



STATE AIRCRAFT UNIT
VICTORIA

Annual Report

2006/07



31st August 2007

Our goal is to provide a “one stop shop” to clients for all aspects of coordination and management of aircraft and aircraft related resources and activities.

Our strategic priorities are:

- * Excellence in service delivery;
- * Continuous performance improvement;
- * Application of new and improved technologies; and
- * Professional development of employees.

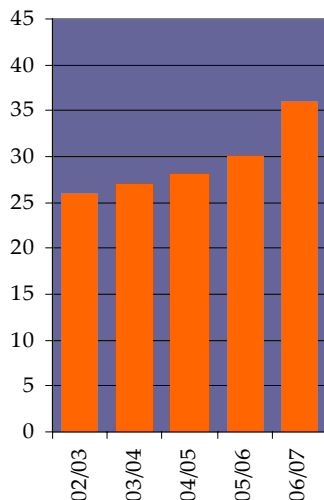
2006/07 Highlights

More than 1,000 fires were attended by the agencies and more than 1.2 million hectares of land was burnt as Victoria experienced a very adverse fire season. Lasting 69 days, the Great Divide fire campaign was the longest in Victoria’s fire history.

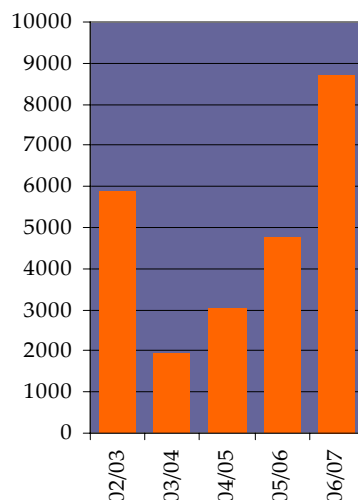
- * All 32 aircraft under long-term contracts were activated.
- * An additional 4 aircraft were contracted and activated for the season.
- * There were 1,415 dispatches recorded by the State Airdesk.
- * At 8,726 hours, the total annual aircraft flying hours were more than double the 10 year average.

- * During periods of peak demand up to 52 aircraft were simultaneously dispatched to incidents.
- * The State Airdesk facilitated the transport of more than 2,700 agency personnel by chartered fixed wing aircraft.
- * International aviation personnel assisted in Victorian fire suppression operations for the first time.
- * The SAU administered more than 75% of the \$39+ million expended through the Joint Agencies Aviation Programme.
- * Aircraft support was provided to the recent Gippsland floods.
- * The clients of the SAU continued to grow in number.
- * The first agency owned bulk refuelling tanker was successfully used throughout the fire season.
- * The new generation aerial incendiary machines were used operationally throughout an extensive prescribed burning program.
- * After 5 years of operation, the SAU was independently reviewed, with recommendations into the focus, direction and governance of the unit.

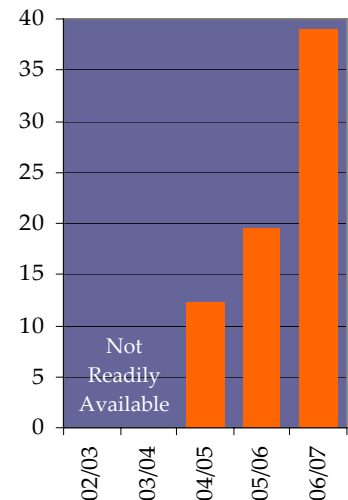
CONTRACT AIRCRAFT ACTIVATED



TOTAL HOURS FLOWN



TOTAL EXPENDITURE \$M



A Message from the Manager, State Aircraft Unit

The Joint Agencies Aviation Program (JAAP) embraces the aircraft and associated aviation service requirements of the Department of Sustainability and Environment (DSE), Country Fire Authority (CFA) and a number of strategic partners. The State Aircraft Unit (SAU) coordinates, manages and delivers a wide range of aviation related services on behalf of both DSE and CFA through the JAAP.

2006/07 has seen the SAU and JAAP challenged like never before. The number of aircraft activated, hours flown and incidents attended were at all time record levels. Expenditure on the aviation program in 2006/07 was in excess of \$39 million, nearly double that expended in 2005/06.

Significant aircraft activity commenced in September 2006 and continued unabated until April 2007. During this unseasonally long period, the program continued to deliver safe operations and enhance the fire suppression capability and effectiveness of ground based operations. Following the fire season, ideal weather conditions enabled the State to implement its prescribed burning program. This resulted in further large numbers of hours being flown on aerial incendiary operations as the State exceeded its 2006/07 burns targets.

Throughout this intense and extended period of operations the SAU and other relevant personnel worked tirelessly to deliver all aspects of the aviation program. A compressed procurement process, involving both State and National Fleet aircraft, combined with the early commencement of aircraft service periods, ensured the availability of necessary aircraft resources. Heavy pre-season training and briefing programs ensured the availability of suitably trained personnel. In January both the training and briefing programs were reactivated with the arrival of international

personnel to assist with fire suppression operations and regional personnel to assist on the State Airdesk. The support of all of these people at short notice is greatly appreciated.

The activities of the SAU in the past two years provide a benchmark for the way forward. It is clear that the role of the unit is changing and the JAAP is broadening to include support to a variety of "natural" emergencies such as Plague Locust control and more recently, the Gippsland floods. This broadening is anticipated to continue and an important challenge for the agencies and their strategic partners will be to ensure that the SAU is well resourced and placed to continue to fulfil their important operational role and meet the growing expectations of an increasingly diverse client base.

During 2006/07 the agencies conducted an internal review of the SAU. It is assumed that the outcomes from the review will reaffirm the future direction of the unit and establish a number of key initiatives to assist the future delivery of programs and the development and where appropriate, the application of new and improved technologies.

Finally, I wish to acknowledge the efforts of the SAU staff in leading a magnificent team of aviation professionals ranging from agency personnel to the pilots, engineers and other company officials. Our peers from other Australian States and Territories, as well as our international counterparts, are often impressed and always complimentary of the program, the results and most importantly the safety record of Victorian air operations.



Nick Ryan

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Service Delivery

Readiness and Response

Standards and Procedures

A review of the Air Operations Manual commenced during 2006/07 with the preparation of a scoping document that canvassed a new format for the document. Further work will be undertaken during 2007/08 to implement any agreed changes to the format of the standards and procedures contained in the manual. It is anticipated that the revised document will better service the broader, long-term interests of all parties to the Joint Agencies Aviation Program.

The SAU continued to provide expert advice on standards and procedures to various emergency and land management agencies, and the aviation industry. During the year the SAU worked closely with Parks Victoria in the development of their policy regarding Management of Aviation Activities. The SAU also worked with the Department of Primary Industries to prepare policies and procedures for aircraft usage relating to Australian Plague Locust outbreaks.

VicForests and the SAU have also been working towards the creation of procedures regarding aircraft usage in aerial seeding and coupe regeneration burning operations.

The SAU continued to be involved with the Australasian Fire Authorities Council (AFAC) and National Aerial Firefighting Centre (NAFC) in the progression of national aircraft management systems, standards and training materials.

Advice

The SAU continued to provide expert advice on a wide range of aviation and aviation related matters to its stakeholders and clients. Through this communication the SAU was able to further refine its procedures and services to ensure client expectations were met in a safer and more effective manner.

