

Report on

A Proposed Land Use Determination for part of the Upper Goulburn Water Supply Catchment

Following consultation with the Land Conservation Council, the Upper Goulburn District Advisory Committee and other interested bodies, the following sections of the above report have been amended to read as follows:-

1. Section I (ii) on page 1

(ii) Water Supply Systems

Water is harvested from several river systems; 75 per cent of the yield is from the high rainfall southern section northern (Mansfield) section. The main river systems supplying the reservoir are: Delatite River, Jamieson River, Taponga River, Goulburn River, Big River, Howqua River, Fords Creek, Jerusalem Creek and Brankeet Creek.

The reservoir was constructed in 1956 to supply irrigation water for mixed farms downstream in the Goulburn Valley, to mitigate flooding, and for hydro-electrical power generation.

Domestic supplies are taken from various points in the storage. Water supplies are pumped for the townships of Eildon, Jamieson and Bonnie Doon, and in the latter two cases the water is used untreated for drinking and household use. The Eildon supply is chlorinated.

Other individual domestic supplies are taken from the reservoir at Mac's Cove, Taylor Bay, Gough's Bay and for many individual household supplies on waterfront allotments. In addition, the townships of Thornton, Alexandra and Seymour draw water from the Goulburn River for domestic supplies. These supplies are treated before use.

2. Section I (iii) on page 2

(iii) Water Quality

An intensive monitoring programme commenced in 1969 to determine the levels of faecal bacteria in surface waters and to study the algae, the chemical nutrients and the physico-chemical behaviour of the lake as a whole. Chemical analyses have been carried out twice yearly since 1941 and bacterial counts of the outlet water since 1964.

(a) *Bacterial Quality*

Samples are collected each month from 16 sites around the storage, including the outlet. There is a significant increase in *E. coli* and faecal streptococci counts at all sites following heavy rain at any time of the year and, in the summer, the surface water contamination is confined to those sites which experience intense recreational activity. The bacterial quality of the water leaving Lake Eildon is, at all times, satisfactory.

(b) *Biological Quality*

During the late summer of 1969 an unsightly bloom of a white variant of the blue-green alga *Microcystis* occurred. It was assumed, in retrospect, to be due to an increase in the concentration of plant nutrients derived from rotting vegetation on the hitherto unexposed banks of the storage. The water level had fallen so low during the 1967-68 drought that there was a substantial regrowth of clovers and grasses on these banks which were subsequently inundated as the water returned to its normal level in the winter of 1968. Considerable aerial spraying activity was observed in the catchment during 1968 but, in the absence of appropriate chemical data, any conclusion as to the factors responsible for the algal bloom is merely conjecture.

Apart from this isolated experience there have been no algal problems in Lake Eildon. There is however a higher concentration of algae in the northern section of the storage despite a higher turbidity and low light penetration into the water column. This situation is probably a result of the flow characteristics through this section since it is reversed in the southern half of the storage where the light penetration is high, the flow-through greater and the concentration of algae low.

Sewage discharges from towns in the vicinity of the Lake and deposition of faecal matter and other garbage pose a threat to future water quality. Aerial spraying and topdressing of any magnitude should be discouraged on adjacent

farmland if wind conditions are not favourable. The public should be made aware that they have a personal responsibility to maintain water quality for the benefit of themselves and others.

Although no records of suspended solids are available, observations have shown significant increases in sediment loads along the immediate shoreline in close proximity to committed residential areas, after adverse climatic conditions. There is an immediate need to limit further such development, and for the stabilisation of those areas already committed to residential development.

3. Section V

The proposed Land Use Determination has been amended to read as follows:

PROPOSED LAND USE DETERMINATION FOR PORTION OF LAKE EILDON CATCHMENT

CATEGORY NUMBER	LAND CATEGORY	PROVISION OF CATEGORY
1	<p>Land to be used for the protection of streams, watercourses and Lake Eildon.</p> <ul style="list-style-type: none"> - Within 200 metres of fully supply level of Lake Eildon, or a lesser distance where defined. - Within 40 metres of the banks of streams shown by heavy line on Plan No. S-125B. - Within 20 metres of other streams and watercourses within the Determined area. 	<p>Disturbance of soils and vegetation should be minimal on land in this category. Consultation with the SCA is required before the commencement of clearing or cultivation operations, earthworks associated with construction of building or stream crossings, or other earthworks.</p> <p>All sewage and sullage waters shall be treated in accordance with the requirements of the <i>Environment Protection Act, 1970</i>, the <i>Health Act, 1958</i> and the local municipality.</p>
2	Land to be retained as forest.	Grazing of land in this category should be limited to that required to reduce fire hazard, and where necessary the SCA will apply stocking rate conditions.
3	Steep land of a high erosion hazard best suited for protection forest but which may be used for grazing.	Forested land in this category should remain uncleared. The Authority may specify conditions relating to grazing management or other conservation measures.
4	Land suitable for grazing, parts of which may also be cultivated for cropping purposes.	The Authority will, where necessary, specify conditions relating to conservation measures or cultivation. Prior consultation with the SCA is required before land is used for commercial horticulture.
5	Land at present subdivided for residential development.	The Authority may advise on the use and management of this land to prevent or correct erosion and to protect water supply interests.

PROVISIONS APPLYING TO CATEGORIES 1, 2, 3, AND 4

Forest operations are to be carried out in accordance with prescriptions made or approved by the SCA, and conditions to that effect will be developed accordingly.

GENERAL PROVISIONS APPLYING TO ALL CATEGORIES

Proposals for subdivision of land, gravel removal, extractive industries, mining operations and recreational developments, likely to result in disturbance to soils or vegetation require prior assessment by the Soil Conservation Authority.

Where necessary, conditions will be applied to ensure that any disturbance to soils or vegetation does not cause erosion or otherwise present a risk to water supply interests.

[Extract from *the Victoria Government Gazette*, No. 12 dated 2nd March 1977]

Soil Conservation and Land Utilization Act 1958
UPPER GOULBURN WATER SUPPLY CATCHMENT
(Catchment to Lake Eildon)

Proclaimed 18th December 1956, *Victoria Government Gazette* No. 22 dated 9th January 1957, pursuant to Section 22, sub-section (1) of the *Soil Conservation and Land Utilization Act*, 1958.

NOTICE OF DETERMINATION OF LAND USE FOR PART OF UPPER GOULBURN (LAKE EILDON) WATER SUPPLY CATCHMENT

In pursuance of the provisions of Section 23, subsection (1) of the *Soil Conservation and Land Utilization Act 1958*, the Soil Conservation Authority, after consultation with the Land Conservation Council, has determined the land use for all that land in the Parishes of Banyarmbite, Booroolite, Brankeet, Darlingford, Delatite, Doolam, Eildon, Howqua, Howqua West, Jamieson, Lodge Park, Loyola, Maindample, Maintongoon, Mansfield, Thornton and Wappan within the boundaries of the Upper Goulburn Water Supply Catchment delineated and marked on Plan No. S-478, the original of which is lodged at the Head Office of the Soil Conservation Authority. All land within this area shall be used in accordance with the particular category of land use to which the areas has been assigned. The boundaries of land use categories shown on Plan No. S-478 are intended as a guide to persons and departments involved in the area, who should consult with the Soil Conservation Authority before making any changes in land use.

The provisions of individual land use categories are set out below and should be read in conjunction with the Determination Plan.

Category Number	Land Category	Provisions of Category
1	Land to be used for the protection of streams, watercourses and Lake Eildon- Within 200 metres of fully supply level of Lake Eildon, or a lesser distance where defined; Within 40 metres of the banks of streams shown by heavy line on Plan No. S-478; Within 20 metres of other streams and watercourses within the Determined area.	Disturbance of soils and vegetation should be minimal on land in this category. Consultation with the SCA is required before the commencement of clearing or cultivation operations, earthworks associated with construction of buildings or stream crossings, or other earthworks. All sewage and sullage waters shall be treated in accordance with the requirements of the <i>Environment Protection Act</i> , 1970, <i>the Health Act</i> , 1958 and the local municipality.
2	Land to be retained as forest.	Grazing of land in this category should be limited to that required to reduce fire hazard, and where necessary the SCA will apply stocking rate conditions.
3	Steep land of a high erosion hazard best suited for protection forest but which may be used for grazing.	Forested land in this category should remain uncleared. The Authority may specify conditions relating to grazing management or other conservation measures.
4	Land suitable for grazing, parts of which may also be cultivated for cropping purposes.	The Authority will, where necessary specify conditions relating to conservation measures or cultivation. Prior consultation with the SCA is required before land is used for commercial horticulture.
5	Land at present subdivided for residential development.	The Authority may advise on the use and management of this land to prevent or correct erosion and to protect water supply interests.

Provisions Applying to Categories 1, 2, 3 and 4.

