

HAMILTON, WILLAURA, DUNKELD, LAKE BELLFIELD WATER SUPPLY CATCHMENTS

A Proposal for Proclamation

Little Tea Tree Creek Tributaries (Hamilton)
Mason Creek (Willaura)
Wannon river Tributaries (Lake Bellfield)
Serra Range Tributaries (Dunkeld)

Statement prepared for consideration by the
Land Conservation Council

May 1989

Land Protection Division

Department of Conservation, Forests and Lands

THE GRAMPIANS CATCHMENTS

The four separate areas contained in this proposal all occur within the Grampians Ranges in Western Victoria and are located on streams that flow to the coast within the Glenelg or Hopkins Rivers Basins.

The characteristic feature of the Grampians in general is the cuesta land form, which is distinguished by long gentle, upward, westerly slopes (dip slopes) which end abruptly in the easterly escarpments (scree slopes). The Grampians cuesta consists of folded and faulted, low dipping beds of Paleozoic sandstones of varying ability to withstand erosion. A cuesta is formed when the overlying softer beds are eroded, exposing the resistant rock strata beneath. The degree of fracturing and faulting of the resistant rock strata determines to what degree the dip slope is dissected. A high degree of fracturing and subsequent erosion led to the formation of steep gullies and scree/outwash slopes.

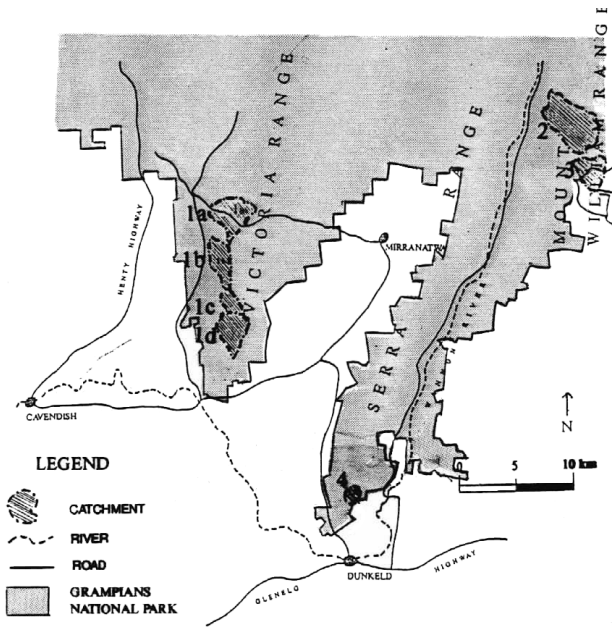
Generally the soils of the ridges and higher elevations are sandy skeletal, shallow soils dispersed amongst large areas of solid rock strata. Soil development increases and exposed rock decreased downslope, until, on the poorer drained scree and out-wash slopes, deep sandy soils may occur.

The plant communities range from short heath/shrublands on the exposed, rocky, upper slopes; to short, sparse scrub/woodlands downslope to dry sclerophyll forest on the outwash slopes. Tall dry sclerophyll and wet sclerophyll forests may occur in the sheltered gullies and on fertile soils.

In the main, the catchment occupy the sparsely vegetated dip slopes but may extend into the poorer drained areas of the outwash-slopes where soils are deeper. Abutting the scree slopes of the Mount William Range, below the Major Mitchell Plateau, are granite/grandiorite hills that contain the headwaters of Mason Creek, one of the catchment's streams. These hills have deeper soils, than those described above, and support similar native vegetation types but of a merchantable quality and quantity. The catchments fall within altitudes of; 330 m - 919 m on the Victoria Range, 410m - 1,100 m on the Mount William Range, and 330 m - 830 m on Mount Abrupt. At these altitudes the catchments experience rainfall of between 700 mm to greater than 900 mm falling primarily during the winter months. The water quality problems tend to be ones of acidity and colour especially during the drier months.

