One of the most significant Defence programs that will go to tender in 2011 is Air 9000 Phase 7, the procurement of a new Helicopter Aircrew Training System (HATS) to provide for the future rotary wing training needs of the Australian Defence Force. Under the HATS Project, the ADF will replace the Army Kiowa and Navy AS350BA Squirrel rotary wing training aircraft with an entirely new training system.

The Air 9000 Phase 7 Project has had a considerable history. First mooted in the DCP in 2004 as two separate projects, these were combined into the joint Navy / Army Air 9000 Phase 7 at First Pass in 2007.

The new Helicopter Aircrew Training System to be delivered under Air 9000 Phase 7 will form part of a new Joint Helicopter School (JHS), based at HMAS Albatross in Nowra. HATS will provide the toolset for ‘ab initio’ (or ‘from the beginning’) rotary wing Training System for all Navy and Army pilots and aircrew.

The system will include a fleet of new twin engine training helicopters, a suite of synthetic training devices and computer based training, ground instructors and, potentially, an Aviation Training Vessel, with the successful industry partner expected to support the Training System under a performance based contract. System life is estimated at 25 years from full operational capability.

When established, the new Joint Helicopter School (JHS) will train all Army pilots and loadmasters, as well as all Navy Pilots, Observers (now known as Maritime Aviation Warfare Officer), Aircrew and Sensor Operators. The Pilots will first graduate from the fixed wing pilot training (soon to be replaced under Project Air 5428) and receive their first taste of helicopter training at the JHS. The JHS will also support secondary missions, as well as Instructor Training Wing (ITW) for conversion training.

The establishment of the JHS will also bring to an end the venerable careers of the Bell Kiowa, the primary Army Aviation training aircraft, and the Navy AS350BA Squirrels. The step up for students from these single engine, analog aircraft into a
Training System based on a twin engine helicopter with modern avionics should result in improved training outcomes and reduce the training load on the operational aircraft types.

Raytheon Australia’s Commitment to Nowra

Over more than a decade Raytheon Australia has progressively established its pedigree in supporting rotary wing training, particularly for the Royal Australian Navy. It was in 1999 that the company first signed a Standing Offer to provide logistics and engineering support services to Navy helicopters based at HMAS Albatross in Nowra. From this foundation the company has demonstrated a steadfast commitment to Nowra. In 2006, Raytheon won the hotly competed ‘RMI’ Program and, since completion of phase in activities in 2007, the company has successfully provided three A109E light twin helicopters to Navy for 1500 flight hours per annum from its Nowra facilities.

This addition to the Raytheon Australia portfolio was followed in 2009, by the company’s success in securing the AS350BA (Squirrel) In Service Support Contract, where a performance based solution is provided to meet the operational and training needs of Navy’s fleet of 13 AS350BA training helicopters.

With these and other programs, Nowra has become home to more than 70 Raytheon staff — with plans to grow even further in coming years.

This association with Nowra adds to other elements of the company’s aerospace training pedigree which includes Hornet and Super Hornet training systems, electronic warfare training system and a range of relevant training programs in the United States and the United Kingdom.

Trusted Partners for Air 9000 Phase 7

In July 2010 Raytheon Australia announced that it had teamed with Bell Helicopter to bid for the Air 9000 Phase 7 HATS Program based on the team’s strong existing customer relationships, innovative training solutions and proud record of contract performance.

It was revealed that the team’s flying platform solution would be centred around the Bell 429, the most modern and cost effective light twin helicopter on the market today offering a substantial capability enhancement for rotary wing flying training and light utility support.

In announcing the teaming agreement, the Managing Director of Raytheon Australia, Michael Ward, emphasised the importance of a systems engineering approach to increase the effectiveness of rotary wing flying training. He also praised his new partner saying, ‘we at Raytheon Australia have drawn upon all of our experience and expertise gained through delivering helicopter support to the ADF to select Bell Helicopter as our partner for this program. Bell Helicopter has a well deserved reputation for delivering on their commitments and, as result, I believe that together we are well placed to become trusted partners of the ADF in this vital endeavour in force preparedness.’

Bell Helicopter has supported the ADF for over 50 years through the delivery and ongoing support to the Australian Army Kiowa, Huey and Sioux. With an unmatched reputation of quality and after sale support, Bell Helicopter has claimed the number one ranking in product support from Aviation International News magazine every year since the magazine began including helicopters in the poll in 2006. Bell Helicopter has also been rated as number one in Customer Service 16 years running by the Professional Pilot Magazine Annual Customer Satisfaction Survey.

The Bell 429 is the most modern light twin engine helicopter to enter the global aviation marketplace. As the only light twin helicopter fully certified to the latest crashworthiness standards, and with a large cockpit capable of handling the full range of ADF pilot candidates, the Bell 429 is well suited to the Air 9000 Phase 7 requirements.

