

# **LAWSON'S LONG ALLEY**

**FROM**

**05:00HRS WEDNESDAY 15 NOVEMBER 2006**

**TO**

**18:00HRS SUNDAY 3 DECEMBER 2006**

## **SECTION 44 INCIDENT CONTROLLER'S REPORT**

**PREPARED BY  
SUPERINTENDENT MAL CRONSTEDT**

  
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Incident Controller  
8 February 2007

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## EXECUTIVE SUMMARY

Dry lightning on 13 November 2006 is suspected to have started two fires in the Lithgow and Blue Mountains Districts. Detected on 14 December, both fires were fought independently for a short time until it became apparent that the two would present problems beyond the resources available locally.

A Section 44 under the Rural Fires Act 1997 was declared on 15 November 2006. Over the ensuing 19 days a substantial inter-agency effort, working in an Incident Management Team located at Blue Mountains Fire Control Centre, worked to control the fire. After substantial effort to contain the fire to as small an area as possible with ground crews, Remote Area Fire Teams (RAFT) and significant aircraft support, a series of back-burning operations successfully limited fire impact on Mount Victoria, Blackheath and Bell.

Subsequent back-burning, careful ground crew work, RAFT insertion and aircraft operations secured most of the western, southern and northern edges despite difficult conditions.

Fire weather on 22 November was the worst experienced throughout the fire and resulted in substantial fire extension to the east and south-east, including spot-overs north of Linden and Hazelbrook, some 12 kilometres distant from the main fire. Spot-overs were contained by concerted aircraft attack, followed by ground crews.

Easing weather conditions over the next few days provided the opportunity to contain and consolidate all fire edges. Extensive mop-up and patrol held the fire within containment lines, despite being tested by poor fire weather on one day.

The declaration was lifted on 3 December 2006.

## 1.0 INTRODUCTION

This Report will outline events which occurred in the lead up to and during the Lawson's Long Alley Section 44 Declaration period from 05:00hrs Wednesday 15 November 2006 through to 18:00hrs Sunday 3 December 2006.

The Report also summarises the outcomes of various debriefs, including recommendations for improvements.

Please note that all times quoted are approximate and are 'AEDT' - Australian Eastern Daylight Time.

Whilst every effort has been made, within the time and resource constraints for preparation, to ensure the accuracy of the Report, it is not possible to guarantee every aspect as correct.

## 1.1 PRELUDE TO DECLARATION

On 13 November 2006, the Blue Mountains and Lithgow Districts experienced dry lightning. It is estimated that the two fires which eventually coalesced into one were started on this day, though the exact time is uncertain as actual fire activity was not detected until the following day.

The point of origin for the Lawson's Long Alley (Lithgow) fire was estimated to be GR 442 842 (1:25,000 Hartley map) and the Burra Korain Head (Blue Mountains) fire GR 498 815 (1:25,000 Mt Wilson map). The Lithgow fire originated on private property and the Blue Mountains fire on National Park lands.

At 17:04hrs on 14 November 2006 a bushfire located at Hartley Vale was reported to Lithgow Fire Control Centre (LFCC) via NSW Fire Brigades (NSWFB) Communications Centre, Katoomba. Rural Fire Brigades from Hartley, South Bowenfels, Clarence/Dargan and Marrangaroo were despatched. Upon arrival, the first Sitrep indicated that the fire was about 1-2 hectares in size with a flame height of about 1-2 metres and that it was near property and moving up hill in inaccessible terrain. Within a couple of hours the fire had escalated significantly under the influence of strong westerly winds.

The Blue Mountains Fire Control Centre (BMFCC) was notified at approximately 17:45hrs of an impending threat by the LFCC. The BMFCC deployed resources to the Darling Causeway (the Causeway) as a precautionary measure. Inspector Tolhurst was also deployed to LFCC.

At 17:57hrs further resources were deployed to the Causeway with a view to ensuring the fire, now well extended to the east, did not cross the Causeway. Assistance from the NSWFB was also sought at 21:30hrs for property protection along the Causeway. Back-burning operations along the roadway were also commenced (under the control of the BMFCC). Numerous spot fires east of the Causeway were extinguished. At about 11:30hrs? a spot fire ignited at about GR 465 835 east of the Causeway and was not accessible. The fire quickly expanded and continued to grow unchecked.

The escalating situation, combined with the fact that there were now three uncontrolled fires within the District, led to the decision to request a formal declaration under Section 44 of the *Rural Fires Act 1997*.

## 1.2 DECLARATION

### 1.2.1 INITIAL DECLARATION WAS MADE AT 05:00HRS ON 15 NOVEMBER 2006

The initial declaration was made in the area listed below with the appointees listed below.

**Area of Declaration:** Blue Mountains and Lithgow LGA

	Full Name	Position	Organisation
Incident Controller	Malcolm Graham Cronstedt	Superintendent	NSW RFS
Deputy Incident Controller	John Henry Tolhurst	Inspector	NSW RFS
Deputy Incident Controller	Gregory Raymond Wardle	Inspector	NSW RFS
Deputy Incident Controller	Anthony Peter Grant	Superintendent	NSWFB
Deputy Incident Controller	Kim Akos De Govrik	Acting Regional Manager	NPWS

### 1.2.2 DECLARATION AMENDED AT 12:00HRS ON 15 NOVEMBER 2006

This amendment saw the exclusion of the area of Lithgow LGA north of the Capertee River.