All catchments lie within or have a major portion of their area within the Grampians National Park. Less than 2% of total area of 4,473 ha is freehold land. Recommendations made by the Land Conservation Council for public land use in the region are contained in "Final Recommendations South-Western Study area, District 2" 1979 LCC. These are; the Grampians National Park (A1) and the relevant water supply offtakes (E13), (E15), (E17), (E18), (E19) and (E20).

Further details about the respective catchments areas are given in the following pages.



WATER SUPPLY CATCHMENTS

1. Little Tea Tree Creek Tributaries
 - 1a. Gap Creek
 - 1b. Waterworks Creek
 - 1c. Brown Creek North
 - 1d. Brown Creek South
2. Wannon River Tributaries
3. Mason Creek
4. Serra Range Tributaries

LITTLE TEA TREE CREEK TRIBUTARIES (HAMILTON) WATER SUPPLY CATCHMENT

The catchment (comprising sub-catchments Brown Creek South, Brown Creek North, Waterworks Creek and Gap Creek) drains the western slopes of the Victoria Range. The catchment streams are within the headwaters of the Little Tea Tree Creek that drains to the Wannon River, within the Glenelg River Basin.

The total area of 2,359 ha in this catchment is made up from the following sub-catchments; Brown Creek South (514 ha), Brown Creek North (490 ha), Waterworks Creek (538 ha), Gap Creek (817 ha), with the offtakes located within the Parishes of Bullawin & Larneebunyah.

Land Tenure and Use

The catchment is entirely public land within the Grampians National Park (A1).

