

SOIL CONSERVATION AUTHORITY

**LAND USE DETERMINATION FOR THE THOMSON
RIVER**

STAGES 1, 1(a) & 2

WATER SUPPLY CATCHMENT

Prepared for consideration by the
Land Conservation Council

A. C. Chappell. July, 1974.

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I. INTRODUCTION

The Thompson River Catchment (Stages 1, 1(a) & 2) was proclaimed on the recommendation of the Land Conservation Council, in September 1973. At that time, Council advised the Soil Conservation Authority to proceed towards a Land Use Determination (under the provisions of section 23 of the *Soil Conservation and Land Utilisation Act 1958*) without delay. Furthermore, as an interim step, to establish management prescriptions for forest operations in consultation with the Forests Commission and the Melbourne and Metropolitan Board of Works (MMBW).

Management Prescriptions were subsequently agreed to and approved by the Commission in January 1974, and have been in effect during the past season of forest operations.

The purpose of this report is to advise Council of the events that have followed Proclamation and the investigations that have been made, and to present a proposal for Land Use Determination of the catchment.

After consultation with Council and after receiving the comments of all other interested parties, the Authority will make its final Determination.

1. *The Supply System*

Please refer also to a report prepared by the Authority for Council prior to Proclamation, dated September 1973, reference SC/C/113. Stage 1. Diverting the Upper Thomson River from the Easton Portal into the Upper Yarra River. It is expected that diversion will be possible through this system in the next few months.

Stage 1 (a). Diverting Whitelaws Creek to the Easton Portal. This stage has been completed.

Stage 2. Construction of Swinglers Diversion Dam at the junction of the Thomson and Jordon Rivers, to divert water into the Stage 1 tunnel system. Diversion date for this stage is 1977. Full Supply Level is expected to be approximately 460 m.

2. *The Catchment*

Since proclamation, no changes have taken place in the catchment to reduce its ability to supply domestic water. It has been described in the Authority's earlier report to Council dated September 1973, and is defined on the 'preliminary plan'.

II. LAND USE

1. Forest Operations

The Management Prescriptions approved by the Forests Commission in January 1974 have been in effect during the season ending 1st May 1974. With minor amendments these prescriptions would become "conditions" on forest landuse, in accordance with the Land Use Determination.

In the past season, four different contractors were given approval for operations at eleven sites. Six of the sites were eventually worked, mostly for removal of logs from mixed species forest, but also for Ash (*Eucalyptus regnans*) logging. At the Nine Mile area the clear felling of Ash regrowth continued, followed by burning and re-seeding.

Stream buffer areas were observed during the operations and subsequent erosion prevention measures have been carried out satisfactorily on landings, tracks and roads.

A preliminary inspection has been made of roadworks and logging areas proposed for the 1974-75 season and further inspections will be made when the road alignments are actually blazed. The scale of operations for the coming season is expected to be similar to last season's unless site clearing for Swinglers Dam (Stage 2) commences.

2. Mining

Although the present level of mining operations in the catchment is low, the area has a history of mining activity, and no doubt the potential for successful mining remains.

Coopers Creek Mining N.L. has a current Mineral Exploration license covering the northern and eastern parts of the catchment. This is due to expire in 1974 but could possibly be extended for another 12 months.

Four Gold Mining Leases are current, all in the Jordon River sub-catchment. Lessees have been asked to advise the Authority of their present and proposed scale of operations and joint inspections will be made later in the year to discuss measures that might be necessary in the interests of the water supply. Most of the leases have 8 to 10 years to run, and can only be cancelled if operations are not in accordance with the lease conditions. Preliminary enquiries of Mines Department indicate that the inclusion now of additional conditions in the leases may be difficult, but not altogether impossible. Note that the proposed determination requires that earthworks have specific Authority approval, and also indicates areas (categories 1 and 2) where earthworks are to be discouraged or prohibited.

The Mining Registrar at Woods Point has been asked to give an indication of the number of mining claims registered in the catchment over the past 2 or 3 years, to give another indication of the interest in mining in the area. Road batters and cuttings in the northern parts of the catchment show signs of fossicking, some of them recent, and it is likely that most people in Woods Point and Aberfeldy would hold miners rights.