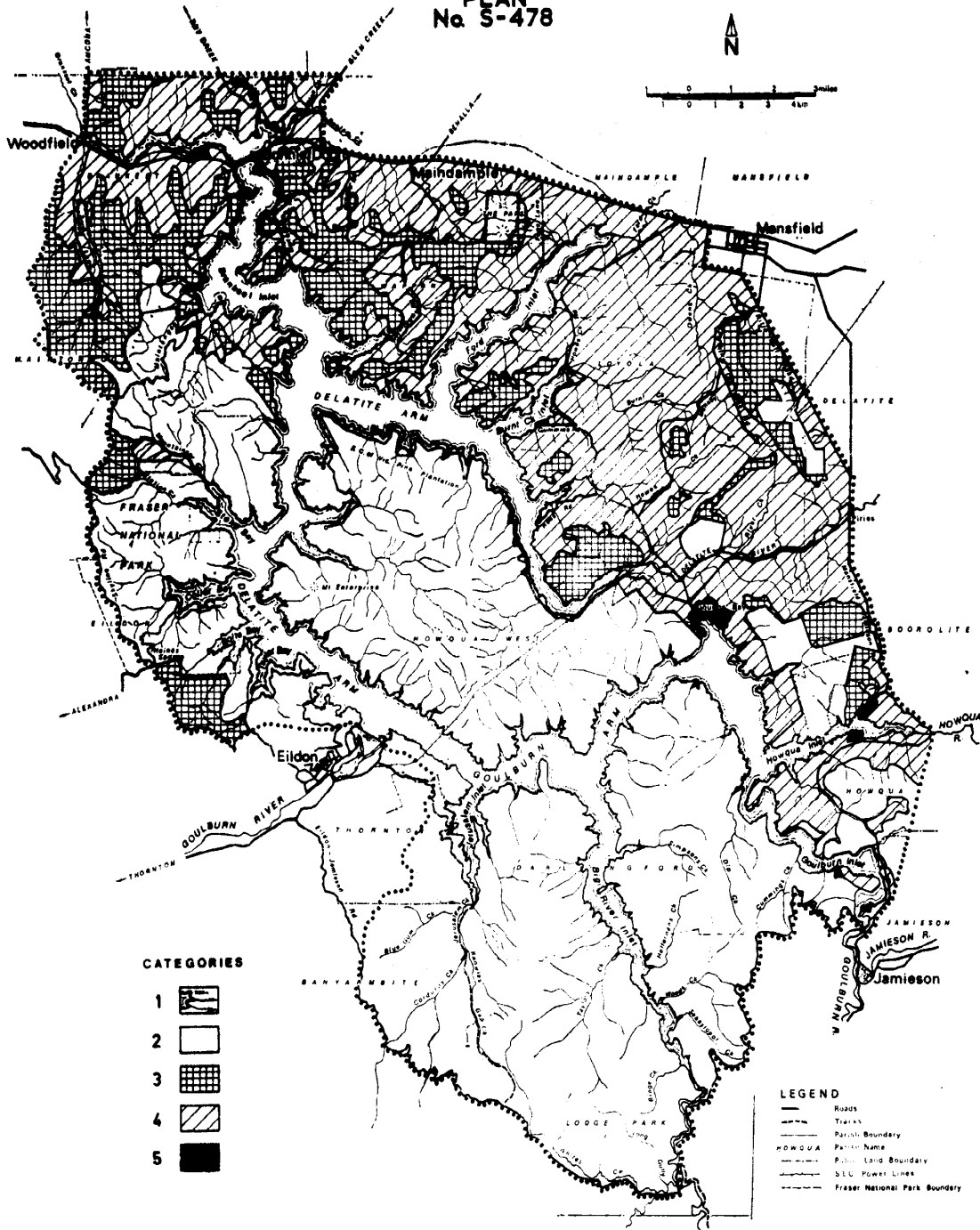
Forest operations are to be carried out in accordance with prescriptions made or approved by the SCA, and conditions to that effect will be developed accordingly.

General Provisions Applying to All Categories.

Proposals for subdivision of land, gravel removal, extractive industries, mining operations and recreational developments, likely to result in disturbance to soils or vegetation require prior assessment by the Soil Conservation Authority.

Where necessary, conditions will be applied to ensure that any disturbance to soils or vegetation does not cause erosion or otherwise present a risk to water supply interests.

PLAN
No S-478



P. G. FERN, Acting Secretary.