Advice was provided to CFA and DSE regarding aircraft preparedness for the fire season, and this continued throughout the year in support of regionally based agency staff.

Specialist advice and support was also given to interstate agencies involved in aircraft management, in particular the Country Fire Service, South Australia. This was in addition to the continued support and participation in improving the management of aircraft on a national basis, through NAFC.

The SAU website once again, proved an effective means of disseminating advice and information to our stakeholders and clients. Useful operational documents, aircraft fleet details, information on aviation industry reports and other topics, were all maintained on the web site throughout the year.

Seven briefing notes were issued during 2006/07, covering a range of topics. These documents were posted on the SAU website and distributed to accredited aviation personnel and operational managers.

Support to Aircraft Operators

Two pre season pilot and aviation industry briefings were conducted in November 2006. These briefings updated the industry on new developments in Victorian aerial firefighting management, and reiterated the critical importance of safety and operational procedures.

This information was reinforced in the Pilot Information and Cockpit Handbooks, which are updated annually and distributed to all State, National and CWN aircraft operators.

Fifteen aircraft companies supplied State and National Fleet aircraft services, through the SAU in 2006/07.

Service Delivery

Procurement

In 2006/07 all 32 aircraft under long-term contracts were activated, 2 more than last year. In addition, a further 4 aircraft were contracted for the 2006/07 season as the risk of fire increased (see Appendix 1 for details).

The 4 additional aircraft contracted were:

- * 2 x Type 1 helicopter services (via NAFC) - an Erickson Airplane S64E (Essendon) with a 7,500lt. bellytank and a Mil Mi-8MTV-1 (Traralgon) with a 4,500lt. underslung bucket;
- * 1 x Type 2 helicopter service (via NAFC) – a Bell UH-1H (Albury) with a 1,190lt. underslung bucket; and
- * 1 x Type 3 helicopter service (via NAFC) – a Bell 206L Long Ranger (Essendon) engaged as an air attack platform for the S64E based at Essendon.

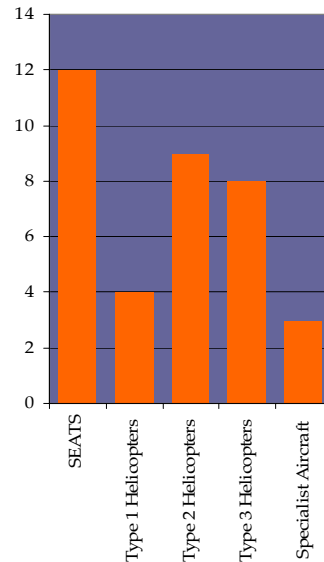
With the Bureau of Meteorology predicting a worse than normal fire season, and Victoria experiencing a greater number of fire incidents early in the season, the CFA and DSE agreed to commence aircraft services incrementally in October 2006, two months earlier than the previous year. See Appendix 2 for details of the 2006/07 Service Periods for individual contract aircraft.

The services of four tray trucks were engaged for the 2006/07 fire season, for the hot refuelling of aircraft. Accredited DSE crews are trained to undertake hot refuelling.

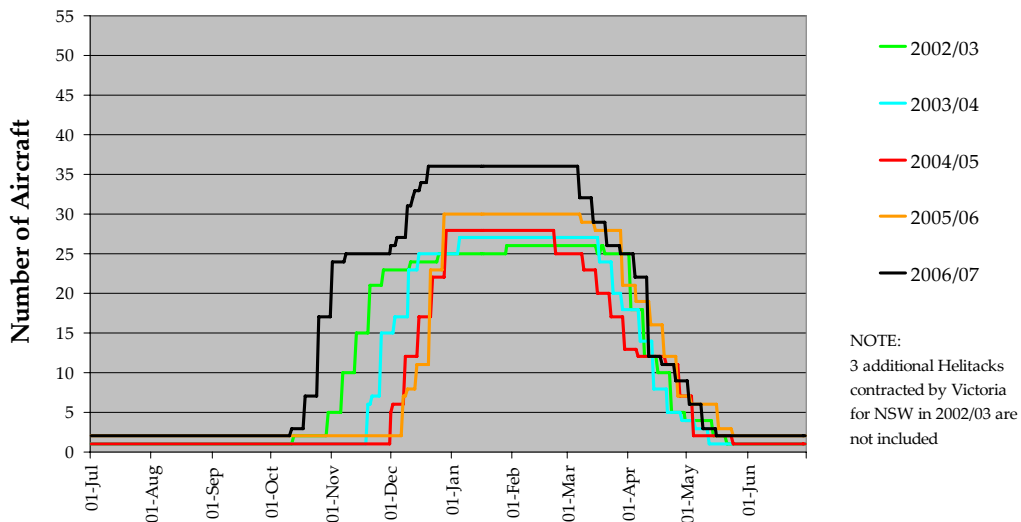
Procurement and construction of three 6,000-litre Jet A1 refuelling tankers commenced. Once completed, these tankers will be strategically positioned before the 2007/08 fire season.

The Call When Needed (CWN) Register contained 83 rotary wing aircraft and 221 fixed wing aircraft, during the 2006/07 year.

AIRCRAFT CONTRACTS ACTIVATED IN 2006/07



CONTRACT AIRCRAFT AVAILABILITY
Does not include "Call When Needed" or regional aircraft



Service Delivery

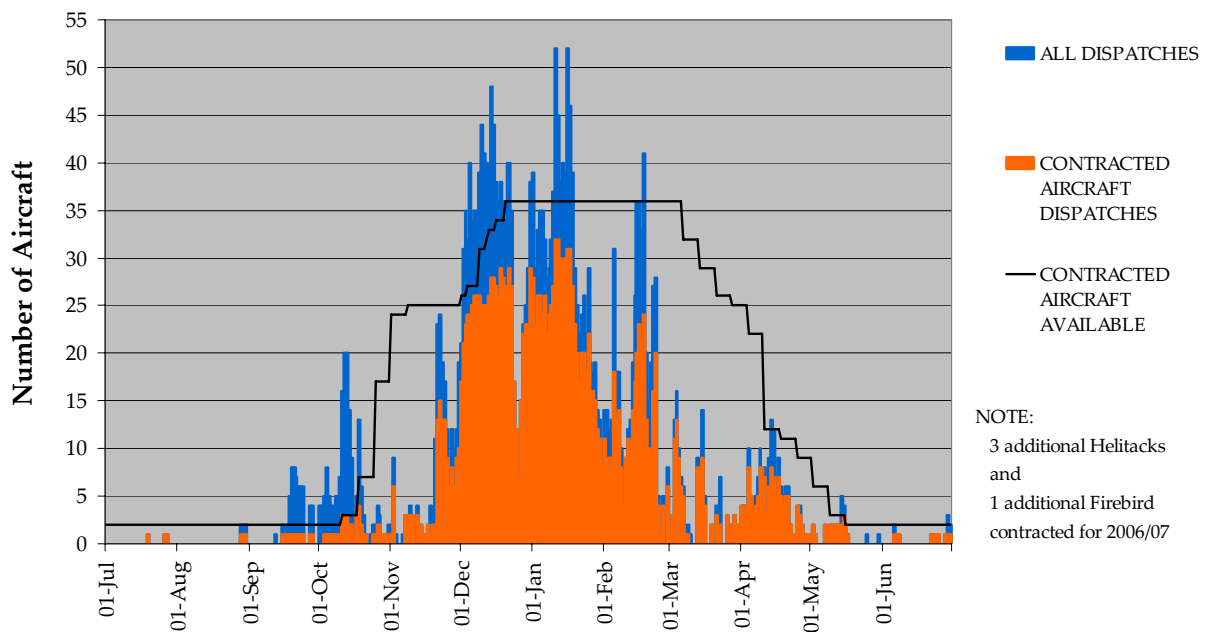
State Airdesk

The State Airdesk recorded 1,415 dispatches to 30 June 2007 inclusive. This included fire and other emergency incidents, prescribed burning operations, and other land management activities such as forest regeneration burning and seeding. The State Airdesk organised a large number of charter aircraft for crew transport during the Great Divide Complex fires. In addition, the SAU was responsible for the coordination of fixed wing passenger transport flights for the DPI Queensland Fruit Fly response. Notification by CFA and DSE Regions of deployments of light fixed wing reconnaissance and observation aircraft were also recorded and entered into the State Airdesk dispatch system.