Section 7 and 347 of the *Mines Act 1958* provide that the Governor-in-Council may except an area from occupation for mining purposes under any miners right. In 1971 a number of water supply catchment areas between Bacchus Marsh and Gisborne were so excepted and the Authority will consider making a recommendation to Governor-in-Council that the Thomson River catchment also be excepted.

3. *Grazing Licences*

Four grazing licenses are still current in the catchment. Revegetation and batter stabilisation works carried out by the MMBW last spring have produced small but lush grazing areas down near the Thomson River itself, stock have apparently moved down to them from their previous grazing areas near Upper Thomson, Matlock and Aberfeldy.

This development is considered undesirable because it will lead to physical disturbance of the bed and banks of streams, and will reduce the effectiveness of the MMBW stabilisation efforts.

It is possible that the licenses be cancelled, or not renewed (they are on an annual renewal basis) or cancelled and re-issued for limited areas. The matter will be followed up with Crown Lands Department.

The proposed Land Use Determination makes no specific mention of grazing, but it is seen as a relatively 'intensive use' to be permitted only on parts of Category 4 land which may be suitable.

4. *Roadworks and Earthworks*

The only major earthworks since proclamation have been the completion of the access road to Swinglers dam site and reconstruction of Marshalls Spur Track to form an all weather road.

The access road between Thomson Portal and Swinglers is close to the main stream and crosses a number of tributaries, which makes satisfactory disposal of road runoff water difficult. At present most of the table drains discharge into successive depressions where the road crosses them, so that water quality is evidently affected during rain periods. It is recognised that Swinglers will eventually inundate much of that road, so improvements may be necessary only on that section of road upstream of Easton Portal.

Wet weather and increased use of the Thomson Valley road has led to its deterioration in the past two months. It is an indicator of the need for good road construction and drainage in high rainfall areas, and particularly on the coarse granitic soils.

Two other roads that give cause for concern are the Jericho Track and the road down from Aberfeldy to Swinglers. The former is in the Stage 2 catchment so can have no effect on water supply quality until that stage comes into operation. It should be considerably upgraded or cross-drained and closed to public use before 1977. The Aberfeldy-Swinglers road drains outside the proclaimed catchment and may not be used once Stage 3 comes into operation. Nevertheless it is very poorly drained and should be considerably improved if it is to be kept open for the next few years.

The MMBW has opened a quarry for road making material on the Marshall Spur road. No additional roadworks were involved and there is considered to be no hazard to the water supply in Whitelaws Creek.

In the proposed Determination, roadworks and earthworks are to be kept to a minimum in categories 1 and 2 and in all cases subject to specific Authority approval throughout the catchment.

5. *Recreation and Public Access*

Soil Conservation Authority policies on catchment management are based on a multiple use concept, whereby a form of land use is not permitted if it would lead to deterioration of the catchment or the water supply.

Until now public access has not been considered a form of land use to be dealt with in a Land Use Determination, although there is a policy on public access and recreation in the context of catchment management generally. It is that:

- a) where no demand exists from public access and recreation, no developments should be permitted which will encourage it, and
- b) where a demand does exist or develop, steps should be taken to direct the public to safe (from the water supply point of view) parts of the catchment.

The Authority considers that uncontrolled public access would be undesirable in this catchment by reason of the erosion hazard caused by vehicles and other concentrated activities, and by reason of a health hazard associated with effluent and waste disposal. Both hazards are highest in the vicinity of streams and storages and therefore specific mention is made of them in category 1.

However, the MMBW policy is that public access into the catchment should be restricted as much as possible to minimise the health hazards to an untreated domestic water supply. The MMBW would like 'letters of agreement' to be exchanged between the departments directly concerned, to the effect that vehicular access be limited to the roads on the catchment boundary, the Thomson Valley road and part of the Thomson-Jordon Divide road. It is proposed that these agreements would last until 1978 when experimental data on roads and logging in catchments becomes available from the Corranderrk studies.