### 1.2.3 DECLARATION AMENDED AT 18:00HRS ON 18 NOVEMBER 2006

This amendment saw the appointment of

	Full Name	Position	Organisation
Incident Controller	Angelo John Baldo	Superintendent	NSW RFS
Deputy Incident Controller	Thomas Adrian Shirt	Inspector	NSW RFS

And the removal of

	Full Name	Position	Organisation
Incident Controller	Malcolm Graham Cronstedt	Superintendent	NSW RFS

### 1.2.4 DECLARATION AMENDED AT 06:00HRS ON 21 NOVEMBER 2006

This amendment saw the appointment of

	Full Name	Position	Organisation
Incident Controller	Malcolm Graham Cronstedt	Superintendent	NSW RFS
Deputy Incident Controller	Robert John Vinzenz	Inspector	NSW RFS
Deputy Incident Controller	Andrew Warren McLeod	Superintendent	NSWFB

And the removal of

	Full Name	Position	Organisation
Incident Controller	Angelo John Baldo	Superintendent	NSW RFS
Deputy Incident Controller	Thomas Adrian Shirt	Inspector	NSW RFS

### 1.2.5 DECLARATION AMENDED AT 19:00HRS ON 23 NOVEMBER 2006

This amendment saw the exclusion of the Lithgow Local Government Area, south of the Capertee River, but included part of Lithgow Local Government Area bounded by the Great Western Highway at the Blue Mountains Local Government Boundary, northwest along the Great Western Highway, north along the Browns Gap Road, north east along Mid Hartley Road, east along Hartley Vale Road to the junction of Kerosene Creek, north along Kerosene Creek to River Lett, east along River Lett to Dargans Creek, north along Dargans Creek to the Bells Line of Road, south west along Bells Line of Road back to the Blue Mountains Local Government Boundary and including part of Hawkesbury Local



Government Area bounded by the Bells Line of Road at the Blue Mountains Local Government Boundary, east along Bells Line of Road to the road intersection at Paterson Range, then south along Burrallow Creek to the junction with the Grose River, then west along the Grose River back to the Blue Mountains Local Government Boundary.

#### 1.2.6 DECLARATION AMENDED AT 18:00HRS ON 25 NOVEMBER 2006

This amendment saw the appointment of

	Full Name	Position	Organisation
Incident Controller	Angelo John Baldo	Superintendent	NSW RFS
Deputy Incident Controller	Thomas Adrian Shirt	Inspector	NSW RFS

and the removal of

	Full Name	Position	Organisation
Incident Controller	Malcolm Graham Cronstedt	Superintendent	NSW RFS
Deputy Incident Controller	Robert John Vinzenz	Inspector	NSW RFS

#### 1.2.7 DECLARATION AMENDED AT 18:01HRS ON 25 NOVEMBER 2006

This amendment saw the correction of the rank of Thomas Shirt from Inspector to Superintendent.

#### 1.2.8 DECLARATION AMENDED AT 06:00HRS ON 28 NOVEMBER 2006

This amendment saw the appointment of

	Full Name	Position	Organisation
Incident Controller	Malcolm Graham Cronstedt	Superintendent	NSW RFS
Deputy Incident Controller	Robert John Vinzenz	Inspector	NSWRFS
Deputy Incident Controller	Richard Baden Kingswood	Area Manager	NPWS

and the removal of:

	Full Name	Position	Organisation
Incident Controller	Angelo John Baldo	Superintendent	NSW RFS
Deputy Incident Controller	Thomas Adrian Shirt	Superintendent	NSW RFS
Deputy Incident Controller	Gregory Raymond Wardle	Inspector	NSW RFS
Deputy Incident Controller	Andrew Warren McLeod	Superintendent	NSWFB
Deputy Incident Controller	Kim Akos Degovrik	Acting Regional Manager	NPWS

TABLE 1 – FIRE WEATHER SUMMARY FOR MT BOYCE AUTOMATED WEATHER STATION

Date	Maximum Temp. (°C)	Minimum Relative Humidity (%)	Average Wind Direction	Average Wind Speed (kph)	Maximum Wind Gust			Rainfall (mm)	Byram Keetch Drought Index (BKDI)	Soil Dryness Index (SDI)	Maximum Forest Fire Danger Index (FFDI)
					Dir	(kph)	Time (hh:mm)				
14/11/06	20.3	14	W	22	W	63	22:53	1.4	57	69	25.1
15/11/06	12.5	30	W	34	WNW	81	10:14	0.0	58	71	13.1
16/11/06	12.4	30	SW	16	SSW	50	6:20	0.0	59	71	8.9
17/11/06	17.7	30	ENE	11	ENE	28	17:23	0.0	59	71	8.4
18/11/06	25.2	14	W	11	W	31	13:28	0.0	60	73	16.6
19/11/06	26.4	13	WNW	10	W	39	12:29	0.0	62	75	23.5
20/11/06	29.2	13	W	12	WNW	39	10:04	0.0	65	78	25.2
21/11/06	29.9	14	W	20	WSW	59	11:00	0.0	69	81	36.6
22/11/06	29.8	16	WNW	24	W	72	12:13	0.0	73	84	39.5
23/11/06	29.9	11	W	16	WSW	44	15:56	0.0	76	87	36.7
24/11/06	23.0	48	ENE	10	E	28	16:10	0.0	80	90	11.2
25/11/06	31.3	13	W	9	WSW	39	11:52	0.0	81	92	27.4
26/11/06	23.7	24	ENE	11	NE	30	16:37	0.0	85	96	12.5
27/11/06	22.7	55	ENE	11	E	30	13:35	0.0	87	98	5.0
28/11/06	28.9	24	W	20	WNW	63	13:48	0.0	89	100	32.6
29/11/06	30.1	11	E	21	SW	63	9:05	0.0	91	103	45.8
30/11/06	23.7	32	ENE	11	W	26	22:17	0.2	95	106	11.6
01/12/06	32.3	19	W	22	W	48	9:29	0.0	108	108	29.2
02/12/06	26.4	41	W	16	NW	48	11:20	1.2	111	111	11.6
03/12/06	11.6	88	E	11	ENE	30	20:57	0.2	113	113	1.0