During 2006/07 the State Airdesk increased the pool of staff available to carry out the role of Duty Aircraft Officer. Five regionally based aviation accredited CFA and DSE/PV staff worked for varying periods throughout January to March, not only enabling core State Airdesk personnel to have a break, but gaining an appreciation for the different issues that arose at a State level in comparison to an Incident Management Team level. In addition, four DSE staff members supported State Airdesk operations during high activity levels, performing a variety of tasks.

The State Airdesk was also staffed for the first time, by members of the international contingent during January and February 2007. Four United States aviation personnel filled the role of Duty Aircraft Officer as part of their rotation between central and regionally based incident management roles.

AIRCRAFT DISPATCHES IN 2006/07
Does not include "Firespotters" or all other regional aircraft



Service Delivery

Operations Overview

In 2006/07 the total aircraft flying time was 8,726 hours. This compares to the average over the past ten years of 3,614 hours. Flights arranged directly by regions for training and other operations are in addition to these times.

2006/07 also saw an increase in use from the previous year, of non-contract aircraft during peak periods and outside contract Service Periods to supplement available resources.

The aircraft flying times during 2006/07, excluding "Firespotters" and some regional aircraft, is indicated in the table below.

CFA and DSE both had their highest usage of aircraft in the past 10 years. Detailed aircraft usage figures are found in Appendix 3.

The following fires were the incidents during 2006/07 with the highest recorded aircraft usage, the majority starting in December 2006 and January 2007:

- Great Divide South Complex 2,026 hrs
- Great Divide North Complex 1,034 hrs
- DSE Mansfield Complex 376 hrs
- DSE Boulder Creek 346 hrs
- DSE Hermit Mountain 330 hrs
- CFA Region 23, Tatong 319 hrs



Helitack 348, a Sikorsky 61N with 3,400lt bucket

- DSE Heyfield Complex * 248 hrs
- DSE Coopers Creek 228 hrs
- DSE Ovens Complex * 151 hrs
- DSE Collier Gap Road 83 hrs

* Hours flown before the Great Divide Complexes were declared.

AGENCY FLYING TIMES					
Agency & Operation	2006/07	2005/06	2004/05	2003/04	2002/03
CFA – fire	736	609	187	207	462
CFA – training	3	1	5	23	9
Agreed strategic positioning (shared equally by CFA and DSE)	116	74	27	19	1
DSE – fire	6,748	2,516	1,717	968	4,648
DSE - training	198	192	245	179	182
DSE – burning & seeding / other works	546	375	656	550	582
PV – other works	109	0	0	0	0
DPI – locusts	0	812	0	0	0
VicForests – burning & seeding	198	137	168	0	0
SAU projects and programs (non-operational)	72	49	0	0	0
Victoria Total hours	8,726	4,765	3,005	1946	5,884

Does not include all flying times for aircraft arranged directly by regional staff for training and other operations. Does not include any flying time charged to interstate agencies.

Service Delivery

Smoke Management

As a result of the complexities associated with maintaining aggressive initial attack and still sustaining tactical support to ongoing fire operations during the 2002/03 Alpine fires, considerable effort was focussed on the ability to anticipate and avoid “smoked in” scenarios. Extensive consultation was undertaken with regional locations and the Bureau of Meteorology to provide solutions. At times this involved a considerable level of repositioning of aircraft resources to perimeter locations, to ensure access to clean air and maintain effective operations. The modelling was also applied to the transporting of firefighters across the state to support incidents and avoid lengthy delays.

Remote Area Access

During remote fire operations on many occasions extensive use was made of the passenger carrying capability of *Helitack 348* (a Sikorsky S61N). The ability to move large numbers of fire crew to various locations, enabled more than adequate response for resourcing of remote fire areas. Several extreme fire threat and isolation scenarios saw an unprecedented demand for the use of a large helicopter for the transporting of fire crews and personnel, however because of fire fighting commitments *Helitack 348* was unavailable. This necessitated the use of another large helicopter which was flown from Queensland, *SAR 376* (a Sikorsky S76) to assist the Great Divide Complex – South operations.

Airshows and Displays

As in previous years, the CFA had a Type 2 firebombing helicopter positioned at Avalon for the International Airshow in March 2007. *Helitack 335* was based on site for immediate fire response and then repositioned back to Essendon for the remainder of the Airshow. *Helitack 332* attended a CFA training day at Dookie demonstrating the usage of a floating collar tank.

Flood Response

During the Gippsland flood event that began at the end of June 2007, the SAU supported the SES, CFA, DSE, OESC and Vic Roads by arranging aircraft for a variety of operations. From shifting sandbags, to Ministerial and operational reconnaissance, and transporting crews to repair damaged infrastructure, aircraft were a critical tool in assisting ground crews with this massive incident.

Airborne Infra Red Services

The complexity and extent of fire operations during 2006/07 combined with an in flight loss of control of *Firescan 300* on the 11th December 2006 and the lack of availability of the second linescanning aircraft *Firescan 350* until 20th December 2006 placed extraordinary pressure on the provision of airborne infra red services.

The two Firescan aircraft were deployed on 78 separate missions covering 108 different incidents flying more than 37,000 nautical miles.

Firescan 300 continues to be unavailable for service following the incident in December.

In addition, a new surveillance aircraft with infra red capability and operated by the Australian Maritime Search and Rescue was used during 2006/07 to provide Victoria with a greater infra red scanning capability.

A significant amount of work was undertaken by the helicopter mounted FLIR units during the Great Divide Complex of fires. This reduced the availability of Type 3 helicopters and first attack support capability for FLIR operations elsewhere across the State. To overcome this shortfall, one Type 3 helicopter was engaged from a CWN operator to provide a dedicated but limited infra red and mapping service to the Great Divide Complex – North. This provided greater flexibility for FLIR operations and first attach support elsewhere across the State.

Service Delivery

Call When Needed Resources

The Call When Needed (CWN) Register contained up to 83 rotary wing aircraft and 221 fixed wing aircraft, during 2006/07.

Early in the season, a large number of CWN aircraft were engaged to assist with aviation related training and the DSE prescribed burning program.

During September, there was a peak in fire activity in the north west of the State and the availability of contracted firebombing aircraft was limited. This resulted in two Type 3 helicopters being utilised for firebombing operations with underslung buckets, rather than their normal air attack supervision and reconnaissance roles.