While the Authority considers that vehicular access should be limited it would appreciate the advice of Council on the level of restriction it considers should be applied in this area.

Once agreement has been reached on the matter it should be formalised by regulations from the Governor-in-Council in accordance with section 3 of the *Land Conservation (Vehicle Control) Act 1972*.

The alternatives are that all or part of the catchment be proclaimed as an erosion hazard area under section 5 of the same Act, or that the Forests Commission under section 3 of the *Forests Act 1958* implement the agreed policy on access.

III. PROPOSED LAND USE DETERMINATION

Wording for the proposed Determination is given below, and should be read in conjunction with the 'preliminary plan' at the start of this report. The paragraphs in brackets are an explanation of the various categories and would not appear in the actual Victorian Government Gazette No.96.

Soil Conservation and Land Utilisation Act 1958

THOMSON RIVER (STAGES 1, 1(a) AND 2)

WATER SUPPLY CATCHMENT

Notice of Determination of Land Use.

Proclaimed 25th September, 1973, Victoria Government Gazette No. 96, dated 3rd October, 1973, pursuant to Section 22 (1) of the *Soil Conservation and Land Utilisation Act, 1958*.

In pursuance of the provisions of Section 23, sub-section (1) of the Soil Conservation and Land Utilisation 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 Moolpah, Bullung, Toombon and Baw Baw within the boundaries of the Thomson River (Stages 1, 1 (a) & 2) Water Supply Catchment, delineated and marked on plan No. 2763, 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 area has been assigned. The boundaries of land use categories shown on plan No. 2763, 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 general provisions of each of the landuse categories are set out hereunder:-

CATEGORY 1

LAND TO BE USED FOR THE PROTECTION OF STREAMS AND WATERCOURSES WHERE CAMPING WILL NOT BE PERMITTED, WHERE DISTURBANCE OF SOILS AND VEGETATION IS TO BE MINIMAL, AND THROUGH WHICH VEHICULAR ACCESS AND CROSSINGS WILL BE PERMITTED ONLY AS SPECIFIED BY THE AUTHORITY. THIS CATEGORY INCLUDES LAND WITHIN 200 METRES OF ANY WATER DIVERSION WORKS OR STORAGES, WITHIN 80 METRES OF THE BANKS OF STREAMS SHOWN BY A HEAVY LINE ON PLAN NO. 2763 AND WITHIN 20 METRES OR SUCH GREATER DISTANCE AS THE AUTHORITY MAY SPECIFY OF OTHER STREAM AND WATERCOURSES IN THE CATCHMENT.

(These buffer zones are not limited to permanent streams, but extend along any drainage line which Authority officers consider may flow from time to time. Many watercourses and streams are not shown on the Land Use Determination plan, but can be located on aerial photos and other plans of the area. For most drainage lines the buffer width will probably be 40 metres each side, but it is recognised that 20 metres each side will be adequate in certain situations.)

CATEGORY 2

LAND UNSUITABLE FOR INTENSIVE USE BY REASON OF ITS STEEPNESS, ERODIBLE SOILS OR POOR GROWING CONDITIONS. EARTHWORKS AND FOREST OPERATIONS ARE TO BE PLANNED TO AVOID THESE AREAS AS MUCH AS POSSIBLE.

(Includes land generally steeper than 30^o or 58% and land in and around the Baw Baw Alpine Reserve.)

CATEGORY 3

LAND SUITABLE FOR MOST FOREST PURPOSES, BUT ON WHICH CLEAR FELLING OPERATIONS WILL BE PERMITTED ONLY WHERE THE AUTHORITY IS SATISFIED THAT THEY REPRESENT NO HAZARD TO THE WATER SUPPLY.

(Forest operations over the past two years indicate that provided:

- stream buffer zones are observed and
- tracks and roads are well maintained during the operating season, and breached, barred or effectively drained when operations are completed, then virtually any forest operation is acceptable on land in this category. Nevertheless it is proposed that over the next 2 or 3 years clear felling and burning operations will be permitted only on a trail basis for land in this category. More definite policies can be developed when the practical effects of slopes, aspects and soils are known.)