## **2.0 DAY BY DAY SYNOPSIS**

This section deals with the day by day overview at a management level for the Blue Mountains and Lithgow Section 44 Declaration.

### **2.1 OVERVIEW DAY 1**

#### **Wednesday 15 November 2006**

The Section 44 Declaration was in force by 05:00hrs. By this time, arrangements for incident 'ramp-up' were already well under way, in particular the full resourcing of an Incident Management Team (IMT) and associated infrastructure.

Resources deployed to the Darling Causeway (the Causeway) reported increasing fire behaviour of the spot fire. At 02:00hrs the total fire area was estimated to be 500 hectares. Back-burning along the Causeway continued, with emphasis on minimising further spot-overs, the containment of the remaining fire west of the Causeway, the protection of isolated properties along the road and monitoring progress of the inaccessible fires east of the Causeway.

By 16:00hrs the fires<sup>1</sup> had grown in total size to 780 hectares, with the spot-over (in the National Park) estimated at 80 hectares. Back-burning around the northern edge of Mt Victoria with the aim of containing the fire west of the Causeway within containment lines established north of the town, the Causeway itself, containment lines south of Hartley Vale along Waltons Road to the south west of Bell along the Hartley Vale Road west of the Causeway and containment lines within Lithgow on the west. Water bombing aircraft were being used to good effect on the western edge, as well as slowing fire progress on the fires east of the Causeway.

### **2.2 OVERVIEW DAY 2**

#### **Thursday 16 November 2006**

Back-burning operations on the northern edge of Mt Victoria were successfully carried out by 05:00hrs. Consolidation of this containment continued, as did consolidation of the edge along the Causeway. Problematic areas around the north western edge around Hartley Valley Siding Road were addressed through aerial attack and Remote Area Firefighting Team (RAFT) insertion. The fires east of the Causeway continued to be slowed by aerial means, while plans for back-burning to protect Blackheath using the existing "Blackline" were being developed. The total fire area was now (23:30hrs) estimated at 1 373 ha.

RAFT crews were not inserted to Burra Korain Head due to weather conditions, given sufficient aerial support could not be guaranteed due to the high reliance of aircraft west of the Causeway.

An uncontained spot fire was burning north of the Hartley Vale containment line towards an electricity substation and Bell/Dargan.

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<sup>1</sup> From this point the fire was dealt with as one in formal Sitreps. As a result, this Report will variously refer to 'the fire' meaning all three ignitions (Lawson Long Alley, Darling Causeway spot-over and Burra Korain Head, and where necessary the individual portions.

## **2.3 OVERVIEW DAY 3**

### **Friday 17 November 2006**

The western and southern edges of the fire west of the Causeway continued to be consolidated with mop-up and ground crew work. Active fire on the northern edge of this portion of the fire continued to cause some difficulty, with water bombing and RAFT/ground crew insertion as and when safe.

The two fires east of the Causeway were being kept in check by intermittent water bombing from aircraft on an opportunistic basis. The fire immediately east of the Causeway was largely contained though the more isolated Burra Korain Head fire east of this was not contained.

The "Blackline" between Blackheath and Mt. Victoria was re-established by combined agencies, with additional bulk water tankers accessed via the NSWFB as well as header dams established at Hat Hill Road, Blackheath for the aerial bombing.

Total fire area estimated at 1 767 ha.

## **2.4 OVERVIEW DAY 4**

### **Saturday 18 November 2006**

The fire west of the Causeway continued to be consolidated, with sound containment now in place along the southern, western and eastern perimeters. The northern edge was now largely contained, with ongoing monitoring, patrol, opportunistic aerial bombing and ground crew work. The fire east of the Causeway was not fully contained, with considerable difficulty in establishing solid containment due to inaccessibility and safety issues.

Difficulties faced at Burra Korain Head triggered the commencement of the first fall back strategies. A backburning operation along the northern perimeter of Blackheath using the "Blackline" commenced in the evening.

Plan for the back-burn along Hat Hill Sector through to Bells Line of Road (across the Grose River) and along Bells Line of Road to Bell was developed. Pierces Pass back-burn was assessed and required further work prior to implementation.

Water supply points at Browntown Oval and a relay at Hat Hill Road were established to meet water demands for the aerial bombing.

The fire area estimated at 2 012 ha.

## **2.5 OVERVIEW DAY 5**

### **Sunday 19 November 2006**

Consolidation of back-burn along the "Blackline" north of Blackheath continued, with some deepening of area via aerial incendiary.

Retardant line put in using fixed wing aircraft above Blackheath Walls. Timing of back-burning north of Blackheath was planned to meet retardant line at first light and combine with aerial assistance.