With RFT release for Air 9000 Phase 7 due in the coming months, the forecast period for contract award is 2013–14. It is anticipated that the training system elements will then be delivered over the following two to three years with the JHS achieving full capability by 2020. The knowledge that the training system will then operate for 25 years emphasises the need for a trusted partnership and a trusted platform that will satisfy requirements all the way to 2045.
BELL 429

**Speeds at Maximum Gross Weight**

<table>
<thead>
<tr>
<th>Speeds at Maximum Gross Weight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vne</td>
<td>287 kph 155 kn</td>
</tr>
<tr>
<td>Vh Cruise</td>
<td>278 kph 150 kn</td>
</tr>
<tr>
<td>Range @ LRC Speed¹</td>
<td>754 km 407 nm</td>
</tr>
<tr>
<td>Maximum Endurance @ Loiter Speed¹</td>
<td>4.4 hrs</td>
</tr>
</tbody>
</table>

**Ceiling Altitudes**

<table>
<thead>
<tr>
<th>Ceiling Altitudes</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Ceiling (Pressure Altitude)</td>
<td>6,096 m 20,000 ft</td>
</tr>
<tr>
<td>Hover Ceiling IGE (Max GW, ISA)</td>
<td>4,307 m 14,132 ft</td>
</tr>
<tr>
<td>Hover Ceiling OGE (Max GW, ISA)</td>
<td>3,439 m 11,282 ft</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1+7</td>
</tr>
</tbody>
</table>

**Capacities**

<table>
<thead>
<tr>
<th>Capacities</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Fuel</td>
<td>821 liters 217 US gal</td>
</tr>
<tr>
<td>Auxiliary Fuel (Optional)</td>
<td>148 liters 39 US gal</td>
</tr>
<tr>
<td>Cabin Floor Space</td>
<td>3.04 m² 32.7 ft²</td>
</tr>
<tr>
<td>Total Cabin Volume (Including Aft Cabin)</td>
<td>5.78 m³ 204 ft³</td>
</tr>
<tr>
<td>Aft (Baggage) Compartment Volume</td>
<td>2.10 m³ 74 ft³</td>
</tr>
</tbody>
</table>

**Weights**

<table>
<thead>
<tr>
<th>Weights</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty Weight (Standard Configuration)</td>
<td>2,035 kg 4,487 lb</td>
</tr>
<tr>
<td>Useful Load (Internal, Standard Configuration)</td>
<td>1,140 kg 2,513 lb</td>
</tr>
<tr>
<td>Minimum Empty Weight</td>
<td>1,926 kg 4,247 lb</td>
</tr>
<tr>
<td>Max Useful Load (Internal, SPIFR)</td>
<td>1,249 kg 2,753 lb</td>
</tr>
<tr>
<td>Max Gross Weight (Internal)</td>
<td>3,175 kg 7,000 lb</td>
</tr>
<tr>
<td>Max Gross Weight (External Load)</td>
<td>3,402 kg 7,500 lb</td>
</tr>
<tr>
<td>Cargo Hook Capacity</td>
<td>1,361 kg 3,000 lb</td>
</tr>
</tbody>
</table>

**Powerplant**

<table>
<thead>
<tr>
<th>Powerplant</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Pratt &amp; Whitney Canada PW207D1</td>
<td>820 kW 1,100 shp</td>
</tr>
</tbody>
</table>

**Class-Leading Features**

- Certified to meet or exceed the latest airworthiness and occupant safety requirements from the FAA, TCAA and EASA
- Certified for Single Pilot IFR and all Category A profiles
- Certified to 6,096 m (20,000 ft) maximum operating altitude with operating temperatures from -40˚ to 51.7˚C (-40 to 125.06˚F)
- 1st helicopter with revolutionary MSG-3 Certified Maintenance Program
- Improved safety and maintenance efficiency, with significant items addressed at the system level
- Spacious intermediate size cabin offers the best value in its class, with pricing and DOCs comparable to smaller light twins
- Fully adjustable crew seats move fore and aft, up and down and include adjustable lumbar support
- Pedals easily adjust fore and aft; coupled with adjustable crew seats, the 429 accommodates pilots from 5 percentile female to 95 percentile male
- Versatile track-mounted seats allows cabin seating to be reconfigured or removed in just minutes for maximum utility
- Rear cabin doors slide aft, hugging the fuselage for easier hot loading and operation with doors open in flight
- Optional clamshell doors open with minimal effort and hug the fuselage for convenient operation in strong winds or while the aircraft is running
- Excellent fore and aft CG tolerance permits flexible load distribution, without the need for adding ballast
- Excellent lateral stability easily permits 272.1 kg (600 lbs) to be hoisted outside of the skid gear

---

¹ Max GW, ISA, Std Fuel – no reserve, @ 4,000ft (1,219 m)
² Standard Configuration includes:
- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake and Wire Strike Protection System
- ELT
- Pilot & Copilot seats
- 6 place Passenger Seating with 18.5" wide seats
- Standard Interior, Headliner panels and Carpet

3 Minimum SPIFR Configuration includes:
- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake and Wire Strike Protection System
- ELT
- Pilot seat

---

Bell Helicopter
A Textron Company