The use of CWN aircraft escalated through the peak of the fire season, with more than 20 aircraft from the register being simultaneously engaged on operations across the State, in addition to the aircraft under contract. A considerable number of these aircraft have high levels of equipment fitted and were engaged on short term agreements to guarantee a continued service.

One CWN Type 3 helicopter (*Firebird 308*), fitted with a recently developed and revolutionary collapsible bellytank, was approved and subsequently engaged by the SAU to provide a short term initial attack firebombing service and to supplement operations on the Great Divide Complex fires.

Land Management Operations

Following on from an initial low key operation in 2005/06, the SAU provided technical and aircraft support to the DSE Arthur Rylah Institute's wild dog monitoring program. Most of the support for the expanded program was managed and provided during the Great Divide fire campaign. The use of one Type 3 helicopter in the remote areas of DSE's North East and Gippsland Regions allowed the program to be conducted with a high level of efficiency.

Parks Victoria continued to utilise Type 3 helicopters for their annual kangaroo counting program in the Mallee area, and expanded the use of helicopters for aerial surveys of remote areas looking for wild horse activity.

Passenger Transport Operations

During 2006/07 the State Airdesk facilitated the movement of the largest number of personnel since the 2002/03 Alpine fires.

More than 2,700 CFA and DSE personnel were transported during the Great Divide campaign fire with a peak of 209 people being transported in one day in mid January 2007. In addition, there were a number of Airdesk approved ad-hoc movements undertaken in regions by the agencies. The Airdesk also organised the transport of more than 80 CFA personnel to NSW in early December 2006, as part of the assistance provided by CFA to the Rural Fire Service NSW.

Although the use of chartered aircraft to transport personnel is now routinely used by both CFA and DSE, it continues to provide many choices and challenges.

Air transport is often very efficient, but in certain circumstances difficult to facilitate because of the limited infrastructure available at some airports and/or the ability for the aircraft to safely land and take off carrying the desired number of passengers. Air transport can also be impacted on by inclement weather and wildfire smoke which can lead to protracted waiting periods and the last minute alteration of departure points and destinations. All of these difficulties were experienced at times during 2006/07.

Road transport is usually less expensive, but slower than air transport. This has the potential to reduce the availability time of personnel and contribute to fire fighter fatigue and frustration if the period of absence from family and work is prolonged. The SAU continues to advise the agencies on a case by case basis.

Service Delivery

Programs

Rappel and Hover Exit Programs

The SAU manages the rappel and hover exit programs on behalf of DSE.

During the 2006/07 season there were 53 rappel deployments of crews within Victoria.

This is the most deployments of rappel crews since the Caledonia fire in the 1997/98 season and the second highest since the program commenced in 1985.

The season was arguably the most challenging, with snow and fires disrupting training at Mt Buller and within 2 weeks, all crews deployed into what was considered one of the biggest fire campaigns since 1939.

Crews worked geographically over a larger area of Victoria this season, than during the Alpine fires of the 2002/03 fire season.

In early December 2006, due to the severity of the season and potential for increased use of rappellers, assistance for additional experienced rappellers was requested from the British Columbia rappel program – Rapattack. Nine rappellers arrived with the BC contingent in early January 2007, and received conversion training - something never attempted before.

Nearly 3,800 rappel descents were conducted for the season (compared to 2,900 for last season). These totals include initial tower and helicopter training, currency and fire operations.



DSE rappel crews at training, Mt Buller

Service Delivery

National Aerial Firefighting Program

In the 2006/07 year, the Commonwealth Government, through NAFC, allocated \$1,880,000 to Victoria for the procurement of aircraft resources. The Commonwealth funds went towards the standing charges of a select number of aircraft up to a maximum of 50% of the total cost. The State provided the additional standing costs and all operating costs.

The SAU continued to provide support to the Victorian Director on the NAFC Board and Victorian Delegate.

The SAU also provide support to the national program, by compiling the national call sign register of firefighting aircraft on behalf of the member states and territories. This register is continually updated and submitted to Airservices Australia (ASA).

Victoria also had a representative on the NAFC study tour of the United States of America, Canada and France. The report from the study tour is available through NAFC.



Helitack 269, a Kaman Kmax Type 2 firebombing helicopter, part of the national aerial firefighting resource.

Service Delivery

SAU Training Program

In 2006/07 the SAU training program delivered a wide range of aviation related courses to a variety of participants at Bendigo, Mangalore Airport, Mt Buller, Point Cook Airfield and the DSE North Altona depot.

A number of the aerial driptorch operators were reaccredited via on-the-job assessments.

In addition, the SAU facilitated Crew Resource Management and "Working in the Wire Environment" training for CFA and DSE/DPI/PV operational flight personnel, using external trainers.

The list of courses delivered and facilitated by the SAU during 2006/07 on behalf of CFA and DSE is contained in Appendix 4.

Organisations represented at the training courses were:

- * CFA
- * DSE
- * Department of Primary Industries, Victoria
- * Parks Victoria
- * VicForests
- * Department of Environment & Heritage, South Australia
- * Country Fire Service, South Australia

To accommodate the predicted severe fire season, the SAU scheduled agency pre season briefings prior to the end of October. To make the briefings more accessible and relevant to the target audience the SAU split the format for the briefings into three sessions. A separate morning and evening session were designed to provide information and raise awareness of aircraft safety, aircraft management and aircraft types and capabilities. These sessions also aimed to provide a forum for field staff, volunteers and other IMT members with an existing basic knowledge of aircraft safety, awareness and an understanding of operations.

An afternoon session covering specific and detailed aircraft management issues was designed specifically for accredited air operations personnel, DSE Managers Fire, CFA Operations Managers, DSE Fire Management Officers and CFA Operations Officers. Pre-season briefings were scheduled for 8 regional locations although several were ultimately cancelled due to a lack of attendance.

State Fleet and regionally based light fixed wing aircraft, were involved in the many regional recurrency days held this year at the following locations:

- * Ballarat
- * Bendigo
- * Guilford airstrip
- * Horsham
- * Linga Firebombing Base
- * Little Desert
- * Stawell
- * Victoria Valley Firebombing Base
- * Wangaratta

These training days provided an opportunity for accredited aviation personnel to maintain currency in safe aircraft practices, airbase management, radio communication procedures and tactical response operations in a controlled manner.

The SAU Training Officer was also given the opportunity to attend a Birddog course in British Columbia, Canada this year. A report of this experience will be made available on the SAU website when completed.

Support to Agency Training Programs

The SAU contributed to a variety of CFA and DSE training and accreditation courses, delivering the aviation related modules.

Service Delivery

Partnerships

Stakeholders

Since its inception, the SAU has evolved beyond meeting the needs of just the Victorian fire agencies. With an ever widening range of stakeholders, the SAU is in a key position to provide expert advice across many fire, land and emergency management operations. The SAU has maintained supply agreements between DSE and CFA, DSE and Melbourne Water, and DSE and VicForests, for the provision of aircraft resources. The SAU has also examined the potential application of aircraft and aviation related systems for use by the agencies.

As always, the SAU welcomes feedback and input into ways of improving service delivery to its clients.

Interstate Relationships

Through its participation in the Wildfire Aviation Technical Group, the SAU maintains a strong network with relevant aviation specialists in other States and Territories.