The Burra Korain Head fire was now moving towards Blackheath under a north west strengthening influence.

RAFT crews prepared Perry Lookdown walking trail and a hand tool link below Banks Walls.

The planned Bells Line of Road back-burn was implemented in the evening with the introduction of fire at the Pierces Pass/Bells Line road intersection by combined agencies. A breakout was reported at 20:45hrs which was investigated and was unfounded.

Back-burning also commenced on Pierces Pass (Hungerford's Track) below the rainforest and cliff edge towards the Grose River. Full distance of back-burn was not achieved this evening.

Continual water supply problems proved it necessary to maintain bulk water tankers for the duration of the campaign.

Fire area now estimated at 3 863 ha.

## **2.6 OVERVIEW DAY 6**

### **Monday 20 November 2006**

Pierces Pass back-burn had been completed and in mop up.

Fire now largely contained within perimeter bounded by containment line north of Mt Victoria and Blackheath, Hat Hill Road and an extension through Pierces Pass to Bells Line of Road, along Bells Line of Road and back to existing contained edges on the western portion of the fire.

A small spot-over on the eastern edge, over containment line established along Pierces Pass caused concerns, though being slowed by aerial bombing, however, crews were withdrawn on safety grounds. Further fall back options and containment lines to the east being planned.

Fire area estimated at 5 732 ha

## **2.7 OVERVIEW DAY 7**

### **Tuesday 21 November 2006**

Fire significantly breached eastern containment lines, namely below Blackheath Walls along the Grose River and behind Perry's Lookdown. Dispersed properties to the north of Blackheath were now potentially under threat. Other sectors remained contained. Intense water bombing operations to slow eastern fire spread being undertaken, as well as further consolidation of other edges. Poor fire weather forecast for tomorrow.

Three new fallback Divisions identified along the Northern Strategic Line ("Blackline").

Mopping up procedures continued along the Bells Line of Road, with property protection in place at Mt. Tomah and Hat Hill Road.

Fire area estimated at 8 335 ha.

## **2.8 OVERVIEW DAY 8**

### **Wednesday 22 November 2006**

Blow-up conditions experienced, with NW winds up to 90 km/h, low RH and high temperature. As a consequence, two spot-overs occurred located approximately 5 km north of Hazelbrook and Woodford. The eastern most spot fire was rapidly extinguished by water bombers, while the western one grew in size to approximately 20 ha. Concerted water bombing operations slowed fire progress, while resources were assembled in anticipation of property protection needs along Great Western Highway.

The active fire south of Bells Line of Road was of concern and progression burning along the roadway to prevent extension north of the road was implemented as conditions eased. In addition, active fire in the Govetts Sector was of concern, with strategies in place to limit spread, while also protecting private property in the vicinity.

At 02.30hrs crews were observing fire crowning in Explorer's Brook and travelling at approximately 1km/h.

Numerous NSWFB and RFS strike teams were situated at strategic locations along the Great Western Highway, with three located at Mt. Tomah and Bells Line of Road.

Back-burning operations were commenced at approximately 23:30hrs along Evans Lookout to Hat Hill Road at Blackheath.

A significant column developed over the main fire – being visible from much of the Sydney Basin. Pyro-cumulous cloud developed to 6 000 metres over Mt. Banks from approximately 12:30hrs associated with extreme behaviour and spotting.

Blue Gum Forest impacted.

The total fire area was now 10 747 ha.

## **2.9 OVERVIEW DAY 9**

### **Thursday 23 November 2006**

Conditions eased, with the two spot fires now contained by aerial means. Progressive back-burning - scheduled to keep pace with the wildfire - along Bells Line of Road. Govetts Sector and the "Blackline" continued to be consolidated via back-burning operations and direct attack on hotspots/breakout as required.

Preparatory work (fire trail maintenance and backburning) to protect Mt. Tomah assets undertaken, as well as planning for more extensive "Blackline" back-burning.

Small outbreak from back-burn on Connaught Road, Blackheath temporarily threatened property.

A fire was also contained at Mitchells Pass at around 03:00hrs which was presumed to be deliberately lit and of serious concern, with the NSWFB remaining on fire watch for most of the day.

Backburn attempted along Linden and Faulconbridge Ridges – minimal depth achieved due to unsuitable weather conditions.

## **2.10 OVERVIEW DAY 10**

### **Friday 24 November 2006**

Overnight high humidity did not allow for effective back-burning along the "Blackline" and Govetts, though conditions eased significantly through the easterly influence. Spot fires were effectively contained and the insertion of ground crews to consolidate edge undertaken. Preparatory earthworks around Bilpin and Mt Irvine continued.

RAFT and ground crews continued work on spot fires north of Linden and Hazelbrook.

Ground crews put out and mopped up backburn on Faulconbridge Ridge.

## **2.11 OVERVIEW DAY 11**

### **Saturday 25 November 2006**

Conditions remained benign, subduing fire behaviour and severely limiting back-burning opportunities. Consolidation of all edges continued, though planning for "Blackline" east back-burning continued in anticipation of need. Direct attack through ground crew and RAFT insertions around areas of concern (Spot-over, Mt Hay, Thunder Gorge-Mt Tomah) continued as did direct attack along general eastern edge of fire where hot spots identified by aerial reconnaissance.

Area of fire now estimated at 13 893 ha.

