulations.

The transition period for CASA’s suite of new regulations for ratings, licences and endorsements began on September 1 2014, but the compliance deadlines were extended by a year less than 12 months after they were announced and have now been pushed back again to September.

“As with most operators, I think we all agree that CASA has missed the mark in a lot of areas lately,” said Finn. “Continual deferrals and time extensions create uncertainty for operators. I do think the industry needs to help itself by improving maintenance and flight standards within rather than relying on CASA to be the watchdog.”

“Engagement is there but we’re not seeing the results Australian aviation needs. Having said that, there are some good industry people now taking on roles within CASA that will provide more understanding within CASA to the plight of everyday operators.”

Crook says the AHIA has been very proactive with CASA over the past year and has seen considerable improvements in communications between the two parties.

“Although things have gone slowly, the achievements that we have had have been considerable,” said Crook. “The Instrument Proficiency Check and Helicopter Flight Review requirements that were posted under the new regulations have been rationalised to reduce the number of hours pilots needed to do to keep their ratings and endorsements current with no negative impact on safety. Basically, it has gone back to where it was.”



Another issue was the proposed requirements for a firefighting endorsement. After a meeting between AHIA and the Aerial Application Association of Australia, CASA has issued an exemption detailing the pathway forward. CASA has also acknowledged 61,040 approvals for appropriately-experienced pilots to issue the firefighting endorsements and the renewal of aerial application ratings.

Crook estimates that those successes will save the industry millions of dollars every year.

“Particularly with the flight testing regime which has been a key area of concern to AHIA since the draft of Part 61, from Instrument Proficiency Checks on the bigger helicopters to Flight Reviews on single-engine pistons, the proposed number of tests required, with associated costs, was a potential disaster for the helicopter industry.”

Those wins have certainly helped AHIA build its reputation for working with the regulator and achieving results.

“When the new Part 61 was proposed, the AHIA sought legal advice on the options available to industry to avert potential threats,”

said Crook. “Options were limited due to the repeal of CAR 5, so the AHIA executive made the decision to take a cooperative and constructive approach to identify potential issues with Part 61 and assist CASA management with potential solutions. We are pleased with the efforts of all stakeholders, which have now established a model of negotiations and consultative processes for the future.”

Crook reports he and AHIA vice president Ray Cronin recently travelled to Canberra and had a “good discussion” with acting Director of Aviation Safety Shane Carmody, who reinforced his desire to have a good rapport and open communications with industry.

“They are listening to the industry and Shane has been very helpful and is wanting to assist tidy up Part 61 sooner than later,” said Crook. “The discussions we had with him were positive with regard to that and hopefully that continues until a new person is found and then hopefully that will continue with the new person.”

#### **The continual rise of the drone**

More than 688 unmanned operator’s certificates (UOC) are currently registered with CASA, a 37 per cent

ⓘ The AHIA has worked with CASA and the industry to rationalise the required number of Instrument Proficiency Checks on bigger helicopters. PAUL SADLER

increase on 12 months earlier. But with remotely piloted aircraft system (RPAS) – ie drones or UAVs – use on the rise many in the helicopter industry see them as a ‘complement’ to the helicopter rather than a replacement.

With an alarming 169 people drowning during the recent 2016-2017 surf patrol season around Australia, lifesavers are further embracing the rapid development and utilisation of RPAS to complement Australia’s fleet of dedicated surf rescue helicopters for beach patrols, shark detection and for saving lives.

The Westpac-sponsored Little Ripper Lifesaver RPAS, developed by The Ripper Group, has been trialling the technology at beaches along the NSW’s north coast since February 2016. Now able to carry a droppable pod containing a lifebuoy and shark shield into the water, Little Ripper now has 35 single and multi-rotor aircraft RPAS in its fleet and growing.

“This technology is designed to be another tool in the toolbox,” said Westpac Little Ripper operations director Ben Trollope. “We’ve got jet skis and we’ve got inflatable rescue boats which are good, but in large seas when people have to swim out it’s much quicker with a UAV. It gives

“**They are listening to the industry and Shane has been very helpful.**

PETER CROOK



people time in the water. It gives rescuers time to get out to them, but it also makes those people out there feel safe.”