CATEGORY 4

LAND SUITABLE FOR FOREST PURPOSES, PARTS OF WHICH MAY BE SUITABLE FOR MORE INTENSIVE USES.

(This land has slopes generally less than 20^o or 36% and erosion hazard is relatively low. Significant areas of Ash regrowth are included in the category, and it is recognised that their utilisation will normally include clear felling and burning. It is desirable that logging and access roads and any future parking, camping or picnic facilities be confined to land in this category. Other 'more inclusive uses' could include plantation development, grazing, cropping, extractive industries and other uses that may become acceptable in future.)

SPECIFIC REQUIREMENTS

WHILE THE CATEGORIES LISTED ABOVE STATE THE FORMS OF LAND USE WHICH MAY BE PERMITTED WITHOUT HAZARD TO THE WATER SUPPLY, THE SOIL CONSERVATION AUTHORITY MAY HAVE SPECIFIC REQUIREMENTS IN RELATION TO ANY LAND USE.

IN PARTICULAR:

- (a) ALL FOREST OPERATIONS ARE TO BE CARRIED OUT IN ACCORDANCE WITH MANAGEMENT PRESCRIPTIONS DRAWN UP OR APPROVED BY THE AUTHORITY
- (b) PRIOR APPROVAL IS NECESSARY FOR LOCATION, DESIGN AND IMPLEMENTATION OF ROAD WORKS OR EARTHWORKS WITHIN THE CATCHMENT.

Appendix 1

[Extract from the *Victoria Government Gazette*, No. 96, dated 3rd October, 1973]

Soil Conservation and Land Utilization Act 1958
Land Conservation Act 1970

THOMSON RIVER (STAGES 1, 1(a) & 2) WATER SUPPLY CATCHMENT

PROCLAMATION

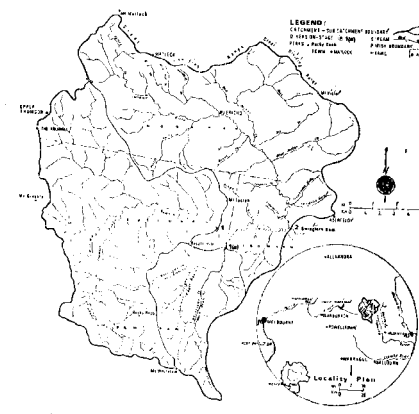
By the Lieutenant-Governor as Deputy for His Excellency the Governor of the State of Victoria and its Dependencies in the Commonwealth of Australia, &c., &c., &c.

I, the Lieutenant-Governor as Deputy for the Governor of the State of Victoria in the Commonwealth of Australia, by and with the advice of the Executive Council of the said State and having considered a recommendation of the Land Conservation Council in pursuance of the provisions contained in Section 22(1) of the *Soil and Land Utilization Act 1958* (No. 6372) and Section 5(1)(b) of the *Land Conservation Act 1970* (No. 8008) do by this Proclamation define the water supply catchment area to be known as the Thomson River (Stages 1, 1(a) and 2) Water Supply Catchment.

The area proclaimed is the catchment to water diversion works (Stages 1 and 1(a) and the Swinglers Dam (Stage 2) to be constructed by the Melbourne and Metropolitan Board of Works on the Thomson River and its tributary, Whitelaws Creek, and on Crown Land in the Parishes of Bullung and Toombon.

The use of land within this catchment is subject to specification of notice or by determination made by the Soil Conservation Authority, acting under the provisions of Section 22(2) and 23 (1) (a) (b) and (c) of the *Soil Conservation and Land Utilization Act 1958*, as amended.

The area described is indicated on Plan No. 2763 hereunder, the original of which is lodged at Head Office of the Soil Conservation Authority, 378 Cotham Road, Kew, 3101.



Given under my Hand and the Seal of the State of Victoria aforesaid, at Melbourne, this twenty-fifth day of September, in the year of our Lord One thousand nine hundred and seventy-three, and in the twenty-second year of the reign of Her Majesty Queen Elizabeth II.

(L.S).
WINNEKE

H. A.

By His Excellency's Command.