## **2.12 OVERVIEW DAY 12**

### **Sunday 26 November 2006**

Conditions continued to be benign, under an easterly influence. Consolidation of edges continued with an emphasis on direct attack based on aerial intelligence. Eastern edge of fire is in 2002 fuels and appears largely inactive, save identified hot spots.

## **2.13 OVERVIEW DAY 13**

### **Monday 27 November 2006**

Benign conditions continued. Consolidation of fire edge continued. Planning for use of the "Blackline" east continued. Intensive use of FLIR and aerial observation to identify areas of concern for IMT tasking of ground crews/RAFT as required. Fire now classed as 'Being Contained' and the area revised to 14 470 ha. Deteriorating fire weather conditions predicted for 28 November.

## **2.14 OVERVIEW DAY 14**

### **Tuesday 28 November 2006**

Very High fire weather eventuated, though not to the extent predicted. Containment lines held. Consolidation of edges continued.

## **2.15 OVERVIEW DAY 15**

### **Wednesday 29 November 2006**

Further mild conditions experienced. Consolidation of fire edges continued, with direct attack where appropriate and safe.

## **2.16 OVERVIEW DAY 16**

### **Thursday 30 November 2006**

More mild conditions experienced. Consolidation continued.

## **2.17 OVERVIEW DAY 17**

### **Friday 1 December 2006**

Fire now classed as 'Contained'.

## **2.18 OVERVIEW DAY 18**

### **Saturday 2 December 2006**

Further consolidation.

## **2.19 OVERVIEW DAY 19**

### **Sunday 3 December 2006**

Fire now classed as 'Patrol'.

Conditions continued to be benign, with very few hot spots detected.

The s44 was consequently revoked at 18:00hrs and incident control handed back to NPWS. Patrol status was maintained and FLIR, Air Observation and RAFT deployment continued.



### 3.0 CRITICAL ISSUES

#### 3.1 BACK-BURN ALONG DARLING CAUSEWAY

On the first night of the fire (14/11/06) in the immediate lead-up to the s44 declaration, a major back-burning operation was undertaken along the Darling Causeway in an attempt to halt the spread of the fire emerging from Lithgow. Despite the valiant efforts of firefighters, the fire overtook resources situated along the Causeway and one of some twenty spot fires was inaccessible by firefighters. This spot fire eventually grew to such an extent that it merged with a previous lightning strike east of it around Burra Korain Head.

#### 3.2 CONTAINMENT STRATEGIES FOR LAWSON'S LONG ALLEY AND BURRA KORAIN HEAD

Much effort was expended on close containment on both original fires – being the Lawson's Long Alley (emanating from Lithgow) and Burra Korain Head. On 17 November there remained two major areas of concern – one being the north western corner of the fire near Hartley Vale and the still uncontained Burra Korain Head fire. In addition, though fire activity appeared benign on the eastern portion of the Lawson's Long Alley fire, hot spots were still being detected by FLIR and there was not sufficient RAFT crews for further deployment, due to numerous other commitments state-wide.. Given the older fuels in this vicinity, the likelihood of fire escape during severe fire weather was certain.

#### 3.3 BACK-BURN TO PROTECT BLACKHEATH, MT VICTORIA, BELL, MT WILSON/IRVINE AND EASTERN CONTAINMENT

During operations it became apparent that the Burra Korain Head fire was not likely to be contained in-situ and that a strategy to minimise the fire's potential to impact communities north and south was required. As a result, an extensive back-burn was set in motion along both the Bells Line of Road and immediately north and east of Mt Victoria and Blackheath (the 'Blackline'). The intention was to create an eastern containment along Hat Hill Road through to Pierces Pass via Perry's Lookdown and Hungerford tracks. Unfortunately, unfavourable weather allowed the main fire to overtake these operations and on 22 November the fire made a major run to the east.

#### 3.4 "BLACKLINE" PREPARATIONS

In the lead up to the blow-up day (22/11), a specific team was set-up to prepare the "Blackline" as far east as practical. The task was to survey the trail, update maps as required and undertake minor works required to ensure its immediate usefulness. In addition, individuals with local knowledge were tasked to update documentation associated with the "Blackline" and ensure it was at hand for immediate implementation if required.

### 3.5 BACK-BURNING TO PROTECT MT TOMAH/MT WILSON/MT IRVINE

A very successful back burn was conducted along the Bells Line of Road from Bell to approximately 1 kilometre west of Mount Tomah. In addition, back-burns immediately west and south of Mt Tomah on the south side of Bells Line of Road, in close proximity to assets, to provide a buffer around the town site. On all occasions, despite difficult conditions and spotting activity, the fire remained south of Bells Line of Road. This strategy is regarded as significant as it not only kept the fire south of the roadway and out of the Wollangambe but successfully protected the towns of Bell, Mount Wilson, Mount Irvine and Mount Tomah.

### 3.6 BLOW-UP DAY AND SPOT-OVER

The 22 November brought with it severe fire weather, with hot, strong (Gust to 100 km/h) and very dry winds from the North West. The main fire took a major run to the south east and two spot fires occurred just north of Hazelbrook and Linden. Both were successfully suppressed by the concerted efforts of aerial bombers, followed up by RAFT crews when conditions permitted but not before significant resources had been amassed in the anticipated need for property protection along the Great Western Highway.