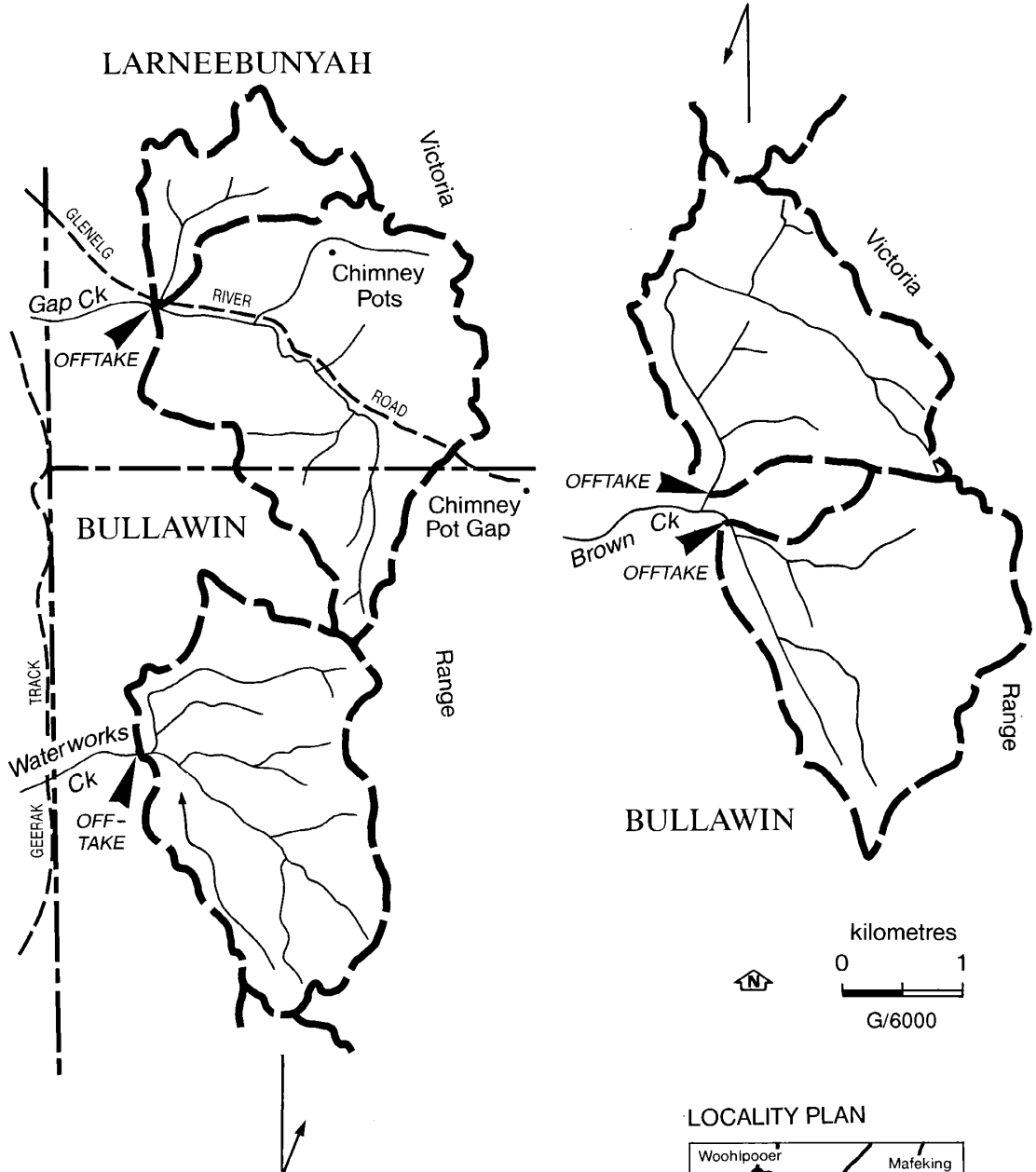
Water Supply System



The offtake weirs on Gap Creek (E17), Waterworks Creek (E18), and Brown Creek (E19) divert water, by pipeline, to service reservoirs near Hamilton for distribution to Hamilton (population 10,100). Water harvested from the catchment is of good quality but seasonally can be characterised by low pH (5.6 - 6.7) and high colour. The water supply authority is the Hamilton Water Board.

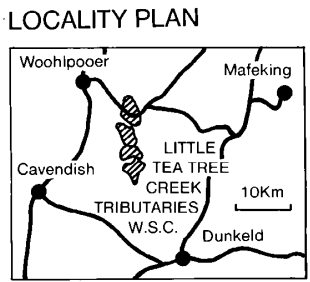
Administrative Areas

Parishes:	Bullawin, Larneebunyah
Municipality:	Shire of Dundas

PLAN No. S-1493
LITTLE TEA TREE CREEK TRIBUTARIES
(HAMILTON) WATER SUPPLY CATCHMENTS



- LEGEND**
-  Catchment boundary
 -  Parish boundary
 - BULLAWIN** Parish name



MASON CREEK (WILLAURA) WATER SUPPLY CATCHMENT

The catchment drains the eastern slopes of the granite/grandiorite hills in the southern end of the Mount William Range. Mason Creek flows to Mount William Swamp which ultimately drains to the Hopkins River, the major stream of the Hopkins River Basin.

The Mason Creek catchment (349 ha) is upstream of the Willaura water supply offtake located within Crown Allotment 89°C of the Parish of Nekeeya.

Land Tenure and Use

The catchment is predominantly public land (91%) within the Grampians National Park. There is also a small area (32.5 ha) of timbered freehold land. Timber may be harvested from public land in the catchment area as provided for in recommendation (A1). Harvesting is to cease by 1994. In the past, the areas has undergone considerable gold mining activity. Areas affected have regenerated naturally.

