

# Canberra Bushfires Fieldwork

18 January 2003

The weeks following the firestorms that struck Canberra on 18 January provided the former Cities Project with a unique opportunity to collect crucial data concerning building damage and fire behaviour. The data provides information about the impact of this disaster and will assist with accurate modelling of future events and their consequences.

Using Global Positioning System (GPS) units, digital cameras and palmtop computers with ArcPad GIS, comprehensive information was recorded on **431** suburban properties that suffered damage to the primary residence by fire and/or wind. Over one thousand photos were also taken and linked to the GIS database.

Damage State	Chapman	Curtin	Duffy	Giralang	Holder	Kambah	Lyons	Rivett	Torrens	Weston
Destroyed	77	3	221	1	35	28	4	13	2	6
Heavy Damage	2	1	2	-	1	4	-	-	-	-
Medium Damage	3	-	1	-	-	-	-	-	-	-
Light Damage	11	-	6	-	-	2	-	-	-	-
Superficial	3	-	2	-	-	2	-	-	-	-
<b>SUB TOTAL</b>	<b>96</b>	<b>4</b>	<b>232</b>	<b>2</b>	<b>36</b>	<b>36</b>	<b>4</b>	<b>13</b>	<b>2</b>	<b>6</b>

*Destroyed or damaged properties, 2003 Canberra bushfires.*

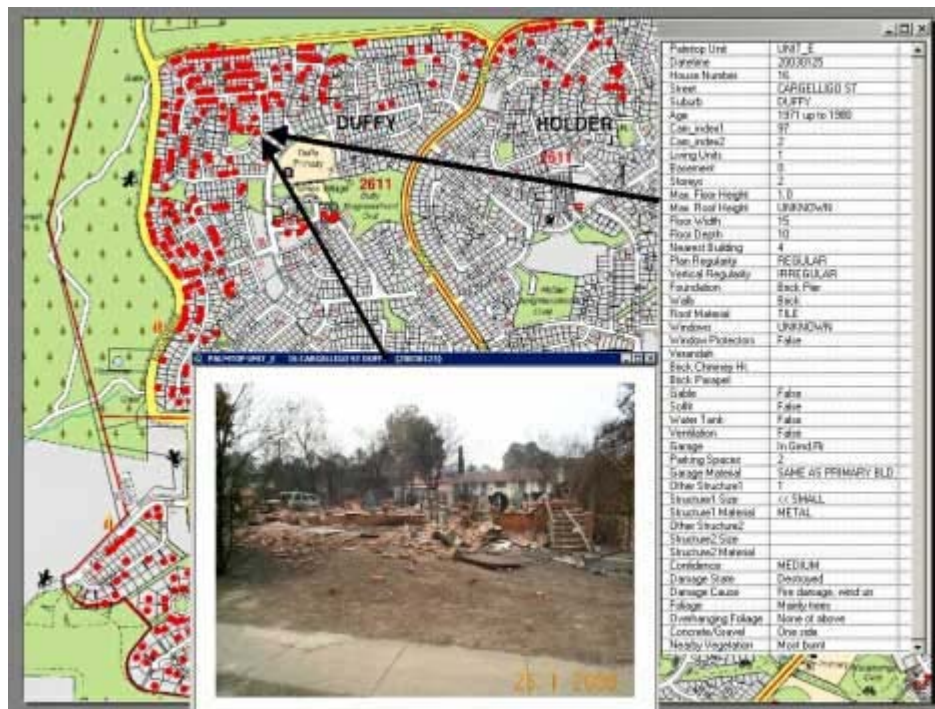
The rapid movement and ferocity of the fire storm is indicated by the large percentage of homes that were completely destroyed (91%), compared to the small percentage that showed lesser damage (9%). With only a few exceptions, buildings were destroyed once ignition was established.

The unique meteorological conditions associated with the approaching fire front caused extreme wind conditions in localised areas of south-western Canberra. These fierce winds uprooted trees, downed powerlines, blew in house windows, stripped tiles from roofs, and even embedded pot plants in house roofs ahead of the fire front. The statistics show that 5% of houses has severe damage caused by wind alone, while another 5% were damaged by both wind and fire.