The 22 November blow-up day and the spot-overs that ensued, created an expectation that the fire would follow a path similar to that of other fires experienced in the area and impact lower mountains' communities such as Winmalee and Springwood. As a result, a range of logistical and management issues arose related to over-resourcing, under-tasking and information flow. Most significantly, several out-of-area task forces were not deployed effectively and communications to their leaders were not clear.

The weekend following the blow-up day, a further back-burn along the "Blackline" was implemented. Burning commenced along Faulconbridge and Linden Ridges in the evening of the 24 November though was largely unsuccessful due to rain. A depth of maximum 50 metres was achieved before rain.

### 3.7 SUCCESSFUL CONTAINMENT STRATEGY

A series of days of favourable fire weather were experienced from 24 November, providing an opportunity to focus on close containment of the fire edge. The eastern edge was now in 2002 fuels and the fire had either subdued, or self-extinguished. This allowed for the insertion of walk-in and RAFT crews supported by aircraft. Though there were a couple of days of High to Very High fire weather days from this time until the 3/12 extended days of high humidity and occasional drizzle provided sufficient time to complete close containment around the entire fire perimeter.

## **4.0 Agencies involved with Section 44**

### **4.1 NSW FIRE FIGHTING AUTHORITIES**

The following are the operational NSW Fire Fighting Authorities involved during the Section 44 Declaration period.

- ✓ NSW Rural Fire Service (RFS) – both local and Inter-District.
- ✓ NSW Fire Brigades (NSWFB)
- ✓ Department of Environment & Conservation (NSW) - (NSW National Parks and Wildlife Service (NPWS))

### **4.2 SUPPORT AGENCIES**

The following are the Support Agencies involved during the Section 44 Declaration period.

- ✓ Ambulance Service of New South Wales
- ✓ Blue Mountains City Council (BMCC)
- ✓ Department of Defence, Royal Australian Air Force (RAAF)
- ✓ Integral Energy
- ✓ NSW Department of Community Services
- ✓ NSW Department of Land and Water Conservation
- ✓ NSW Department of Primary Industries
- ✓ NSW Health
- ✓ NSW Police Force
- ✓ NSW State Emergency Service (SES)
- ✓ Roads and Traffic Authority, NSW (RTA)
- ✓ Rail Corporation New South Wales (RailCorp)
- ✓ Salvation Army
- ✓ St Johns Ambulance of Australia
- ✓ Sydney Catchment Authority (SCA)\*
- ✓ Sydney Water
- ✓ Telstra Corporation Limited

\* Whilst the Sydney Catchment Authority is listed under Support Agencies, the Authority provided operational fire fighters in the form of the Seasonal Fire Fighting crews jointly managed by the NPWS and SCA.

## 5.0 RESOURCES USED

Lawson's Long Alley Fire, Nov 14th - Dec 3rd 2006 (Total Resources Utilised )					
Agencies	IMT Personnel	Fire Fighters (incl. RAFT)	Appliances	Aircraft	Plant
RFS	475	2303	503	RFS/NPWS	
NSWFB	35	859	182		
NPWS	167	626	73	RFS/NPWS	9
Council/ Contractors	80				24
<b>TOTAL</b>	<b>757</b>	<b>3888</b>	<b>758</b>	<b>187</b>	<b>33</b>

## 6.0 SUMMARY OF INJURIES, PROPERTY DAMAGE AND NEAR MISS

### 6.1 SUMMARY OF INJURIES/NEAR MISS

The following table provides an overview of injuries sustained during the Section 44 Declaration, the most significant being a broken ankle. The majority of injuries were the result of firefighters working on steep loose terrain.

INJURIES							WorkCover Claim Processed	
No.	Date	Agency / Brigade	Type of Injury	Cause of Injury	Details			
1	15/11/06	RFS Cullen Bullen	Fracture Dislocation /	Slip	Fractured Ankle		Yes - Submitted by Lithgow FCC	
2	15/11/06	RFS Wentworth Falls	Other - Minor	Other	Headache		No - Taken home by family member	
3	16/11/06	RFS Regentville	Other sprain / strain	Struck by Object	Soft tissue injury to upper left arm		No - treated on scene by Ambo	
4	19/11/06	RFS GIS Services Unit	Back Injury / Strain	Body Stressing	Strained lower back leaning across desk - IMT		No- Taken to ANZAC Memorial Hospital	
5	20/11/06	RFS East Wingecarribee	Back Injury / Strain	Slip	Slipped on Wet rocks, poor lighting, steep terrain		No - reported by Wingecarribee FCC	
6	20/11/06	RFS East Wingecarribee	Back Injury / Strain	Body Stressing	Stiff back working on rough steep terrain		No - reported by Wingecarribee FCC	
7	20/11/06	RFS Woodford	Cuts/Abrasions (hand)	Contact with object	Removing brushcutting blade hand slipped		Yes - form filled in	
8	21/11/06	RFS Bullaburra	Fracture Dislocation /	Slip	Slipped whilst cutting fire break		Yes - form filled in	
9	22/11/06	RFS Macarthur Group	Eye Injury	Contact with object	Ash in eye report			
10	22/11/06	RFS Hazelbrook	no details				Yes - physio claim	
11	23/11/06	RFS Wentworth Falls	Minor Bruising	Slip	Steep Terrain		No - First Aid	
12	23/11/06	RFS Katoomba / Leura	Burns / Scalds	Exposure (Fire/heat/Smoke)	Sudden flare during back burn		No - treated at station by first aid officer	
13	23/11/06	RFS Katoomba / Leura	Heat Affected	Exposure (Fire/heat/Smoke)	Affected by to hot weather & heat from back burn		No - treated on site by crews registered nurse	
14	24/11/06	RFS Valley Heights	Crush	Struck by Object	Gate dropped on hand		No - Treated on site	