International Relationships

The SAU maintains strong relationships with a variety of international agencies. These networks proved invaluable in December 2006, when Victoria requested the assistance of specialist personnel for incident response from Canada, New Zealand and the United States of America. Rappel crews from Canada enhanced the existing Victorian rappel capability, allowing for greater use of these highly specialised teams across a wider area of the state. An experienced Air Operations Manager came from New Zealand and worked in the Integrated Fire Agency Coordination Centre (IFACC) for the Great Divide Complex - South. The USA provided a specialist crew to assist with the infra red linescanning service, as well as accredited aviation personnel for incident management teams.



Helitack 231, a Bell UH-1H with underslung bucket, working at Buxton, January 2007

Continuous Performance Improvement

Audits

The SAU conducts audits of aircraft contractors to verify information provided in tenders and to ensure the ability of contractors to meet contract conditions. These comprehensive organisational audits are conducted with the assistance of an independent aviation auditor.

In 2006/07, the following audits were completed:

- 5 organisational audits,
- 17 State and National Fleet aircraft compliance audits; and
- 20 Call When Needed aircraft compliance audits.

Contract Company Audits

The aim of the SAU Audit Plan is to conduct a minimum of three company audits during each financial year. A total of four were conducted in 2006/07 by a specialist external organisation, two were facilitated during a process of Contract Service reassignment and the other two were subject to the Audit Plan. The process has proven to be an invaluable development process for both the SAU and aircraft contractors with improvements being made in service delivery.

Contract Aircraft Compliance Audits

For the first time in many years the SAU was unable to complete the aircraft compliance audits on the total State and National Fleet aircraft this season, due to the high level of incident response. Of the 36 aircraft services engaged, only 17 were completed. The lack of capability to complete the compliance process on some services, was reflected in the Aircheck process and problems associated with aircraft serviceability during operations.

Call When Needed Aircraft Compliance Audits

Early in the year the SAU recognised that potential for risk exposure within the CWN fleet of light fixed wing aircraft, given the high proportion of accredited agency personnel undertaking extensive detection and reconnaissance flights with regionally engaged CWN aircraft.

The opportunity became available during this year to undertake compliance audits on several regionally based CWN aircraft. As a result of the process, some aircraft were temporarily stood down from operational availability for non compliance with the minimum standard specifications. The SAU was disappointed and dissatisfied with the result including the lack of cooperation in rectifying the issues. As a result, the SAU considers that an ongoing CWN audit program is a high priority to eliminate potential risks to the high numbers of agency personnel who could be at risk.

Continuous Performance Improvement

Aviation Occurrences and Fireline Incidents

As a result of an aggressive briefing and information program through the training programs, pre season briefings and the mandatory reporting of any aviation occurrences and aviation related fireline incidents, there has been an unprecedented increase in the number of matters being formally reported to the SAU. The SAU has recognised that many of the matters identified have also occurred in previous years but there has been no access to a formal reporting process and the awareness and knowledge of these matters has only been known anecdotally.

Only a small number of the occurrences and aviation related fireline incidents have been investigated and completed. By the completion of the season there were in excess of 30 reported matters which are still required to be resolved.

The small numbers of reports that have been completed indicate distinct trends in some particular aspects of aircraft operations. As a result the SAU has already implemented some changes in procedural areas and is developing a strategy to address many other matters.

The following are extracts from the investigation process administered by the SAU:

Aviation Occurrences in 2006/07

In flight uncontrolled descent

Mt Beauty, Victoria, Australia

10th December 2006

During fire operations on Sunday 10th of December 2006, Firescan 300 (VH-CWE) a King Air 200 was conducting scanning operations on significant fire activity in the Mt. Beauty area. During the mission the visibility decreased and turbulence increased.

The pilot of the aircraft turned away from the turbulent area to find smooth air and the aircraft encountered severe turbulence and began to descend rapidly.

The pilot regained control of the aircraft and flew the aircraft back to Essendon Airport. The aircraft was inspected and it was found that the airframe had sustained damage during the uncontrolled descent, and was subsequently stood down from service. It is reported that no injuries were sustained by the pilot or the two agency aircrew. The occurrence is currently subject to an ongoing investigation.

Runway overrun during landing

Bairnsdale, Victoria, Australia

5th January 2007

On Monday 5th of January 2007, a commercial passenger carrying aircraft, a Piper Cheyenne (VH-NMA) overran a runway during a landing procedure. The aircraft was engaged to transport firefighters from their home location to the Bairnsdale Airport during fire operations. The aircraft sustained undercarriage and propeller damage. It is reported that the aircrew and passengers sustained no injuries. The occurrence is currently subject to an ongoing investigation.

Continuous Performance Improvement

Blade strike- single return wire

Tatong, Victoria, Australia

12th January 2007

At approximately 1315 on 12th of January 2007, Helitack 332 (VH-LHL) a Bell 212 helicopter sustained a wire strike whilst conducting firebombing operations near Molyullah. It was found that the aircraft had struck a single return wire suspended from two ridges across a valley. The pilot, who was the only occupant, was uninjured and he landed the aircraft a short time later. No further damage was incurred. Although the occurrence was not investigated by the SAU, it was comprehensively investigated by the helicopter company to a standard that exceeded the requirements of the SAU. The immediate cause of the occurrence was that the pilot failed to see the obstruction in sufficient time to carry out an avoiding action.

Blade strike - trees

Mt Baw Baw, Victoria, Australia

7th May 2007

Between 1530 and 1600 hrs on the 7th of May 2007, Firebird 307 (VH-BHF) a Bell 206L helicopter, sustained significant main rotor and drive train damage after striking several trees after take off from a remote landing site. The occurrence is currently subject to an ongoing investigation.

Aviation Related Fireline Incidents in 2006/07

Airspace management

A review of the listed reports received by the SAU indicates that a high level of risk is being experienced at fire operations with the failure of aircraft to maintain separation. An example of this is when agency engaged aircraft not dispatched to an actual fire incident, fly in the vicinity of the incident to have a look, where incident acquired aircraft are working in close proximity. Other examples relate to fixed wing and rotary wing reconnaissance aircraft compromising

separation when working in close proximity with each other on fire incidents together.

Fire fighting operations

Apart from the reported blade wire strike occurrence, only a small number of incidents were reported during tactical fire operations. On one occasion a Type 3 helicopter had an underslung bucket catch on a floating collar tank during an insertion procedure with no damage or injury sustained, and on another occasion a SEAT sustained a blown tyre during a landing procedure, forcing the closure of the landing strip for a period of time. No injuries were sustained.

Aircraft serviceability

Surprisingly, the SAU received a high number of reports of aircraft malfunction and serviceability during operations related to the transport of firefighters by light fixed wing charter aircraft during the season. Some of the issues that occurred related to landing gear malfunctions, loose engine cowlings, oil leaks and inability to start aircraft.

Fireline incidents

Although there was one reported incident where fireline personnel were caught in an aircraft drop zone, it was refreshing to note the reduction of other similar incidents. This has been attributed to a positive awareness program developed as a result of a high number of fireline incidences in the previous season, and subsequently presented in training and pre season briefings for personnel when working on the fireline in the vicinity of aircraft.