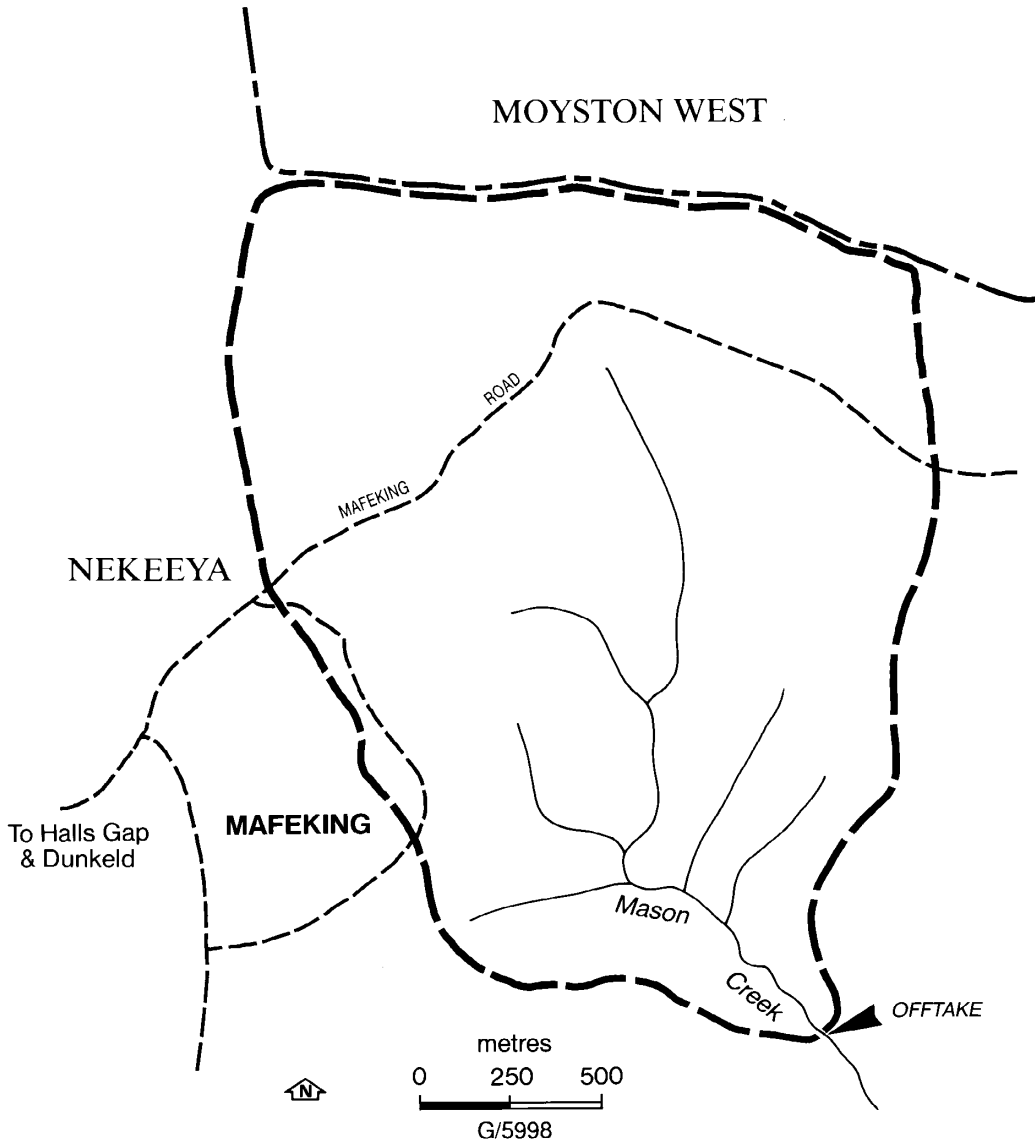
Water Supply System



The Mason Creek offtake (E15) supplies the Willaura system via a gravity feed pipeline. This offtake was installed during the 1967/68 drought and provides about 10% of the total system's needs. The total system supplies a total population of 1,630 within the townships of Willaura (800), Lake Bolac (300), Wickliffe (130), Moyston (150) and Glenthompson (250). High colour levels and occasionally high *E. coli* counts are the main problems experienced with water quality. The water supply authority responsible for this supply is the Shire of Ararat.