INJURIES (contd.)							WorkCover Claim Processed
No.	Date	Agency / Brigade	Type of Injury	Cause of Injury	Details		
15	24/11/06	RFS Lake Macquarie Catering	Back Injury / Strain	Struck by Object	Pack of drink zealously thrown		No - Strained back
16	25/11/06	RFS Mt Riverview	Heat Affected	Body Stressing	Dehydration		Yes - Transported to Nepean Hospital
17	27/11/06	RFS Illawarra	Crush	Contact object	RAFT Locker door came down crushing hand		No- Taken to ANZAC Memorial
18	27/11/06	RFS Illawarra	Cuts/Abrasions (hand)	Contact object	Spiked hand		No - ANZAC memorial Hospital
19	1/12/06	RFS Woodford	Crush	Slip	Slipped carrying chainsaw, squashing L. hand between motor & rock.		Yes - Hospital
20	1/12/06	BMCC Driver	Heart	Unknown	Heart Palpitations		No - Treated by SCAT on site.
NEAR MISS							
21	1/12/06	RFS Lake Macquarie Catering	Near Miss	Floor collapsing	IMT False Floor Gave way		No - reported by NSWFB
22	30/11/06	RFS BK Helicopter	Near Miss	Pilot Error / Faulty fuel gauge	Heli lurched with crew onboard		

## 6.2 Summary of Property Damage

Lawsons Long Alley Fire, Nov 14th - Dec 3rd 2006 (Damage/Loss of Assets)										
Agencies	Toilets	Pedestrian Bridges Timber	Handrails	Lookouts	Stairways	Steps	Bollards	Tables/Seats	Retaining Walls Timber	Signs/Guardrail
NPWS	3	18	1357metres	15	3	3407	83	2	45	Unknown
RTA										\$125,000
Council										
TOTAL	3	18	1357metres	15	3	3407	83	2	45	Unknown



### 6.3 SUMMARY OF PROPERTY DAMAGE - PERSONAL

Date	Agency Brigade	Type of Damage	Cause of Damage	Details	WorkCover Claim Processed
1 15/11/06	RFS Cullen Bullen	Damaged Glasses	Extreme heat	Heat delaminated multi-focal lenses	Yes - Property (Prescription glasses)
2 18/11/06	RFS Wentworth Falls	Vehicle Damage	Hit tree	Dozer trail too narrow	Damage to rear cage.
3 23/11/06	RFS Lawson	Vehicle Damage	Collision	Parked car was hit @ station whilst D. Smith was on active fire duty	
4 1/12/06	RFS Woodford	Vehicle Damage	Hit by falling branch	Branch fell on car during high wind	Yes - Property claim completed
5	RFS Bell	Lost glasses	Fell during night work	Fell into the night and could not be found	Yes - property claim (Prescription glasses)

## **7.0 REVOCATION**

The Section 44 Declaration of 05:00hrs 15 November 2006 and subsequent amendments were revoked at 18:00hrs 3 December 2006.

At this point in time, all fire fighting efforts returned to the local control arrangements.

## **8.0 REHABILITATION OF CONTROL LINE**

Rehabilitation works were undertaken in the following areas:

- Along a containment line established between Darling Causeway and St Georges Parade, Mount Victoria. Due to the environmental sensitivity of the site, steepness of the terrain and the excessive excavation within and near the creek lines, the containment line required soil conservation work to stabilise and rehabilitate the site.
- At the Mount Hay swamp a previous soak was dug out without the knowledge of the Incident Management Team. The surrounding swamp suffered damage. Extensive restoration works have been undertaken and the site will be monitored.

## **9.0 LEGAL ACTION PENDING**

This office has received correspondence from Davis Legal acting on behalf of O'Connell's of Little Hartley. The applicant is seeking compensation for water loss due to water bombing operations conducted out of their dam located in Little Hartley. This office has referred them to the Department of Primary Industry (through the local Local Emergency Management Officer) in order to access a water replacement program for primary producers. Issues concerning a lack of consultation were also raised by the solicitor, though these are being addressed locally.

## **10.0 LESSONS LEARNED/ISSUES**

### **10.1 AFTER ACTION REVIEWS**

In-house After Action Reviews (AAR – previously known as debriefs) were conducted on a sector basis across the district, culminating in a District AAR on the 18/12/06. The all-agencies AAR incorporating the Blue Mountains Bushfire Management Committee (BMBFMC) was held on 19/12/06. Results of the whole AAR process are reflected in the following summary of outcomes.

### **10.2 RESOURCING**

A range of issues concerning resource planning, sourcing, tracking and tasking arose. In particular, a number of out-of-area strike teams were not deployed effectively and management of their deployment was less than satisfactory. The causes of this in part relate to over-resourcing during the peak of the fire and a subsequent overwhelming of local capacity to manage the associated complexities.

**Recommendation:** That an all-agencies pre-season exercise be held at Blue Mountains Fire Control to test and refine resource tracking, deployment and welfare, including the specific allocation of duties to ensure out-of-area and local brigade liaison is made more effective.

### 10.3 RESOURCE MANAGEMENT

The AAR recommended better resource management systems and processes, including dedicated tasking of an IMT member to ensure more effective resource management.