W. BORTHWICK
Minister for Conservation

GOD SAVE THE QUEEN!

By Authority: C. H. RIXON, Government Printer, Melbourne

Appendix 2

SOIL CONSERVATION AUTHORITY

MANAGEMENT PRESCRIPTIONS FOR FOREST OPERATIONS in the THOMSON RIVER (Stages 1, 1(a) and 2) WATER SUPPLY CATCHMENT

1. *General*

Operations are to be in accordance with the relevant land use categories of the Land Use Determination made by the Soil Conservation Authority on 1974, under the provisions of Section 23 of the *Soil Conservation and Land Utilization Act 1958*. The various land use categories are marked on SCA Plan No.

Timber harvesting operations are to be located and organised so that they are consistent with both catchment protection and the effective establishment of required regeneration. They are to be carried out in accordance with a documented utilisation plan prepared at least eight weeks prior to commencement of each season's operations and approved by an Authority officer. A copy of the plan is to be held in the relevant District Forest Office, and is to be available for perusal by appropriate Soil Conservation Authority (SCA), Melbourne and Metropolitan Board of Works (MMBW) or Lands Department officers.

2. *Period of Operations*

Timber harvesting operations are prohibited during the period 1st May to 30th November, except that earlier commencement of operations may be authorised by the Divisional Forester after consultation with the Senior Catchment Investigation Officer (who will contact the appropriate MMBW officers).

Temporary suspension of operations is to be imposed at any time by the District Forester on his own initiative or on the advice of an SCA officer, during or following heavy rain, in such areas as for such periods as are deemed necessary to prevent deterioration of the quality of the water supply.

3. *Debris in Water Courses*

Forest operations are to be carried out in a manner which will ensure that water courses are kept free of resultant heads, logs and similar debris. Land described in Category 1 in the Land Use Determination is to be used for the protection of streams, storages and watercourses, and timber utilization operations are excluded from that land.

4. *Roading*

SCA approval is required for the location and design standards of roads and other earthworks. New roads should be planned to avoid Category 2 land as much as possible.

Effective road maintenance is to be carried out throughout the year to minimise erosion and the direct discharge of runoff into stream channels.

5. *Snig Tracks*

In general, utilization operations will not be permitted on Category 2 land. Elsewhere, snig tracks are to be located so that erosion will be kept to a minimum and prior approval of the supervising forest officer is necessary where side cutting is required. As far as is practicable snigging is to be uphill.

Snigging or machine movement directly through any running stream or swampy area is prohibited. Subject to the approval of location and design by an SCA officer bridges or pipe culverts are to be constructed at all crossings of running streams.

Where directed by the supervising officer, temporary culverts or log crossings are to be constructed at crossings of dry drainage channels and these must be removed before the end of each season's operations.

Prior to 30th April each year or prior to leaving an area, or prior to significant periods of absence, snig tracks and other tracks which are liable to collect and channel surface runoff are to be breached and barred at intervals so that runoff is diverted into the surrounding vegetation and not discharged directly into streams.

These water diversion works are to be carried out to the satisfaction of and within the time specified by the supervising forest officer, acting on his own initiative or on the advice of and SCA officer.

6. Landings and Log Dumps

No landing or log dump is to be constructed on land described as Category 1 or 2 or within 80 metres of, or in a position likely to cause direct discharge of drainage into streams. The location of all landings is to be approved by the supervising forest officer and disposal of bark is to be directed by him. When the landing is no longer required, the disturbed area is to be levelled and drained so that runoff is directed into the surrounding vegetation.

7. Reserved Areas

Except for approved crossings, earthworks and timber utilization operations are to be excluded from the following areas:

- (a) An area within 200 metres radius of the Thomson portal.
- (b) An area within 200 metres radius of the Easton portal.
- (c) An area within 200 metres radius of the Stage 2 portal and high water level of the Swinglers Weir.
- (d) A strip of minimum width of 80 metres on each bank along the main course of the Thomson and Jordon Rivers, as shown by the heavy line on SCA Plan No.
- (e) A strip of minimum width of 20 metres on each bank of all other streams.
- (f) Such other strips or sections along water courses or streams as, in the opinion of the SCA, are necessary for effective catchment protection.

