

# Needs of an actual community post disaster – Hornsby Ku-ring-gai

*Darryl Dixon considers aspects of recovery preparedness by a local community*

## Abstract

This paper features the Hornsby Ku-ring-gai area of New South Wales and outlines the potential needs following a serious emergency event. The Hornsby Ku-ring-gai area is a group of suburbs, situated on the North Shore of Sydney, New South Wales. Although it is a well established community that has numerous resources can it adequately restore itself after an event such as a bushfire?



*Tourist locations such as Bobbin Head are affected as a result of Bushfires to the area. Concern is also placed on tourists being "locked in" if the two main access roads are closed suddenly due to bushfires.*

***'Its not whether you get knocked down; Its whether you get up'.  
– Vince Lombardi (1913–1970)***

## Introduction

No matter what emergency or incident arises, there will be a recovery period for the community affected. The recovery period may be a short period of time (less than a week) or a long period of time (up to twelve months or more).

Emergency Management Australia defines disaster recovery as the "co-ordinated process of supporting disaster affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well-being" (EMA, 1996 p.xi). The amount of preplanning and resources the community has essentially determines the length and complexity of the recovery phase for return (if possible) to a pre-event lifestyle.

The Ku-ring-gai area has a vast amount of bushland, some 60% is National Park or reserve land. One of the most serious hazards for the area is bushfires. As recently as January 2004, a bushfire took hold in the Ku-ring-gai National Park where some 1,400 hectares were burnt and a combined total of 400 Rural Fire Service Officers fought the blaze that affected local residents.

With bushfires a regular occurrence in the area it is appropriate to look at bushfire recovery. The reaction and requirements of the community after the incident occurs are of major concern as understanding and controlling recovery contributes to minimise recovery time. Essentially the community reduces in function for a period of time and that amount of time depends on the availability of resources and co-operation from within the community.

## Level of vulnerability

History of bushfires in the area is common due to the proximity of the Ku-ring-gai Chase National Park. Bushfires are generally reported relative to the amount of land it covers. The 1994 bushfires covered 75 per cent of all bushland in the Sydney metropolitan area. The majority of the bushland is situated on hillsides and remote areas that fire fighters cannot easily access in emergency situations.

Heat produced from these fires can also be very intense with temperatures up to 200 degrees Celsius recorded at the front of some fires during the 1994 season. This results in emergency teams having to fight the fire from a distance and not focusing directly on the areas required.

In late July 2000, seven people were killed during a back burning exercise conducted as a fuel reduction initiative. The fire went out of control in a section of the Ku-ring-gai National Park at Mt Ku-ring-gai (Stevenson 2001).

Bushfires are seasonal and the majority occur in the summer and autumn seasons when the bushland surface is fuel loaded with high amounts of dry leaves and vegetation. The likelihood of a fire in Ku-ring-gai is quite high considering back burning has been suspended or reduced for some time in several areas. Previous fires in the Berowra Valley Bushland Reserve in the north west of the area have been linked to arson by teenagers (ABC 2002).

### What can be done to change it and who is responsible?

Essentially everyone in the community is responsible for bushfires in their area. However these can be broken down into two distinct areas – legislative and moral responsibility. Through the combined activities of community and organisations the vulnerability of the area to bushfires is considerably reduced.

Legislative responsibilities can be found in various State Acts including *NSW Fire Brigades Act*, *Rural Fire Service Act*, and the *State Emergency Rescue Management Act (SERM)*. Other examples of delegated responsibility are found in emergency management plans such as the *State Displan* and the *Hornsby Ku-ring-gai Displan*.

Bushfires are the responsibility of the NSW Rural Fire Service section 207a of the local Displan that states “dealing with outbreaks of fire and taking measures as may be practicable to prevent outbreak of fires”. It also notes section 52 of the *Rural Fires Act* that allows for the formation of the Ku-ring-gai Bush Fire Management Committee.



Photo: Dianne Thompson

*While nature recovers post bushfire, there needs to be greater co-ordination for community recovery.*

Moral responsibilities include entire communities becoming involved by being fire-smart and implementing preventative measures like fire proofing houses, clearing ground fuels from around the house, planting a combination of fire resistant plants on their property, clearing gutters, and removing flammable items from around the house (eg. door mats, woodpile, and obvious flammable materials such as paper, boxes, crates, hanging baskets, and wooden garden furniture). They can also join the Static Water Supply (SWS) Marking System and prepare firebreaks.

Local councils can also amend various building codes to reduce the construction of residential areas in fire prone regions. The NSW Rural Fire Service (RFS) runs educational services aimed at all members of the community, from school lectures to information brochures on fire protection. Outside of the fire season the RFS conducts hazard reduction operations to minimise fire fuels and dry leaves from parklands close to homes. Through these prevention tactics community vulnerability to bushfires is mitigated significantly and a greater awareness of emergency services roles develops.