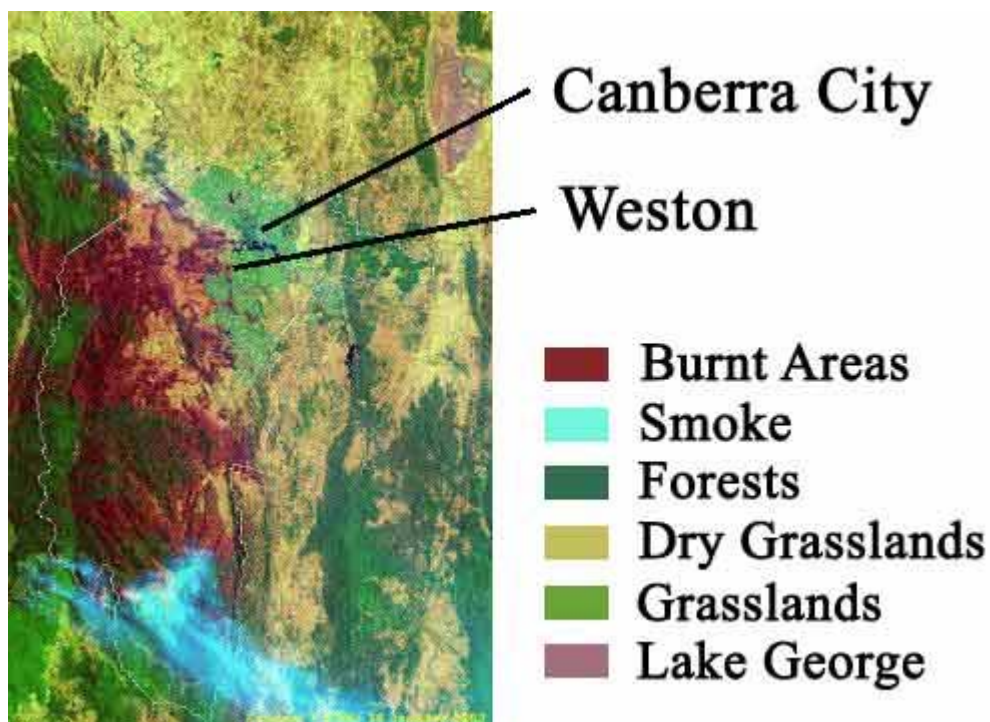
Other agencies are using the information gathered from the 2003 Canberra Bushfires by Geoscience Australia for a variety of purposes. The [CSIRO Fire Research Group](#) integrated the data with other scientific data (such as data on fire spread and intensity) they have collected.

The data collected will help emergency managers, planners and engineers to develop appropriate policies and regulations for future fire management. More importantly, this information will allow other communities to learn from the ACT's experience.

# Images



The image above shows the destroyed houses (red asterisks) in the suburbs of Duffy, and Holder. The GIS database not only shows spatial data but also the field attributes collected and photos for each data point.



These images show land cover across the Canberra region. The first image was captured by the Landsat7 Satellite in November 2002. The second (rollover) image was captured eight days after the Canberra bushfires.



*The GIS image above shows the destroyed houses (red asterisks) in Canberra's south-western suburbs of: Duffy, Chapman, Rivett, Weston, Holder, and Lyons.*



*96 homes in Chapman were affected by the fires.*



*Roofing materials were found hundreds of metres from original dwellings.*



*The intense heat from the fires scorched all the vegetation in this area of Chapman.*



*This home in Chapman was extensively damaged by the high winds.*



*Cities Project team manager, Greg Scott, surveying the total destruction of this house in Chapman.*



*Gutted house in Duffy.*



*Houses in Duffy did not stand a chance once the windows were blown in.*



*A two storey house in Duffy completely destroyed.*



*Nothing was spared in the path of the fire.*