Continuous Performance Improvement

Reports on Services and Operations

AAS Reports

Collation and analysis of Air Attack Supervisor (AAS) Operational Reports by the SAU continued throughout the 2006/07 fire season, raising the total number of submitted reports to 488. The enhanced program, now in its fourth year, contributes to the continuous performance improvement of decision making, policies and procedures in regard to aerial fire fighting issues by:

- improving modelling integrity;
- providing data for ongoing development and enhancement of key decision-support tools; and
- providing ongoing appraisal of performance efficiency and effectiveness of Victorian aerial fire fighting resources.

With all AAS Operational Reports since December 26th 2003 now held in an electronic database, analysis is undertaken to identify and react to trends across a wide variety of fire types and sizes.

These trends are examined and considered when updating aviation training courses, and contribute to the strategic decision making processes involving aircraft and aviation related resources.

Preliminary analysis of the 2006/07 and previous operational reports indicate that:

- * Twice the number of reports were submitted this season (238), compared to the 2005/06 season (119).
- * During the past four fire seasons, rotary wing aircraft were used as AAS platforms for 70% (347) of reported AAS deployments.
- * Ovens and Wangaratta were the most frequently used AAS departure locations during the 2006/07 season.
- * The average time for an AAS to become airborne was 9 minutes on extreme FFDI days, and 21 minutes on very high FFDI days.

- * The average flight time for an AAS to reach an incident was 25 minutes on both extreme and very high FFDI days.
- * The average time that an AAS spends over a fire was 3hrs and 22 minutes on extreme FFDI days, and 3hrs 25 minutes on very high FFDI days.

Performance Management Program (AIRCHECK)

The performance management program (AIRCHECK) provides feedback to the State and to aircraft contractors as to the service being delivered and the standard of that service.

At the conclusion of each mission the lead agency representative involved in each operation completes an AIRCHECK report covering technical, service delivery and pilot performance.

In 2006/07 29 contract services achieved an average of 94.88% of the performance requirements under AIRCHECK. This was an improvement on the 2005/06 year (94.33%), a significant achievement by aircraft operators given the greater use of aircraft during this year.

Post Season Contractor Debriefs

The SAU conducted a total of 13 contract aircraft operator debriefs at the conclusion of the fire season. Apart from the Victorian based aircraft, the SAU conducted a debrief process with the nationally supplied aircraft as well. This process has provided valuable feedback to the SAU to help improve operational management and support during fire operations for the CFA, DSE and the SAU.

Continuous Performance Improvement

Bushfire CRC

The SAU continued its ongoing and significant commitment to the Bushfire CRC. In 2006/07 the SAU contribution included the provision of substantial amounts of technical data and information in relation to contracted aircraft usage during the fire season, and operational evaluations of suppressants and aircraft systems.

Prior to the commencement of the fire season the SAU provided a forum, through the pre season briefings, for the CRC to provide feedback to agency aviation personnel on information the CRC had collected from the SAU Air Attack Supervisor Reports.

Due to the complexity and severity of the fire season, the ability of the SAU to conduct continued field assessment and case studies of wildfire operations which would normally be undertaken, was restricted.



Air Tractor 802 working at Mt Buller, January 2007

Application of New and Improved Technologies

Research on Emerging Technologies

Aircraft Delivery Systems Program

Prior to the commencement of the fire season the Aircraft Delivery Systems Program (ADSP) conducted continuing evaluation on the effectiveness of foam delivered by fixed wing aircraft with the enthusiastic assistance of field staff from the DSE Bacchus Marsh and Ovens Fire Districts. The evaluation was linked to the infra red trials conducted in 2005. The evaluation will continue with further trials towards the end 2007. As a result of the trials, the understanding of foam and its properties and subsequent application has resulted in an increased effectiveness.

The extended duration of the fire season and the availability of both fixed and rotary wing contracted aircraft, presented an opportunity for the ADSP to evaluate one helicopter and five fixed wing aircraft delivery systems. In addition to the contracted aircraft, the ADSP completed a formal evaluation of the Helitack 1200® collapsible belly tank which operated on fires during the season attached to a CWN Type 3 helicopter.



Conair 92 delivery system

The ADSP also took the opportunity to conduct an evaluation of an additional helicopter belly tank which was attached to a NAFC/South Australian Contract aircraft.

The ADSP established a formal long term partnership with the City of Ballarat to utilise several open field sites within the Ballarat Airport environs, including access to suitable water sources to conduct the evaluations. The preparation of the drop sites and the collection of data were conducted by the operational and field staff of the DSE Vickers Street depot.



Wood designed delivery system

Although conducted in a controlled environment, the preliminary results indicate that the systems have the capacity to provide consistent positive results and with modification to the application process, can be used in a variety of fire and vegetation scenarios and achieve a high level of effectiveness. The evaluation process this year has indicated that the Conair 92 belly tank has some exceptional enhanced attributes for use in Victoria.

The ADSP also participated in an evaluation process of a fixed wing delivery system in Orange with the Rural Fire Service, New South Wales (RFS NSW).

Application of New and Improved Technologies

The ADSP has continued its ongoing commitment to provide expert information and assistance to Australian and overseas delivery system manufacturers, interstate and international fire agencies and authorities, including the Country Fire Service South Australia, RFS NSW, NAFC Aust., British Columbia Forest Service Canada, Bureau of Land Management, Forest Service USA and a new partner Securite Civile, France.

Firebombing Aircraft

With the severity and extent of the fire situation across the State and the deployment of available aircraft resources, many interstate and international commercial aircraft providers, which had an interest in aerial fire fighting, recognised an opportunity to market their services within Victoria and interstate as well.

A lot of the aircraft combinations being marketed were untried and not fully proven and required investigation and evaluation. Many of the combinations were impractical, however two very significant resources were recognised as having potential and extensive research and evaluation was conducted into the feasibility of two new aircraft combinations. The two aircraft reviewed were former commercial airliners reconfigured as high capacity airtankers, one a Boeing 747 fitted with a 91,200lt. (24,000-US gallons) pressurised drop internal tank system and the other a DC-10 fitted with an externally attached gravity drop tank system with a 45,600 Lt. (12,000-US gallons) capacity. The review reports are in draft form and once completed, will inform the strategic aircraft fleet decision making process.



Helitack FT2100B3 delivery system

Application of New and Improved Technologies

Development and Maintenance

The following are several projects and items of equipment that have been managed and/or developed by the Aviation Equipment Group this year:

New Generation Aerial Incendiary Machines

The SAU identified in 2005, the need to replace existing aerial incendiary machines. Two prototype machines were evaluated during 2005/06. These were the Arlos machine from Arlos Engineering, Victoria and the Raindance R2 machine from Skyworx Aviation, WA.

The Arlos machine completed operational trials during 2005/06 and additional machines were purchased for the 2006/07 fire and prescribed burning season. The Arlos machines operated a total of 77 flight days and dropped 193,000 capsules.

The Raindance R2 unit was operationally trialled during the prescribed burning season, flying for 5 days and dropping 14,750 capsules.

Communications Facilities

Two airfield communications caravans were constructed and will be based at DSE Equipment Development Centre and Bacchus Marsh.

State Aviation Refuelling Support

Following the success of the 6,000lt Jet A1 refuelling tanker positioned at Benalla, a further three units have been completed and will be based at Heyfield, Lysterfield and Colac for the 2007/08 fire season.

Firebombing Airbase Upgrades

A new eductor retardant mixing facility was completed at Stawell airfield and resurfacing of the Victoria Valley airstrip was completed.

