KATOOMBA FALLS CREEK VALLEY ENVIRONMENTAL STUDY

PART 1

REPORT ON ENVIRONMENTAL STUDY AND MANAGEMENT PLAN

CONTENTS OF PART 1

1.	INTRODUCTION				
	1.01	Objectives	60.4		
	1.02	Background	In the sta		
	1.03	Scope, focus and limitations of study	1		
	1.04	The study area	2 2		
2.	NATURAL ENVIRONMENT				
	2.01	Climate	akono		
	2.02	Geology and geomorphology	6		
	2.03	Soils and soil erosion	6 8		
	2.04	Catchment runoff and streamflow			
	2.05	Water quality	13		
	2.06	Vegetation	15		
	2.07	Animals	18		
	2.08	Fire history and management	23		
	2.09	Summary of special features of natural environment	25 26		
3.	CULTURAL ENVIRONMENT				
	3.01	Aboriginal history	Control of the		
	3.02	Aboriginal history	27		
	3.02	European history	30		
	3.04	Present landscape character	33		
	3.04	Aesthetic and visual qualities	33		
	3.05	Residential amenity	34		
	3.00	Summary of special features of cultural environment	36		
4.	LAND USE				
	4.01	Present land use	37		
	4.02	Present land tenure	37		
	4.03	Zoning and future land use	38		
	4.04	Traffic and access	41		
	4.05	Utility services	42		
	4.06	Recreation	42		
	4.07	Tourism	44		
	4.08	Significance of walking and backpacking for tourism	44		
	4.09	Significance of the "green corridor" and open space to residents	46		
	4.10	Summary of most relevant aspects of land use	47		
5.	COMMUNI	TY PERCEPTIONS, VALUES AND ASPIRATIONS			
	5.01	Local residents	48		
	5.02	Environmental groups			
	5.03	The wider community	52		
			52		
	5.04 5.05	Perceived threats and opportunities	55		
		Community priorities	57		
	5.06	Summary of main conclusions from community surveys	58		

CONTENTS OF PART 1 (cont'd)

6.	SPECIAL ASPECTS OF THE ENVIRONMENTAL MANAGEMENT PLAN				
	6.01	Why another management plan ?	59		
	6.02	The future of the study area	59		
	6.03	The future of motor sports on Catalina Circuit	60		
	6.04	The adequacy of present zoning and development controls	62		
	6.05	The total catchment management concept	63		
	6.06	Aims and principles of the management plan	63		
	6.07	Costing, priorities and timing of the recommended actions	64		
7.	ACTIONS FOR RESTORATION AND MANAGEMENT OF THE PUBLIC LAND				
	7.01	Specific objectives	66		
	7.02	To maintain dry weather flows over Katoomba Falls	66		
	7.03	To minimise water pollution in Katoomba Falls Creek	68		
	7.04	To minimise future soil erosion and repair past erosion damage	68		
	7.05	To protect and restore native flora and fauna	70		
	7.06	To protect Aboriginal cultural heritage	71		
	7.07	To protect European cultural heritage	71		
	7.08	To enhance and maintain visual qualities	72		
	7.09	To promote recreational and tourist values in the public land	73		
	7.10	Other actions to achieve objectives of plan	75		
8.	ENVIRON	MENTAL MANAGEMENT OF TOTAL CATCHMENT			
	8.01	Specific objectives	77		
	8.02	Recommended actions to improve planning controls	77		
	8.03	Other actions to meet the objectives	78		
9.	ENVIRONMENTAL MANAGEMENT PROGRAMME				
	9.01	General strategy of management plan	79		
	REFEREN	CES PROPERTY OF THE PROPERTY O	85		
		Utility services			
	4 88	FIGURES			
F	igure 1	The study area	3		
	igure 2	Mean annual rainfall isohyets	7		
	igure 3	Slope classes	9		
	igure 4	Locations of soil erosion problems	11		
	igure 5	Swamps and impervious areas	14		
	igure 6	Predicted flow duration curves for Katoomba Falls Creek	16		
	igure 7	Vegetation	19		
	igure 8	Aboriginal sites	29		
	igure 9	Land use, tenure and zoning	39		
	igure 10	Proposed or potential developments	56		
	igure 11	Locations of recommended actions	67		
	igure 12	Locations of recommended actions (Frank Walford Park)	69		

CONTENTS OF PART 1 (cont'd) TABLES

Table	1	Soil erosion problem areas at locations shown in Figure 4	12
Table	2	Erosion hazard and advisable protective measures for soils	
		from Narrabeen sandstones	13
Table	3	Common plant species in Katoomba Falls Creek Valley	21
Table	4	Native animal species in Katoomba Falls Creek Valley	24
Table	5	Registered heritage items in study area	31
Table	6	Purposes for which development may be carried out with	
		development consent	40
Table	7	Questionnaire responses on present use of public land	49
Table	8	Community opinions on two major issues	50
Table	10	Recommended actions in year 1 of programme	80
Table	11	Recommended actions in years 2 and 3 of programme	81
Table	12	Recommended actions in years 4 and 5 of programme	83

1. INTRODUCTION

1.01 Objectives

This is a study of the environmental problems of the Katoomba Falls Creek Valley. Its ultimate aim is to produce an integrated environmental management plan for the valley, with the following broad objectives:

- · to ensure the protection of the natural and cultural environments.
- to maintain or enhance existing visual qualities and values,
- · to promote the quality of life of the local and regional communities.