In the world of TV news, some networks in the US have already done away with using helicopters for electronic news gathering (ENG) altogether due to their high operating costs and electing to obtain news footage from other cheaper sources such as drones and from the ever increasing millions of mobile phone cameras and ‘dash cams’ at very little cost or, in most cases, free.

In Australia, the Seven and Nine TV networks ended their own individual helicopter operations for ENG in September 2016 with the start of a combined national contract for shared helicopter news operations in Brisbane, Sydney, Melbourne, Adelaide and Perth. The ABC has also selected a single national provider of helicopter service, AusJet Helicopters, for its ENG operations in the same capital cities.

### Looking forward

The past 12 months has been a relatively mild year for the Australian helicopter industry with resource prices starting to edge higher, another busy bushfire season having just wrapped up and interest rates remaining at record lows.

“There’s still a bit of activity in the private sector – they’re still flying and the EMS sector is thriving,” said Crook. “But my personal opinion is it

Some ENG operators have chosen to do away with using helicopters altogether in favour of using other sources. PAUL SADLER

“  
The better times are coming, but the product needs to be in line with client expectation.”

AARON FINN

will take at least until the end of this year before there is any appreciable increase in helicopter activity. The increase in resource prices I think needs to be shown to have stabilised before we see anything substantial.”

This is a sentiment shared by Nurit, who said the Australian helicopter industry is healthy, with some growth expected in a few segments.

“This is a slow recovery and not a spike by any stretch of the imagination,” he said. “We do not foresee growth from the oil and gas segment at least until 2018, and even then, we may only see a slight uptick due to current market excess. We are still in the low side of the cycle, but that is coming off a high cycle that was extraordinary. We tend to agree with the predictions that show how 2015-2017 market trends are building a supply-side shortage in the 2019-2020 timeframe, which will cause the pendulum to swing back the other way.”

To help support the industry’s growth, the AHIA’s helicopter exposition and conference returns to the Sunshine Coast next May. On the back of a very successful event in 2016, Rotortech 2018 will again be held at the Novotel Twin Waters Resort from May 24-26.

“Rotortech 2014 and 2016 were great successes with last year’s event seeing almost twice the participation and exhibitor numbers than in 2014,” said Crook. “Rotortech 2018 is shaping

up to be even bigger still with more than 80 expressions of interest for exhibitor space already received. We are just coming up with potential keynote speakers at the moment and I think one of them, if we can get him, will be an absolute drawcard.”

Crook says the new format of running the event in 2018 across a Thursday to Saturday timeframe was at the request of delegates and exhibitors who would like to have an extra day of a working week with still a day to get home before starting the new working week.

“As a small volunteer executive, we do not have the manpower or skills to keep up with the growth of Rotortech,” said Crook. “We have just finalised a long-term sponsorship agreement with Industry Defence and Security Australia Limited (IDSAL), the exhibition and conference arm of Aerospace Maritime and Defence Foundation of Australia (AMDA), which has for many years run the very successful Australian International Airshow.”

With the numbers up, slightly, across most matrices and with the general mood across the industry being relatively positive but reserved, the next 12 months could certainly be the turning point for Australia’s helicopter industry to rise again to a more healthy and prosperous financial state.

“I think it will be steady in Australia in the next 12 months,” said D’Rozario. “There will be a few more oil and gas opportunities to come though. The same on the SAR and EMS side of things. If I’m looking for growth, then I’m looking at south-east Asia in a big way.”

Finn echoes the steady course for the industry, but says Australia’s ageing helicopter fleet, one of the oldest in the world, needs to be considered. “If we are to compete on the world stage we seriously need to look at fleet renewal and technological advancements. The better times are coming, but the product needs to be in line with client expectation.”

As for the AHIA, the year ahead will see further consultation with CASA to help ensure regulations remain in check and the health of the industry continues on its steady trend from gloom to boom.

“Hopefully by this time next year things will have improved and helicopter activity will have increased,” said Crook. “Time will tell I suppose.” **A**