The transition of the Delatite firebombing facility and its reconstruction at Walsh's airstrip, Mansfield has commenced and will be completed for the 2007/08 season.

Mobile eductor mixers were constructed at the DSE Equipment Development Centre and were located at Casterton, Bairnsdale and Latrobe Valley. Construction of a further two units for Alexandra and Bairnsdale has commenced.

SAU Business Management

Governance

The SAU is governed by:

SAU Steering Committee, comprising

- * DSE Chief Officer, Fire & Emergency Management (Chair);
- * CFA Chief Officer; and
- * Emergency Services Commissioner.

and the

SAU Implementation Committee,

comprising

- * CFA Manager State Operations (Chair);
- * DSE Assistant Chief Officer, Operations Support; and
- * Manager, State Aircraft Unit.

Functional Structure

The SAU reports to the CFA Chief Officer and DSE Chief Officer, Fire and Emergency Management. The SAU is responsible for the operation of the State Airdesk, the aircraft fleet coordination and dispatch function of the unit.



Operational Structure

In 2006/07 both CFA and DSE provided the staff for the SAU.

The Manager, SAU is responsible for the day-to-day operation of the SAU and the delivering against the SAU Strategic Plan and SAU Business Plan.

Staff within the SAU are delegated roles and responsibilities broadly in line with the objectives contained in the Strategic Plan and Business Plan

CFA and DSE provide administrative support to the relevant agency staff, as appropriate.



SAU Business Management

Report on Activities

During 2006/07 the SAU produced a number of ad hoc reports on activities and operations. The information contained in these reports was used, among a number of things, for procurements, equipment upgrades, budget submissions and to underpin advice to the agencies, stakeholders and service users.

SAU Review

The CFA and DSE commissioned a review of the SAU during 2006/07, to assist in assessing the focus, direction and governance of the unit after the first 5 years of operation. The consultant, Forest Strategy Pty. Ltd., considered a range of views from various stakeholders of the SAU and delivered a report to the joint parent agencies in March 2007. The report and recommendations are currently under consideration.

Marketing

The SAU commissioned the development of new logos to promote the State Aircraft Unit business and State Airdesk operations. This badging reaffirms the joint nature of aviation management between CFA, DSE and their partner agencies.



SAU Business Management

Financial Summary

This financial summary covers the SAU as an entity of CFA and DSE.

	2006/07 \$'000	2005/06 \$'000	2004/05 \$'000
Revenue			
Revenue from Commonwealth Government	1,880	1,880	2,013
Recurrent Revenue from State Government	6,751	6,637	5,816
Revenue from other parties (Melbourne Water, VicForests, Parks Victoria)	770	512	430
Additional Revenue from State Government	29,501	11,960	
Total funding	38,902	20,989	8,259
Expenditure			
Aircraft Standing Charges			(8,804)
CFA	(6,468)	(3,569)	
DSE	(9,006)	(6,999)	
DPI	(-)	(92)	
PV	(10)	(17)	
VF	(54)	(30)	
Aircraft Operating Charges			(2,235)
CFA	(3,450)	(1,834)	
DSE	(12,489)	(4,591)	
DPI	(76)	(1,181)	
PV	(111)	(110)	
VF	(199)	(156)	
SAU Business and State Airdesk Operating Charges	(1,518)	(1,034)	(107)
Other Agency Operating Charges*	(5,521)	(1,376)	(1,186)
Total expenditure	(38,902)	(20,989)	(12,332)

* includes aviation fuel, fuel truck hire, retardant and foam

Appendix 1: State Fleet and National Fleet aircraft for 2006/07

Aircraft Callsign	Type	Nominated Base	Firebombing system (Full capacity)
Type 1 Helicopters			
Helitack 341 *	Aircrane S64F	Essendon	9500 litre Belly Tank
Helitack 342 *	Aircrane S64E	Essendon	7500 litre Belly Tank
Helitack 348 *	Sikorsky 61N	Mansfield	3400 litre Bucket
Helitack 349 *	Mil Mi-8MTV-1	Latrobe Valley	4600 litre Bucket
Type 2 & 3 Firebombing Helicopters			
Helitack 331	Bell 412	Moorabbin	1400 litre Belly Tank
Helitack 332	Bell 212	Benalla	1400 litre Belly Tank
Helitack 333	Bell 212	Heyfield	1400 litre Belly Tank
Helitack 334	BK117B2	Bacchus Marsh	1200 litre Belly Tank
Helitack 335	Bell 205	Colac	1400 litre Belly Tank
Helitack 345	Bell 212	Olinda	1350 litre Belly Tank
Helitack 346 *	Bell 212	Essendon	1400 litre Belly Tank
Helitack 347 *	Bell 212	Essendon	1400 litre Belly Tank
Helitack 231 *	Bell UH-1H	Albury	1190 litre Bucket
Type 3 Helicopters			
Firebird 301	Bell 206B3 JetRanger	Horsham	410 litre Bucket
Firebird 302	AS350B2 Squirrel	Moorabbin	500 litre Bucket
Firebird 303	Bell 206B3 JetRanger	Ovens (Myrtleford)	410 litre Bucket
Firebird 304	AS350BA Squirrel	Bairnsdale	500 litre Bucket
Firebird 305	Bell 206B3 JetRanger	Bendigo	410 litre Bucket
Firebird 306	AS350BA Squirrel	Essendon	410 litre Bucket
Firebird 307	Bell 206L LongRanger	Essendon	500 litre Bucket
Firebird 309 *	Bell 206L LongRanger	Essendon	500 litre Bucket
Single Engine Air Tankers (SEATS)			
Bomber 351	AT802F	Stawell	3200 litre Hopper
Bomber 352	PZL M18A Dromader	Portland	2500 litre Hopper
Bomber 353	PZL M18A Dromader	Hamilton	2500 litre Hopper
Bomber 354	AT802F	Albury	3200 litre Hopper
Bomber 355	PZL M18A Dromader	Bairnsdale	2500 litre Hopper
Bomber 356	AT802F	Albury	3200 litre Hopper
Bomber 357	PZL M18A Dromader	Deniliquin	2500 litre Hopper
Bomber 358	PZL M18A Dromader	Leongatha	2500 litre Hopper
Bomber 359	PZL M18A Dromader	Benambra	2500 litre Hopper
Bomber 360	AT802F	Stawell	3200 litre Hopper
Bomber 361	PZL M18A Dromader	Leongatha	2500 litre Hopper
Bomber 365	PZL M18A Turbine Dromader	Bendigo	3000 litre Hopper
Specialist aircraft			
Firescan 300	Beechcraft KingAir 200	Essendon	-NA-
Firescan 350	Cessna 404 Titan	Essendon	-NA-
Birddog 366	Cessna 337	Essendon	-NA-

* Resource acquired through the National Aerial Firefighting Centre

Appendix 2: Start and finish dates of 2006/07 Service Periods for Contract Aircraft (Requirement 1 and 2)