Administrative Areas

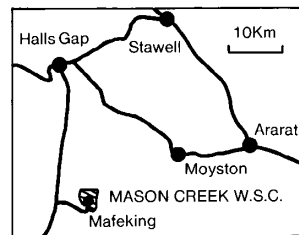
Parish: Nekeeya
Municipality: Shire of Ararat

**PLAN No. S-1491
MASON CREEK (WILLAURA)
WATER SUPPLY CATCHMENT**



- LEGEND**
-  Catchment boundary
 -  Parish boundary
 - NEKEEYA** Parish name

LOCALITY PLAN



WANNON RIVER TRIBUTARIES (LAKE BELLFIELD) WATER SUPPLY CATCHMENT

The catchment drains part of the Major Mitchell Plateau within the Mount William Range and is comprised of three adjacent headwater tributaries of the upper Wannon River within the Glenelg River Basin. The area under consideration (1,570 ha) is upstream of the offtakes which divert water to upper Fyans Creek, Lake Bellfield and ultimately the Wimmera/Mallee stock and domestic system. The township of Stawell draws domestic supply from upper Fyans Creek, presently downstream of the entry of the Wannon tributaries diversion. All catchment land lies within the Parish of Nekeeya.

Land Tenure and Use

The catchment area is entirely public land within the Grampians National Park (A1).