### What does the local emergency plans state about recovery?

The local Displan has very little on the topic of recovery management following a disaster or incident. It does state however that there is a need for a co-ordinated recovery following a disaster. Specific information contained on the one page dedicated to recovery management states that “the two councils (Hornsby and Ku-ring-gai) oversee the operations and the chairman of the recovery committee is the local emergency management committee (LEMC) chairman”. It also identifies six areas of need following a disaster such as a bushfire. These are:

- the tasks and responsibilities of participating organisations;
- co-ordinating arrangements;
- procedures for informing the public and media;
- assessment of resources required;
- emergency relief funding; and
- special requirements like large scale accommodation (*Hornsby Ku-ring-gai Local Displan 1998*).

There appears to be a lack of understanding of the importance of recovery management by the LEMC. However there is a supporting plan called the *Local*

**Table1. Lifeline Delegations**

Life Line	Specific Damage or Action	Co-ordinating Authority	
<b>Engineering</b>	Power	Energy Australia	
	Gas	Integral Energy	
	Communications	Telstra, Optus	
	Water, Sewerage, sanitation	Sydney Water	
	Transportation issues	RTA, State Rail	
<b>Community</b>	Schools	Dept Education	
	Hospitals	Health Dept	
	Food Supplies	St Vincent De Paul, Salvation Army	
	Employment	Centrelink	
	Economic development	Chamber of commerce, Centrelink	
	Fuel Supplies	Not assigned	
	Banking	Centrelink	
	Emergency Services	NSW Govt Agencies	
	Environmental issues	Environmental Protection Agency	
	Administrative support	Hornsby Council	
	Small business advice	Chamber Commerce, Hornsby Council, Dept of Fair trading	
	<b>Individual</b>	Psychological needs	Health Dept, Private practitioners as required
		Support groups	Dept Health, Salvation Army
Assistance and advice		Centrelink, Dept Health	
Legal , insurance, referral advice		Centrelink, Hornsby council, Dept Health	
Emergency Housing		Salvation Army, Ku Ring Gai council, Dept Housing, Centrelink	

*Disaster Welfare Plan.* This 13-page document outlines the mechanisms to co-ordinate the provisions of welfare services to those effected by disasters and to define the roles and responsibility of the services being provided. Although this document provides adequate information, it appears ambiguous and only lists essentials such as catering, accommodation, clothing, financial and welfare centres. This assists the community following a bushfire, but it only scrapes the surface of the total needs of the community such as engineering lifelines items like transportation, restoration of services (electricity, communications) and community lifelines such as schools, hospitals and commerce. Overall the two

documents could be more effective in relation to recovery management.

Information in the following table has been sourced from agencies and officials to determine exact requirements for all possible scenarios following a severe bushfire in the area. It should be stressed that some of these delegations are not “concrete” in that they are not officially documented or arranged by the LEMC. Therefore an agency could no longer provide a specific service and this not be known until the recovery phase has begun. These services should be defined in the various emergency plans as a matter of priority to ensure the quick restoration of facilities to the community, as longer delays will

greatly affect the status quo of a community.

Table 1 offers a combination of material gained from local and State emergency plans and from previous incidents that have occurred in the Ku-ring-gai area. It serves as a guide to assist recovery planners and community recovery committees to indicate the range and types of services that can be used during recovery processes and the principal sources of those services. Knowing who provides particular resources and how they can be arranged prior to an emergency will allow a quicker recovery time for the affected area. When the recovery committee is established and decides what is required, they can simply look at

**Table 2. Damage of severe bushfires**

Consequence	Measure	Effects
<b>Area Affected</b>	Square Kilometres/Suburbs	250 square kms of bushland. All suburbs in area can be affected.
<b>Deaths/Injuries</b>	Number of people killed, injured and nature of death/injury. Psychological effects	Numerous, depending on area affected. Previous history of nine deaths in Ku Ring Gai. Injuries include breathing difficulties eg asthma, heat stroke, burns to body. Both human and animal life affected.
<b>Disruption of services</b>	Service disrupted, location, time to restore	All of area affected with main roads over crowded/closed, power loss to homes, loss of water pressure. Emergency services in greater demand.
<b>Damage</b>	Type and degree, value	Homes destroyed or severely damaged. Bushland destroyed in both national parks.
<b>Economic</b>	Monetary value lost	Several million dollars worth of homes, property, disruption of businesses. Insurance, people not insured causing hardship.
<b>Social</b>	Psychological effects, morale, housing problems	People out of work, housing destroyed, people killed or injured causes psychological problems. Morale affected if continual bushfires affect area.
<b>Environmental</b>	Severity, scale	Severe damage to all bushland possible. Flora and fauna affected. Several years to restore or eliminated.
<b>Potential Problems</b>	Various areas	Loss of tourism with parkland damage. Main roads congested if not closed. Emergency services requiring assistance. Schools and vulnerable people require relocation.

their information tables and task the appropriate recovery action.