**Recommendation:** See 10.2.

### 10.4 NSWFB/RFS RADIO COMMUNICATIONS

The AAR noted that NSWFB – RFS radio communications was poor and fragmented. The effective use of NSWFB-RFS Liaison channels appeared to be limited.

**Recommendation:** That this issue be factored into the exercise recommended at 10.2.

### 10.5 NAMING OF DIVISIONS/SECTORS

There was some confusion concerning Division and Sector naming, boundaries and changes. This will require review to ensure better adherence to existing standards.

**Recommendation:** That this issue be factored into the exercise recommended at 10.2.

### 10.6 USE OF PLANT

The AAR noted that trail construction standards and the particular use of machines were sometimes wanting. Further planning with regard to Blackline options, the clearer specification of machine-related jobs, the selection and training of contractors and appropriate supervision was required.

**Recommendation:** That the Fire Trail Sub-committee of the District's Bushfire Management Committee be tasked with reviewing the efficacy, location and future configuration of the "Blackline"

**Recommendation:** That the District's Bushfire Management Committee review the availability, location and skills of contractors with a view to developing a list of preferred contractors for use.

**Recommendation:** That the issue of appropriate earthworks supervision be incorporated into the exercise recommended at 10.2.

### 10.7 CONTINUITY OF INCIDENT MANAGEMENT TEAM (IMT)

Discontinuity of IMT was an issue, with gaps apparent in frequent changes in certain positions, under utilisation of certain agencies in areas and several senior 'locals' rostered off at the same time.

**Recommendation:** That the fire authority members of the Blue Mountains Bushfire Management Committee review the District's Operations Coordination Plan to ensure

sufficient local personnel are available across all Incident Management Team positions for future large incident operations.

#### 10.8 COMMUNITY LIAISON

It was felt that the pro-active community liaison approach taken at this fire was extremely successful, in particular the 1-800 number, the website and community meetings. There was some issue with Sydney-based media dramatising the incident and the apparent omission of some agencies from media releases. There was some concern about community understanding of fire fighting strategies and tactics.

**Recommendation:** That Public Liaison personnel be thanked for their outstanding contribution, and be included in pre-season briefings in the Blue Mountains District to assist collaboration at future large incidents.

#### 10.9 ROSTERING OF PERSONNEL

There was some issue with rostering of key positions and the appropriate use of inter-agency skills. In addition, rostering of positions needs to take account of skills required, local representation and the early identification of needs.

**Recommendation:** That the fire authority members of the Blue Mountains Bushfire Management Committee review the District's Operations Coordination Plan to ensure the appropriate number of skilled and experienced people have been nominated for inclusion in 'Incident Management Team Members', and that a draft roster of available key personnel be developed and maintained for the statutory bushfire period.

#### 10.10 WORKSPACES FOR INCIDENT MANAGEMENT TEAM

Logistics was poorly housed and the workspaces for all IMT positions/functions requires review. Security of the building was also a concern, given safety issues and the apparent variable access control enforced.

**Recommendation:** That the fire authority members of the Blue Mountains Bushfire Management Committee review the Fire Control Centre's configuration, layout and facilities with a view to developing a five-year staged plan of upgrade for inclusion in capital works bids by affected agencies.

#### 10.11 BACK-BURNING

The use of back-burning was raised, in particular the actual rationale and trigger points need to be made clear to all. There was some doubt about whether some back-burns were initiated at the Divisional Command level or IMT. In addition, it was felt that the public needed to be better informed about its use.

**Recommendation:** That the Blue Mountains Bushfire Management Committee agree on appropriate trigger points for back-burning operations and review the decision process for such burns for incorporation into the District's Operations Coordination Plan.

### **10.12 SAFETY**

Safety issues also arose concerning the lack of PPE on Bulk Water carriers and aircraft passengers. Additionally, concern expressed about tanker and firefighter proximity to hazards at times.

**Recommendation:** That Logistics incorporate in their procedures/systems the requirement to ensure suppliers who enter the fireground are briefed on safety requirements, including PPE.

**Recommendation:** That the post-season de-brief meeting for Blue Mountains District Senior Officers be reminded about the specific fireground safety issues raised at debriefs.

### **10.13 RAFT STANDARDS**

RAFT standards were questioned, as was the variable application of the RFS and NPWS standard and RAFT themselves.

**Recommendation:** That the RFS RAFT standard be reviewed in light of recent experience, and that there be a common standard applicable across the fire authorities.

### **10.14 VARIOUS**

Other issues identified included the need to include RTA and Railcorp early in Incident Control; the need to develop better systems and processes for procurement, purchasing and accounting; some difficulty with ambulance deployment to Lithgow; problems with obtaining catering numbers and delivery of catering in places; the appropriate selection of staging areas for future use and the selection and use of water for aircraft use.

A range of more detailed issues have emerged from Brigade, Sector and out-of-District AARs that have not been included above, though will be captured and presented to the Blue Mountains Bush Fire Management Committee for consideration and action as required.

**Recommendation:** That the Blue Mountains Bushfire Management Committee carefully consider all debrief items from both Blue Mountains and Lithgow, and decide on a course of action for each item.

**Recommendation:** That the Blue Mountains Bushfire Management Committee carefully consider the recommendations of this Report and decide a plan of action for each recommendation, including timings, resources and responsibilities. This Plan of Action to be completed by 1 September 2007.