As outlined in the study brief, key issues to be identified and evaluated include:

- · maintenance of water flow and quality to Katoomba Falls.
- protection of Aboriginal and European heritage,
- recognition of the "green space" near the town centre.
- · amenity of the adjacent residential development,
- opportunities for use for recreational, cultural and educational purposes, and for local tourist use.
- · community perceptions and priorities.

The study is essentially a co-operative effort between consultants F & J Bell & Associates, Blue Mountains City Council (BMCC) and the community group, The Friends of Katoomba Falls Creek Valley.

1.02 Background

The catchment area of Katoomba Falls Creek includes about half of the Katoomba urban area. Although the entire catchment has been modified by human land uses over at least 120 years of European occupation, much of the valley of the creek is still open space under public ownership and used mainly for recreational activities. Parts of this public land have good stands of native vegetation, most of which is regrowth after earlier clearing. Other parts are regarded as severely degraded, having obvious problems of soil erosion, weed invasion, water pollution, rubbish dumping and derelict structures.

Extending almost to the railway station and commercial centre of Katoomba, the public land of Katoomba Falls Creek Valley is surrounded by urban settlement. For a number of years there have been pressures to develop the valley for commercial, residential and other purposes that would alienate it from the public (see 5.04). These pressures, together with the continuing causes of environmental degradation, have given rise to much concern amongst local residents. A plan of management of the northern section of the valley, namely Frank Walford Park, was prepared about ten years ago (BMCC, 1982). The resulting recommendations were that the area be developed and managed for a wide range of recreational activities, and that previous environmental damage be repaired. The first of these recommendations has been met to a limited extent but most of the environmental problems reported then are still present.

More recently another management plan was prepared for the southern section of the public land, focused on tourist activities around Katoomba Falls (Manidis Roberts, 1990). Some of the recommendations of this plan have since been carried out and others are likely to be implemented during the next few years. Nevertheless, it is now recognised that an overall

environmental management plan is required for the entire valley and catchment area as the land uses and environmental problems throughout the area are related and interdependent.

Funds for an environmental study of the entire area were sought by The Friends of Katoomba Falls Valley, and they succeeded in obtaining a relatively small grant from the NSW Department of Planning. This was increased with additional money raised by The Friends and a matching contribution from BMCC. The intention was to use the funds to appoint consultants to carry out much of the work with appropriate input from BMCC and The Friends. F & J Bell & Associates were subsequently engaged on this basis.

1.03 Scope, focus and limitations of study

In common with most other environmental studies involving both urban and natural areas, there is a large range of issues in the Katoomba Falls Creek Valley study. As there are always budget and time limitations a major professional problem is to decide which aspects of such a study must have specialist input and which aspects may be dealt with in less detail without unduly compromising the specific objectives. Unfortunately, less detailed treatments of particular topics are always likely to be labelled as "sketchy" by critics who have special interests in these topics or who do not appreciate the focus and constraints

In view of the issues identified in the brief, the consultants have given particular attention to catchment hydrology, water pollution, soil erosion, Aboriginal heritage and the sampling of community opinions and attitudes. The Friends of Katoomba Falls Creek Valley have provided the professional inputs in geomorphic, biological and some historical aspects.

One important item that could not be dealt with thoroughly was the full costing of all recommendations. Without considerable investigation it was not possible to decide how to allow for local circumstances nor to decide whether some recommendations would be best carried out by BMCC or by contractors. Other significant matters that could not be addressed included the risk of accidents and possible litigation against BMCC in recreational uses of the public land. Follow-up investigations are recommended for these issues.

Other limitations of the study were due to the need to carry out the fieldwork in a 12-week period from June to September, as specified in the brief. This provided a poor sample of some important factors. It was a relatively dry period with no significant falls of rain and little direct data were therefore obtained on the hydrologic behaviour of the drainage system under flood conditions. Tourist and recreational activity tend to be seasonal and little purpose would have been served by visitor and traffic surveys for such a limited time. Because of these circumstances it was necessary to utilise indirect sources of information to a greater degree than would be necessary with a study over a longer period. Nevertheless, such problems are fairly typical of a study of this type.