Aircraft Callsign	Start Date	Finish Date
Type 1 Helicopters		
Helitack 341 *	1 Nov 2006	24 Mar 2007
Helitack 342 *	4 Dec 2006	6 Mar 2007
Helitack 348 *	9 Dec 2006	20 Mar 2007
Helitack 349 *	12 Dec 2006	13 Mar 2007
Type 2 & 3 Firebombing Helicopters		
Helitack 331	1 Dec 2006	3 Apr 2007
Helitack 332	25 Oct 2006	10 Apr 2007
Helitack 333	1 Nov 2006	10 Apr 2007
Helitack 334	25 Oct 2006	10 Apr 2007
Helitack 335	18 Oct 2006	24 Apr 2007
Helitack 345	8 Nov 2006	3 Apr 2007
Helitack 346 *	9 Dec 2006	6 Mar 2007
Helitack 347 *	9 Dec 2006	6 Mar 2007
Helitack 231 *	9 Dec 2006	13 Mar 2007
Type 3 Helicopters		
Firebird 301	25 Oct 2006	8 Mar 2007
Firebird 302	18 Oct 2006	1 May 2007
Firebird 303	1 Nov 2006	8 May 2007
Firebird 304	1 Nov 2006	8 May 2007
Firebird 305	25 Oct 2006	17 Apr 2007
Firebird 306	25 Oct 2006	25 May 2007
Firebird 307	1 Nov 2006	24 Apr 2007
Firebird 309 *	13 Dec 2006	6 Mar 2007
Single Engine Air Tankers (SEATS)		
Bomber 351	10 Nov 2006	10 Apr 2007
Bomber 352	25 Oct 2006	20 Mar 2007
Bomber 353	25 Oct 2006	10 Apr 2007
Bomber 354	25 Oct 2006	10 Mar 2007
Bomber 355	1 Nov 2006	10 Apr 2007
Bomber 356	16 Dec 2006	9 Mar 2007
Bomber 357	25 Oct 2006	1 May 2007
Bomber 358	1 Nov 2006	24 Apr 2007
Bomber 359	25 Oct 2006	1 May 2007
Bomber 360	18 Oct 2006	1 May 2007
Bomber 361	20 Dec 2006	10 Apr 2007
Bomber 365	18 Oct 2006	20 Mar 2007
Specialist aircraft		
Firescan 300	25 Oct 2006	13 Feb 2007
Firescan 350	20 Dec 2006	10 Apr 2007
Birddog 366	1 Nov 2006	3 Apr 2007

* Resource acquired through the National Aerial Firefighting Centre

Appendix 3: Aircraft Usage 2006/07

Type 1 Helicopters

Aircraft	Location	Hours	Hours by task (ferry time not included)	
			Firebombing	Passenger transport
Helitack 341	Essendon	167.94		
Helitack 342	Essendon	152.55		
Helitack 348	Mansfield	256.61		11.61
Helitack 349	Latrobe Valley	246.49		
Total		823.59	705.54	
CFA Total		81.35		
DSE Total		733.67		

Type 2 and 3 Firebombing Helicopters

Aircraft	Location	Hours	Hours by task (ferry time not included)			
			Firebombing	Rappelling	Firefighter transport	Training
Helitack 331	Moorabbin	277.02				
Helitack 332	Benalla	311.45				
Helitack 333	Heyfield	359.43				
Helitack 334	Bacchus Marsh	200.75				
Helitack 335	Colac/Essendon	174.62				
Helitack 345	Olinda	125.07				
Helitack 346	Essendon	99.26				
Helitack 347	Essendon	161.49				
Helitack 231	Albury	155.09				
Total		1,864.18	1,207.22	191.14	119.60	107.83
CFA Total		225.25				
DSE Total		1,625.66				

Type 3 Helicopters

Aircraft	Location	Hours	Hours by task (ferry time not included)					
			Air Attack	Aerial Ignition	FLIR	Other	Reconnaissance/ Detection	Training
Firebird 301	Horsham	389.50						
Firebird 302	Moorabbin	631.42						
Firebird 303	Ovens (Myrtleford)	429.36						
Firebird 304	Bairnsdale	415.78						
Firebird 305	Bendigo	325.69						
Firebird 306	Moorabbin	485.48						
Firebird 307	Essendon	455.39						
Firebird 309	Essendon	178.24						
Total		3,304.83	965.22	414.05	300.44	54.71	769.93	17.59
CFA Total		213.35						
DSE Total		2,478.55						

Appendix 3: Aircraft Usage 2006/07

Single Engine Air Tankers (SEATS)

Aircraft	Location	Hours	Hours by task (ferry time not included)	
			Firebombing	Training
Bomber 351	Stawell	135.05		
Bomber 352	Portland	51.59		
Bomber 353	Hamilton	58.60		
Bomber 354	Albury	117.20		
Bomber 355	Bairnsdale	80.92		
Bomber 356	Albury	85.78		
Bomber 357	Deniliquin	99.20		
Bomber 358	Leongatha	127.49		
Bomber 359	Benambra	168.94		
Bomber 360	Horsham	104.71		
Bomber 361	Leongatha	105.96		
Bomber 365	Bendigo	83.34		
Total		1,218.78	949.18	17.31
CFA Total		87.41		
DSE Total		1,127.12		

Specialist Aircraft

Aircraft	Location	Hours	Hours by task (ferry time not included)				
			Infra red	Air Attack	Reconnaissance	Firefighter transport	Training
Firescan 300	Essendon	86.90	79.10				
Firescan 350	Essendon	140.73	136.29				
CFA Total		5.83					
DSE Total		218.17					
Birddog 366	Essendon	126.87					
CFA Total		13.00		53.88	18.25	12.66	-
DSE Total		113.88					

Appendix 4: Training Program courses

Course	Participants
Aerial Driptorch Operators	5
Aerial Driptorch Support Crew	20
Air Attack Supervisor	12
Airbase Manager	12
Aircraft Officer	13
Air Observer	14
Basic Wildfire Awareness - online	97
Crew Resource Management	18
FLIR Operator	4
Fly to Wire Environment training	12
Hot refuelling	45
Hover Exit	12
Incendiary Bombardier	21
Rappel	39
Rappel Dispatcher	7

Appendix 5: Operator Debrief schedule

Service Provider	Services	Month	Location
AG Airwork Pty Ltd.	4x SEATs	May 2007	Melbourne
Alpine Airwork	1x SEAT	May 2007	Melbourne
Australasian Jet & Charter Pty Ltd	1x Light Fixed Wing Reconnaissance Aircraft 2x Infra Red Linescanning Aircraft	June 2007	Melbourne
CHC Helicopters (Australia)	3x Type 2 Firebombing Helicopters	May 2007	Melbourne
Coulson Aircrane Ltd	1x Type 1 Helicopter 2x Type 2 Firebombing Helicopters	March 2007	Melbourne
Forest Air Helicopters	1x Type 2 Firebombing Helicopter	Not completed	
Helicopter Resources	1x Type 1 Helicopter	Not completed	
Helicopters Victoria	2x Type 3 Helicopter	May 2007	Melbourne
Helicorp Pty Ltd	2x Type 1 Helicopter 1x Type 2 Helicopter 2x Type 3 Helicopter	April 2007	Melbourne
Heli-Serv Pty Ltd	3x Type 3 Helicopters	May 2007	Melbourne
Kestrel Aviation College Pty Ltd	2x Type 2 and 3 Firebombing Helicopters	June 2007	Melbourne
Pays Air Service Pty. Ltd.	2x SEATs	May 2007	Melbourne
Professional Helicopter Services Pty Ltd	1x Type 3 Helicopter	May 2007	Melbourne
R & M Aircraft Pty. Ltd.	1x SEAT	May 2007	Melbourne
Woorayl Air Services	4x SEATs	May 2007	Leongatha