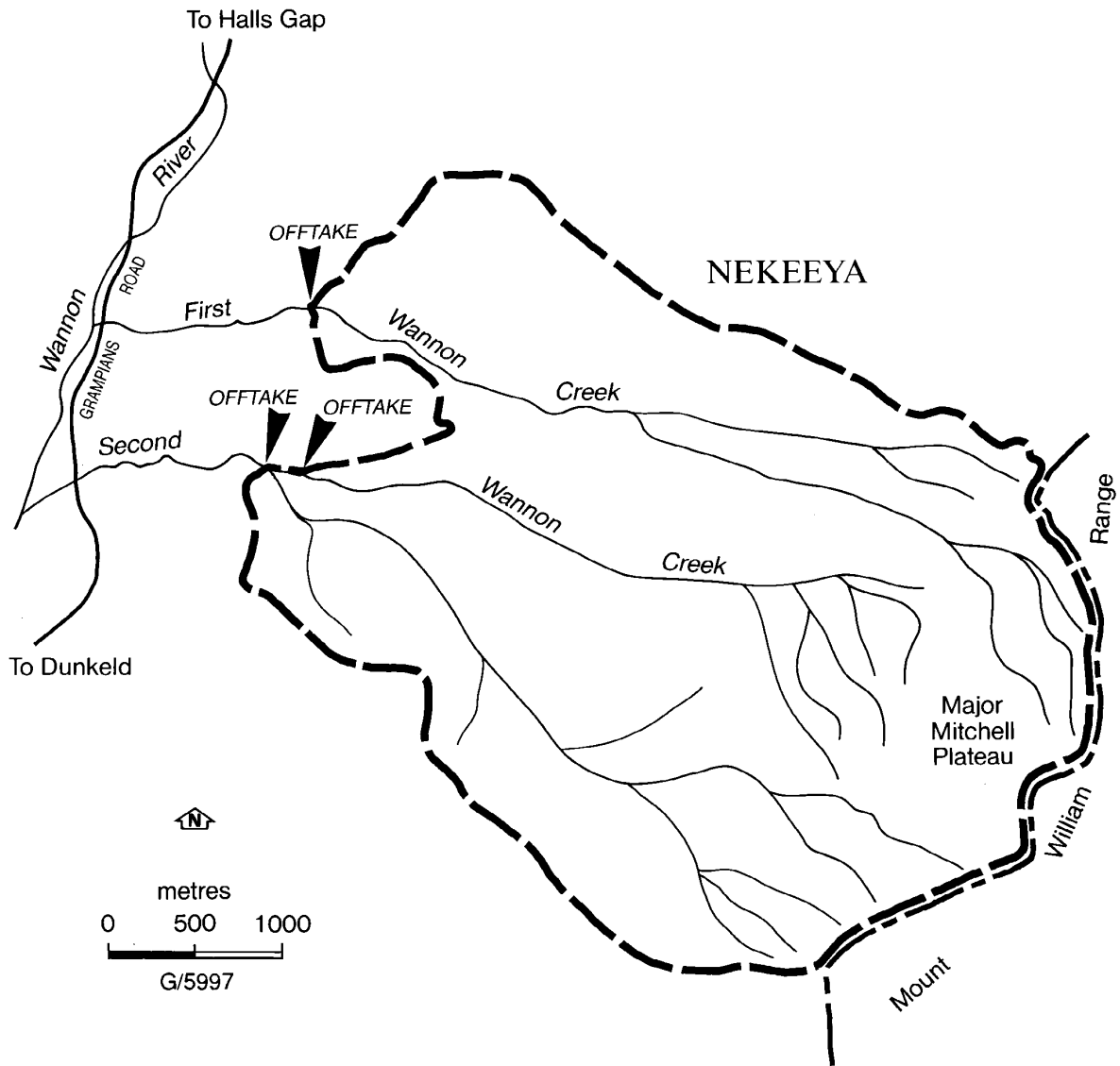
Water Supply System

Three small offtake weirs (E13) divert winter flows via a gravity feed pipeline to the upper Fyans Creek which feeds into Lake Bellfield. Generally, the water is moderately acidic. It is highly coloured seasonally and this is thought to arise from the decomposition products of the litter e.g. lignins and tannins. Stream flow is regulated by the Rural Water Commission.

Administrative Areas

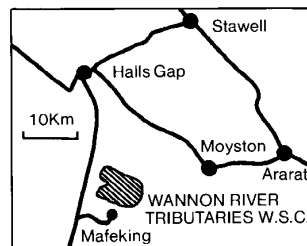
Parish: Nekeeya
Municipality: Shire of Ararat

PLAN No. S-1490
WANNON RIVER TRIBUTARIES (LAKE BELLFIELD)
WATER SUPPLY CATCHMENT



- LEGEND**
- Catchment boundary
 - Parish boundary
 - NEKEEYA** Parish name

LOCALITY PLAN



SERRA RANGE TRIBUTARIES (DUNKELD) WATER SUPPLY CATCHMENT

The catchment area drains the western face of Mount Abrupt at the southern tip of the Serra Range. The catchment of 195 ha, comprises the upper headwaters of Waterfall Gully, which together with the adjacent stream to the south, are tributaries to low lying, inundated areas that drain to the Wannon River within the Glenelg River Basin. The offtakes are located within the parish of Moutajup.

Land Tenure and Use

The catchment area is predominantly public land, Grampians National Park (A1), with a small area of forested private land (27%).

Water Supply Systems

A small offtake weir on Waterfall Gully (E20) diverts water via a gravity feed pipeline to two service storage's (36 ML each) which supply the township of Dunkeld (population 250). Two bores supplement supply in low flow periods.

Currently investigations are being conducted into the development of the water resources of the adjacent catchment for supply to Dunkeld. Although the catchment headwork's have yet to be finalised agreement in principal has been reached with the Department of Conservation, Forests and Lands for water supply development to proceed.

The Shire of Mount Rouse is the water supply authority.

