
Land

Use this section to find out more about the geology, topography and soils of the Abercrombie River sub-catchment

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Soil type, land capability, groundwater, slopes and topography maps for the Abercrombie River sub-catchment are at the end of this section.

Topography

The highest parts of the Abercrombie sub-catchment are in excess of 1200 m ASL and found on the eastern boundary of the sub-catchment near Porters Retreat. The high ground and northern boundary continues in a westerly direction toward the junction of The Rockley Road and Triangle Flat Rd and maintains an altitude of over 900 m ASL. It then heads in a north-westerly direction to the Carrawa Range, where the Trunkey Rd passes the old Hobby's Yard rubbish tip, and finally heads west to finish along the Kentucky Rd south of Neville. From this boundary the ground slopes down in a southerly direction toward the Abercrombie River via ridges formed by many smaller tributaries such as the Isabella River, Thompson Creek, Grove Creek and Mulgunnia Creek. The lowest part of the sub-catchment, with an altitude of approximately 400 m ASL, is along the Abercrombie River approximately 10 km to the west of the main bridge over the river and a few hundred metres downstream of the confluence with Little Curragh Creek. A small proportion of the sub-catchment is found on the southern side of the river and this country does not reach more than 800 m ASL.

Elevation	Town/Locality
> 1000m	No towns but areas surrounding Porters Retreat and Mt Ryan
1000m - 750m	Trunkey Creek, Burruga, Triangle Flat, Coal Hole Flat and other areas throughout the sub-catchment
750 - 500m	No towns but much of the lower reaches of the Abercrombie River tributaries
< 500m	Along the Abercrombie River from Cooks Vale Creek down to Little Curragh Creek

Landform and Slope

There are many areas of the Abercrombie sub-catchment that have very steep slopes. These slopes are found in the lower reaches of the tributaries of the Abercrombie River and along the Abercrombie River itself. The more level areas of the sub-catchment are generally found in the areas with a higher elevation. This is because the area was originally a plateau that has been cut away by the Abercrombie River and its tributaries, and the more of the plateau that has been cut away the deeper the valley and steeper the ground. An idea of the slopes throughout the sub-catchment can be attained by driving from the Carrawa Lane and Trunkey Road, through Trunkey Creek and down to the Abercrombie River. This will take you from relatively level ground, through mildly sloping areas surrounding Trunkey Creek to very steeply sloped areas at the lower elevations when approaching the Abercrombie River.

Soils

The different types of soils

There are 20 different soil types in the Abercrombie River sub-catchment but One Eye (oe), Trunkey (tr), Burraga (bu), Rockley (rl) and Vulcan (vu) soil types dominate the sub-catchment. Soils in the sub-catchment are derived from many sources including shale, slate, sandstone and igneous type rocks such as andesite and basalt. The characteristics of soils are too convoluted to include with this chapter. If you wish to acquire more information on the soils, obtain the *Soil landscapes of the 1:250 000 Bathurst sheet* book from your local library or the internet (see contacts section). The map provided with this chapter should be used as an indication only as local conditions can influence soils and small patches of soils that are not shown on the map may exist within a larger area of another type. Local variability also plays a role in determining soil quality. A general rule is that ridge tops and upper slopes will differ in soil properties to the lower slopes and flats. Lower slopes and flats will *generally* have better soils because the soil from ridges has been washed down to the flats leaving the ridge tops with poorer rockier soils.

Soils erosion

Approximately two-thirds of the sub-catchment experiences no appreciable erosion or minor sheet and rill erosion and these areas are generally in the headwaters of creeks and rivers *i.e.* the higher and flatter parts of the sub-catchment. These areas can, therefore, be found in the eastern and northern areas of the sub-catchment. The south-western third of the sub-catchment experiences a large proportion of moderate to severe sheet and rill erosion. In addition, this area of the sub-catchment has extensive amounts of gully erosion. Areas that are moderately to severely eroded can be seen from the Trunkey Creek - Tuena Rd as it winds down into, and then back out of, the Abercrombie River valley.

Certain soil types can be more prone to erosion but many factors determine soil erosion. A lack of vegetation on a slope that is exposed to a high intensity rainfall event can cause erosion. It is, therefore, important to maintain vegetation on ground especially on steep slopes and poor soils. Obviously, steeper slopes are also more prone to erosion.

Land Classes and Uses

The most frequent land class in the sub-catchment is class IV (full land class descriptions can be found in the main Land chapter). This land is generally found in the higher areas of the sub-catchment however some patches occur as flats along rivers and streams. A few patches of class II land exist throughout the sub-catchment. These are found in the vicinity of Porters Retreat, a few kilometres to the east of Burraga, along Grove and Byrnes Creek in the vicinity of their junction and a ridge top approximately 5 km to the south of the village of Trunkey Creek. This ridge top is crossed by the road to Tuena after crossing Mulgunnia Creek (when heading south). The rock types associated with the soils changes as you drive up the hill and changes in tree and grass species between

the hillside and the ridge top is also noticeable. Small areas of class III land also occur. The main patches are along the Trunkey Creek and Bathurst Roads to the north and north-east of Trunkey Creek. Another smaller patch is located a few kilometres to the east of Burruga. Lands classed V, VI, VII and VIII are generally found in the steeper areas of the sub-catchment, however some class V and VI land is found in the higher more level areas.

Nearly all of the land in the Abercrombie River sub-catchment is used for grazing or has been left timbered due to its steepness. Unfortunately, a lot of steep country was cleared by the settlers and continues to be grazed today even though this country is very marginal and profit margins are very small at best. With changes to environmental policy, it may become more profitable for these areas to be reforested and used to gain carbon credits than for the traditional fine wool enterprise.

Some of the flatter country with better soils (i.e. higher altitude areas around Trunkey Creek, Burruga and Porters Retreat), is occasionally cropped however these areas are not traditional cropping country and crops are mainly oats that are used by farmers for stockfeed.

Groundwater

Although variation exists in the quality of ground water throughout the entire Abercrombie River sub-catchment, nearly all is moderate-high quality with the exception of the western boundary of the sub-catchment where water quality is poor.

References

M. Kovac, B.W. Murphy and J.W. Lawrie (1990) Soil landscapes of the 1: 250 000 Bathurst sheet. Department of Land and Water Conservation