8. Clear Felling

Approval for area proposed for clear felling is subject to a joint inspection with an SCA officer to determine stream buffer widths and limits of the area to be clear felled. Clear felling will not be approved on land described as Categories 1 and 2, may in special circumstances be approved on Category land, but should be limited to Category 4 land as much as possible.

9. Prescribed Burning

The use of fire for silvicultural and protection purposes is to be in accordance with accepted Forests Commission practices and is to be restricted to a minimum consistent with sound silviculture and effect protection of the catchment from fire.

Burning operations are to be planned in advance and shown on the utilisation plan, thereby bringing them to the attention of the SCA, the MMBW and Lands Department.

10. Fuel Dumps

No fuel dumps are to be located, and no tractor servicing carried, and Category 1 land or within 100 metres of any running stream. Waste oils and greases are to be collected and disposed of outside the catchment in a manner approved by the supervising forest officer.

11. *Camps*

The establishment of any temporary or permanent camps associated with forest operations is prohibited.

12. *Sawmills*

The establishment of any sawmill or of any industry converting timber to manufactured products is prohibited.

13. *Sanitary*

Suitable chemical type sanitary facilities are to be used by persons engaged in forest operations. The location, installation and servicing of the sanitary facilities are to be to the satisfaction of the District Forester. Disposal of garbage and waste material is to be as directed by the District Forester.

14. *Wildfire*

In so far as they are inconsistent with prompt effect suppression of fires these prescriptions shall have no force. Subsequent remedial soil conservation measures may be required by the SCA.

Appendix 3

RELEVANT LEGISLATION

Mines Act, 1958:

Section 7

1. The Governor-in-Council may at any time either by a general or particular description except from occupation for mining purposes under any miner's right from being leased under a mining lease any specific portion of Crown lands or any class of Crown Lands.
2. No land so excepted or included in any class so excepted shall be occupied under a miner's right unless such exception is revoked nor unless revoked shall it be lawful for any person to make out or apply for a mining lease of such land or any part thereof, and any such marking out or application shall be null and void.
3. If the Governor-in-Council thinks fit, such exception shall be made as regards the surface of the said land and down to such depth below the surface or from any depth below the surface to any other depth below the surface as the Governor-in-Council by order directs.

Section 347 The Governor-in-Council may at any time except from occupation for mining purposes under any miner's right or from being leased under a mining lease any specific portions of private lands, and no land so excepted shall be marked out or occupied contrary to such exception under any provisions of this Part for mining purposes until such exception is revoked by the Governor-in-Council.

Land Conservation (Vehicle Control) Act 1973

Section 3

1. Notwithstanding anything in any Act the Governor-in-Council may make regulation for and with respect to:
 - a) prohibiting or regulating traffic or any class or classes of traffic on public land; and
 - b) prohibiting or regulating the use of vehicles on public land.
2. regulations under this section:
 - a) may be general or may be restricted in operation as to time, place, vehicles, persons or circumstances whether any such time, place, vehicle, person circumstance is determined or ascertainable before or after the making of the regulations;
 - b) may authorise the delegation of any powers, duties or discretion to any person or body having the management or control of any public land or any person in the service of any such person or body;
 - c) may prescribe penalties not exceeding \$500 for any breach of the regulations;
 - d) shall have full force and effect notwithstanding anything or any regulation or by law under any other Act.

Section 5

1. The Governor-in-Council on the recommendation of the Soil Conservation Authority may, be proclamation published in the Government Gazette:
 - a) declare any public land to be an erosion hazards area; and
 - b) revoke or amend any such declaration.
2. the Soil Conservation Authority shall not make a recommendation under sub-section (1) in respect of land under the management or control of any person or body except at the request of that person or body'.
3. etc.

Forests Act 1958 (as amended, 1970)

Section 21

1. Subject to this Act the Commission may

close for such period as the Commission thinks fit or, with the approval of the Governor-in-Council, permanently the whole or part of a road, track, tramway or other work constructed or maintained by the Commission.