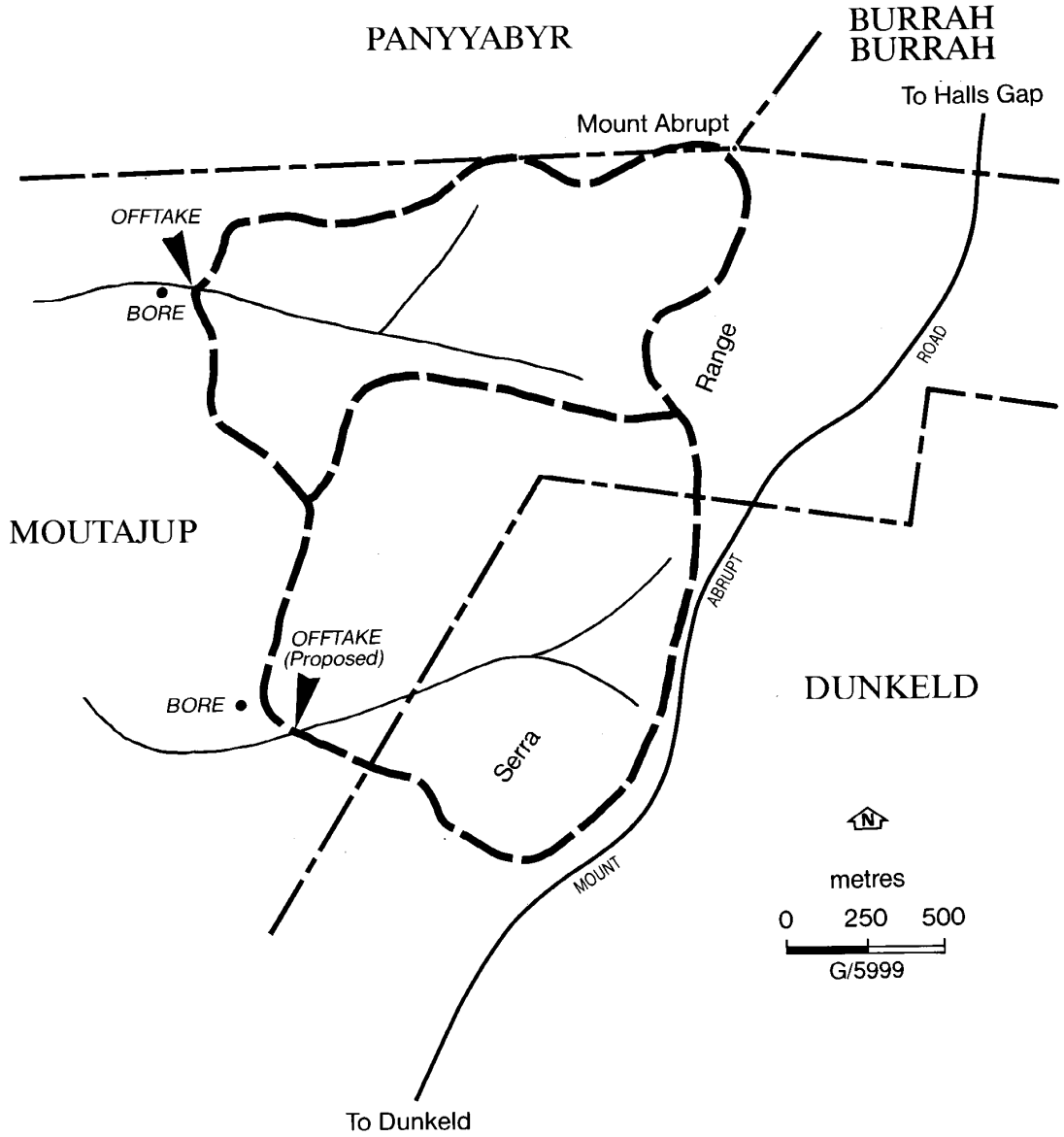
Administrative Areas



Parishes:	Moutajup, Dunkeld, Panyyabyr
Municipalities:	Shire of Dundas Shire of Mount Rouse.

Consideration of this catchment for proclamation has been deferred until June 1990, due to uncertainties related to the proposed augmentation of supply, and the additional investigation required for the associated borefield intake.

A recommendation concerning both surface and groundwater intake areas will be presented at that time.

PLAN No. S-1492
SERRA RANGE TRIBUTARIES (DUNKELD)
WATER SUPPLY CATCHMENTS



- LEGEND**
-  Catchment boundary
 -  Parish boundary
 - DUNKELD** Parish name