1.04 The study area

Figure 1 shows the study area and some of its relevant features. The 2.9 sq km catchment area of Katoomba Falls Creek extends from the Great Western Highway in the north to the escarpment at Katoomba Falls in the south. In the north-east the catchment boundary passes through the Katoomba business centre and in the south-east it is only 0.5 km from the focal point of the Blue Mountains tourist industry at Echo Point. Katoomba Falls is about 1 km from Echo Point and many tourists visit both sites on the same trip.

1. INTRODUCTION

1.01 Objectives

This is a study of the environmental problems of the Katoomba Falls Creek Valley. Its ultimate aim is to produce an integrated environmental management plan for the valley, with the following broad objectives:

- · to ensure the protection of the natural and cultural environments,
- · to maintain or enhance existing visual qualities and values,
- to promote the quality of life of the local and regional communities.

As outlined in the study brief, key issues to be identified and evaluated include:

- maintenance of water flow and quality to Katoomba Falls,
- protection of Aboriginal and European heritage,
- recognition of the "green space" near the town centre,
- · amenity of the adjacent residential development,
- opportunities for use for recreational, cultural and educational purposes, and for local tourist use,
- community perceptions and priorities.

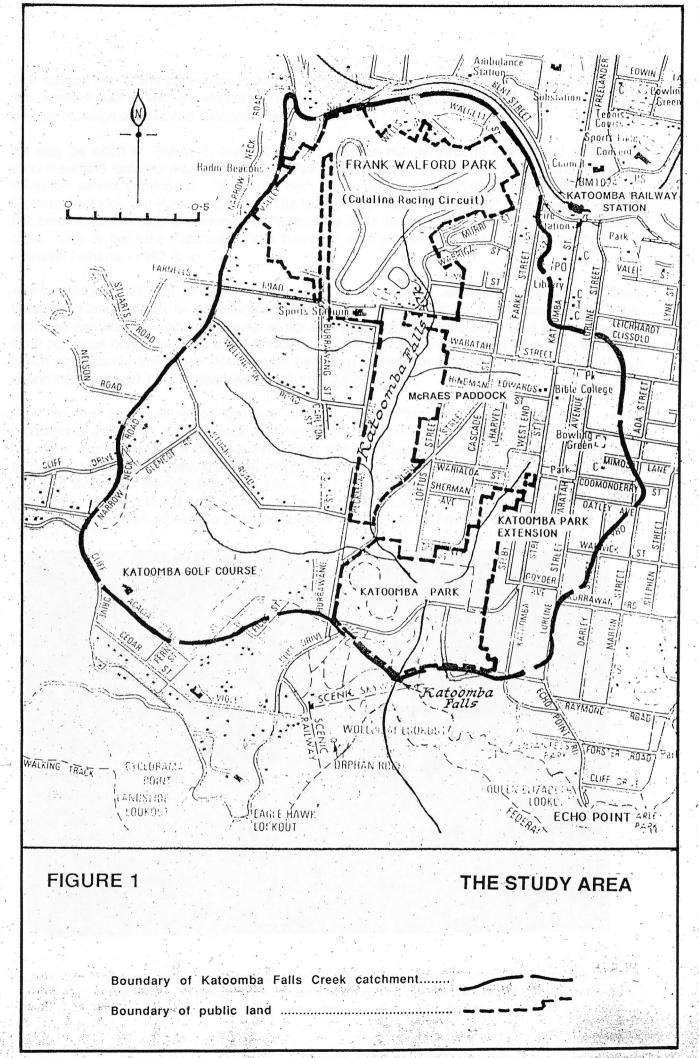
The study is essentially a co-operative effort between consultants F & J Bell & Associates, Blue Mountains City Council (BMCC) and the community group, The Friends of Katoomba Falls Creek Valley.

1.02 Background

The catchment area of Katoomba Falls Creek includes about half of the Katoomba urban area. Although the entire catchment has been modified by human land uses over at least 120 years of European occupation, much of the valley of the creek is still open space under public ownership and used mainly for recreational activities. Parts of this public land have good stands of native vegetation, most of which is regrowth after earlier clearing. Other parts are regarded as severely degraded, having obvious problems of soil erosion, weed invasion, water pollution, rubbish dumping and derelict structures.

Extending almost to the railway station and commercial centre of Katoomba, the public land of Katoomba Falls Creek Valley is surrounded by urban settlement. For a number of years there have been pressures to develop the valley for commercial, residential and other purposes that would alienate it from the public (see 5.04). These pressures, together with the continuing causes of environmental degradation, have given rise to much concern amongst local residents. A plan of management of the northern section of the valley, namely Frank Walford Park, was prepared about ten years ago (BMCC, 1982). The resulting recommendations were that the area be developed and managed for a wide range of recreational activities, and that previous environmental damage be repaired. The first of these recommendations has been met to a limited extent but most of the environmental problems reported then are still present.