### Who is responsible for various recovery needs?

The following matrix is a brief look at the actual damage that can occur following a severe bushfire in the area. In order to determine who is responsible for the various recovery needs, we need to ascertain what damage has actually been done to the community. Without knowing the extent of the damage to the community it is almost impossible to determine the various recovery needs such as the individual community and engineering lifelines that residents rely on in the pre-disaster state.

This is an example of the destruction that can occur in the Ku-ring-gai area following a bushfire. It is interesting to note that the last major bushfire in the area was in 1994 and that significant damage to infrastructure and the majority of the community

was subject to major recovery and priority needs that form the three major "lifeline" categories.

As can be seen from the above table, the Ku-ring-gai area is highly vulnerable after a severe bushfire. Planning for the recovery phase is a high priority. As numerous lifeline services are severed after a bushfire in the area, common sense would dictate a quick and logistical operation to restore pre-disaster conditions, including arrangements to prevent further similar events.

### What effect does damage have on community?

We can break the reactions of communities into two areas, those of physical and psychosocial effects. Physical effects are facilities needed by a community to adequately operate on a daily basis and the psychosocial effects deal with the individual. At the onset of a disaster such as a flood, the community may be unable to organise the

removal of facilities and resources to minimise damage. The community therefore will ultimately lose some of their resources that will affect their recovery phase. Some of the physical losses the community may face include essential services, residential and commercial areas, community facilities, entertainment and environmental damage.

There are numerous physical losses that may be incurred from a disaster, however it is rare that a community would lose all of these resources for a long duration. The event may decommission a resource for a period of time; for example a flood may render housing unliveable and land inhospitable for crops until the floodwater subsides.

The longer these services are unavailable, the longer it will take for a community to become self-reliant post incident. People would be required to go without or travel to other communities in order to fulfil their requirements.





*Firefighters battle blazes in the Ku-ring-gai bush (Northern suburbs of Sydney) every year.*

The essential services likely to be affected include gas, electricity, water, telephone, sewerage, hospitals, and infrastructure including roads and public transport.

No matter what type of incident the community is subjected to, all people will be affected in some way. Being able to predict or understand their reactions at the onset of a disaster will assist with an easier recovery period.

In essence there are around 12 types of responses an individual will go through, ranging from the natural shock, to anger at the event, wanting to lay blame for the incident and denial that the event even happened. Following from these responses are personal psychological effects, such as paranoia, nightmares and Post Traumatic Stress Syndrome. Until recently emergency service workers have been ignored in this area as they have been stereotyped as strong and resourceful as opposed to survivors who might be viewed as helpless and lacking resources (Short 1979).

### **Repair time**

The repair time during the recovery phase varies greatly depending on the severity of the bushfire. To date the area has not been subject to

complete devastation. The 1994 bushfires were the most severe in local history, therefore a comparison can be made based on previous recovery times. Homes that were destroyed were rebuilt within 12 months, transportation was in pre-fire conditions within one week, and local businesses were affected for up to three months until the community was financially stable. Essential requirements such as water, sewerage, gas, electricity and communications were restored within four days after technicians were allowed into affected areas. As numerous service depots for many of the lifeline requirements are based in the local area the restoration time was greatly reduced.

### **Conclusion**

Obviously the threat of a bushfire in the Ku-ring-gai area is very high no matter what prevention and recovery measures are in place. Not only are government and voluntary agencies responsible for the provision of recovery management, the community itself has a large portion of the accountability to help themselves to help each other.

Welfare agencies and essential services in the Ku-ring-gai area need to update their local Displans to incorporate adequate recovery measures. The current version

being used lacks the thoroughness and detail required to compile the lifeline /responsibility chart.

Overall the disaster plan and the sub-plans are deficient in relation to recovery management. They only scrape the surface of the specific needs of the community such as the lifeline items like transportation and restoration of services. Recovery allows an early restoration of lifelines. Without them the community cannot restore itself to pre disaster operational status. Consideration of recovery arrangements is a priority and requires commitments from the local government and local agencies whose charters and governing laws define their core business of serving the community.

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*The Sydney – Newcastle Freeway (F3) is often closed due to severe smoke and bushland fires surrounding the road during peak seasons. As this is the only main roadway linking Sydney to Newcastle, extensive delays occur.*

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