More recently another management plan was prepared for the southern section of the public land, focused on tourist activities around Katoomba Falls (Manidis Roberts, 1990). Some of the recommendations of this plan have since been carried out and others are likely to be implemented during the next few years. Nevertheless, it is now recognised that an overall



The eastern half of the catchment includes a large part of the older residential area of Katoomba. The western half is less developed, containing a newer residential area with many vacant lots, several old large estates and Katoomba Golf Course.

As may be seen in Figure 1, the public land extends mainly through the central part of the catchment and includes most of Katoomba Falls Creek Valley. With a total area of about 90 ha, it forms an almost continuous "green corridor" comprising three sections: Frank Walford Park, McRaes Paddock and Katoomba Park. The local name "McRaes Paddock" has been adopted for the central section and is preferred to "Katoomba Falls Reserve" used elsewhere for the same area. This is because Katoomba Falls Reserve also officially includes Katoomba Park (see Manidis Roberts, 1990 p.4).

Frank Walford Park has an area of 47 ha and is also known as Catalina Park. It contains Catalina Circuit which is a winding strip of tarmac constructed for motor racing about1959. Although this was a popular venue for motor sports during the 1960s and 70s it is now used for such purposes only about one day per month. Within the circuit is a large (5 ha) area of swamp which significantly influences downstream hydrology, as shown in section 2.04, and is also an important plant and bird habitat (see 2.06 and 2.07).

Prior to the construction of Catalina Circuit, part of the area was a privately owned recreational park with a large pool constructed for swimming and water sports. Anchored on the water was the hull of a Catalina flying boat which became a notable tourist feature. Because of pollution problems, however, Blue Mountains Council closed the pool to swimming and later replaced it with an olympic type pool nearby. Formal gardens and a grassed picnic area were established around the old pool which became known as "Lake Catalina". An indoor stadium and other sports facilities have also been established in this part of Frank Walford Park.

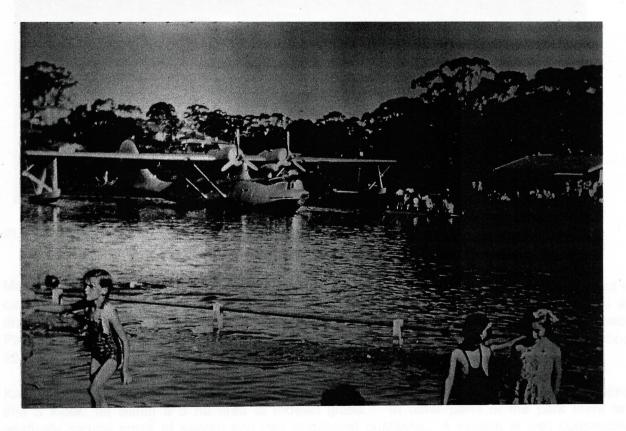


PLATE 1 Scene at Lake Catalina about 1950. This was a popular swimming area for local residents and tourists until closed because of water pollution (photo by courtesy of J. Smith)

In other parts of Frank Walford Park outside Catalina Circuit there are a number of open areas, some of which are swampy while others have either grass covers or bare, eroded surfaces. There are also substantial areas with good tree cover, mainly north and west of the circuit. A narrow strip of privately owned land intrudes into the western section of the Park. This is the route of an old tramway used last century for transporting coal and oil shale from mines in the Jamison and Megalong Valleys (see 3.02).

As shown in Figure 1 and Plate 2, Katoomba Falls Creek passes through the length of McRaes Paddock which has a total area of about 17 ha. On the eastern side of the creek it is mainly open, grassed land with several degraded boggy patches that were formerly hanging swamps. On the western side there is a strip of swamp in a more natural condition. Adjoining this and extending up the western valley slope is an area with open forest cover. Heavy grazing by dairy cattle has occurred throughout McRaes Paddock in the past and it is still used for grazing horses.



PLATE 2 Part of McRaes Paddock showing some areas affected by grazing.

Most of the southern section of the public land is in Katoomba Park which has been developed to cater for tourist activity near Katoomba Falls. The north-eastern corner of this section is an area of approximately 6 ha outside the park boundary and referred to in Figure 1 as "Katoomba Park Extension". The combined area of Katoomba Park and Katoomba Park Extension is about 26 ha.

Katoomba Park has visitor facilities such as picnic tables, shelter sheds, gas barbecues, toilets and a kiosk, all within a 5 ha area of mowed grass. In other parts of the park there are relatively natural areas of swamp and tree dominated bushland. A system of well constructed and maintained walking tracks through the park links up with an extensive system of tracks in Blue Mountains National Park below the escarpment. Katoomba Park also contains two sports ovals and a caravan park.