

Campers in catchments

NO MATTER WHERE WE LIVE be it in the largest city, the smallest village, the biggest rural station or on a town suburban block, we live within a waterway catchment.

Freeways, highways, cycleways, pathways are all familiar terms and are frequently a part of the news reports we hear on radio and television. We drive, bicycle, walk on them. We know the names of many. But, waterways are often overlooked and taken for granted. We drive across them without realising it.

Yet water is a vital part of our lives. Creeks and rivers all run to the sea. The seas makes up 80 per cent of the Earths surface.

So the purpose of this Explainer is to help us pay closer attention to the waterways in our neighbourhoods. Do the creeks have names? Do we allocate time and money to looking after them? Why do so many people consider waterways as places to discard the things they no longer want?

Costa Georgiados, in his book *Costas World*, wants us to think of ourselves as campers in catchments. Granted our camping is on a more permanent scale than pitching a tent and spending a few days in nature, but the idea holds true. We are occupying a site within a catchment and by way of building houses and roads, commercial and industrial trading places, we are impacting on the other aspects of nature that have been in these places for tens of thousands of years.

We need all of them to sustain healthy ecosystems and by extension, maintain human health. A healthy Earth (in this case creek) will ensure a healthy human society. A polluted and sick Earth (creeks) will come back to bit us and our children.

Keeping creek catchments healthy needs to be an integral part of everyday life.

Creeks (some with wetlands and swamps) contain nutrients that underpin the aquatic food web and support frogs, birds, bats, a host of invertebrates and other wildlife.

Creeks provide nursery habitats for animals to feed, breed and seek refuge from predators.

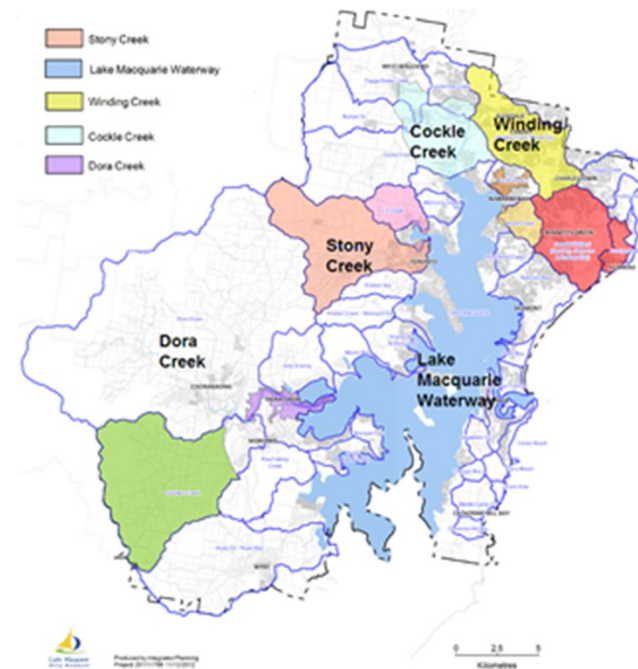
Creeks provide corridors for pollinators, for movement, for connecting Munibung Hill with larger creeks and the lake.

There's lots to love about creeks.

Locating ourselves in the bigger picture

WHILE THE FOCUS of this Explainer is Munibung Hill, the catchments containing the creeks, are nested within the larger whole that is the Lake Macquarie catchment. The creeks of Munibung Hill flow into Winding Creek on the north east, Cockle Creek on the north west, North Creek on the south east, and directly into Lake Macquarie on the south west. It is an elaborate symphony of interconnectedness, with the whole being greater than the sum of its parts.

If you live outside this area, learn about the catchment you are camping in, find out about the creek—where it flows from, where it flows to. Does it have a name? Let's all help make the invisible visible.



Munibung Hill Conservation Society

Web: <http://www.munibunghill.com>

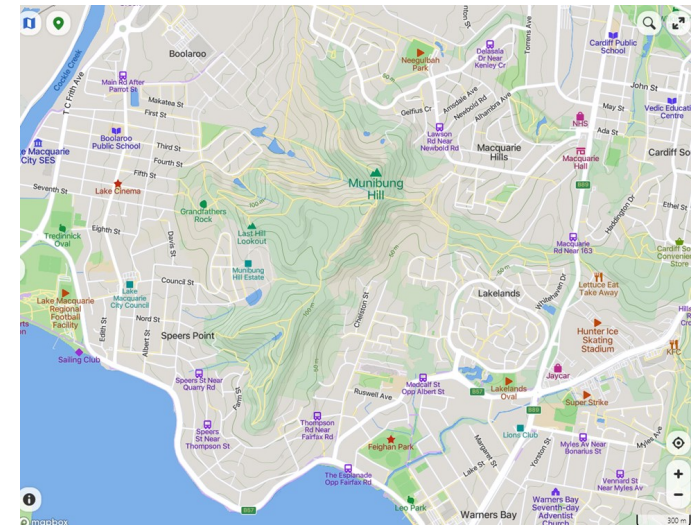
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Munibung Hill / Kona-konaba

Creeks and Catchments

Reading the contours to find our way



Making the invisible visible

The creeks and catchments at Munibung Hill are millions of years old. Lake Macquarie came into its current form between 12 000 - 6 000 years BP. The syncline (downward pointing fold in basement geology) that underlies Lake Macquarie has been around for about 80 million years and the lake would have filled and emptied several times over the past 500 000 years during glaciations and inter-glacial periods. Before that the creeks flowed into a valley the indigenous people called Awaba—meaning flat or plain surface.

Contours, Catchments and Creeks

Reading a map

CONTOUR LINES INDICATE THE STEEPNESS OF the terrain and show the points that share the same elevation. They also show the shape and the height.

Where contour lines are wide apart, elevation is changing slowly, indicating a gentle slope. Roughly concentric circles are probably indicating a peak. Areas between peaks are passes, referred to as saddles.

Studying a topo map of an area is a great way to learn how to match terrain features with the contour lines on a map.

- Peak 165m
- Ridge contour 150m
- Valley and creek contours from 120m sloping down to 60m
- Saddle contours 90-100m
- Cliff face contours from creek at 50m rising to peak at 120m

Getting started ...

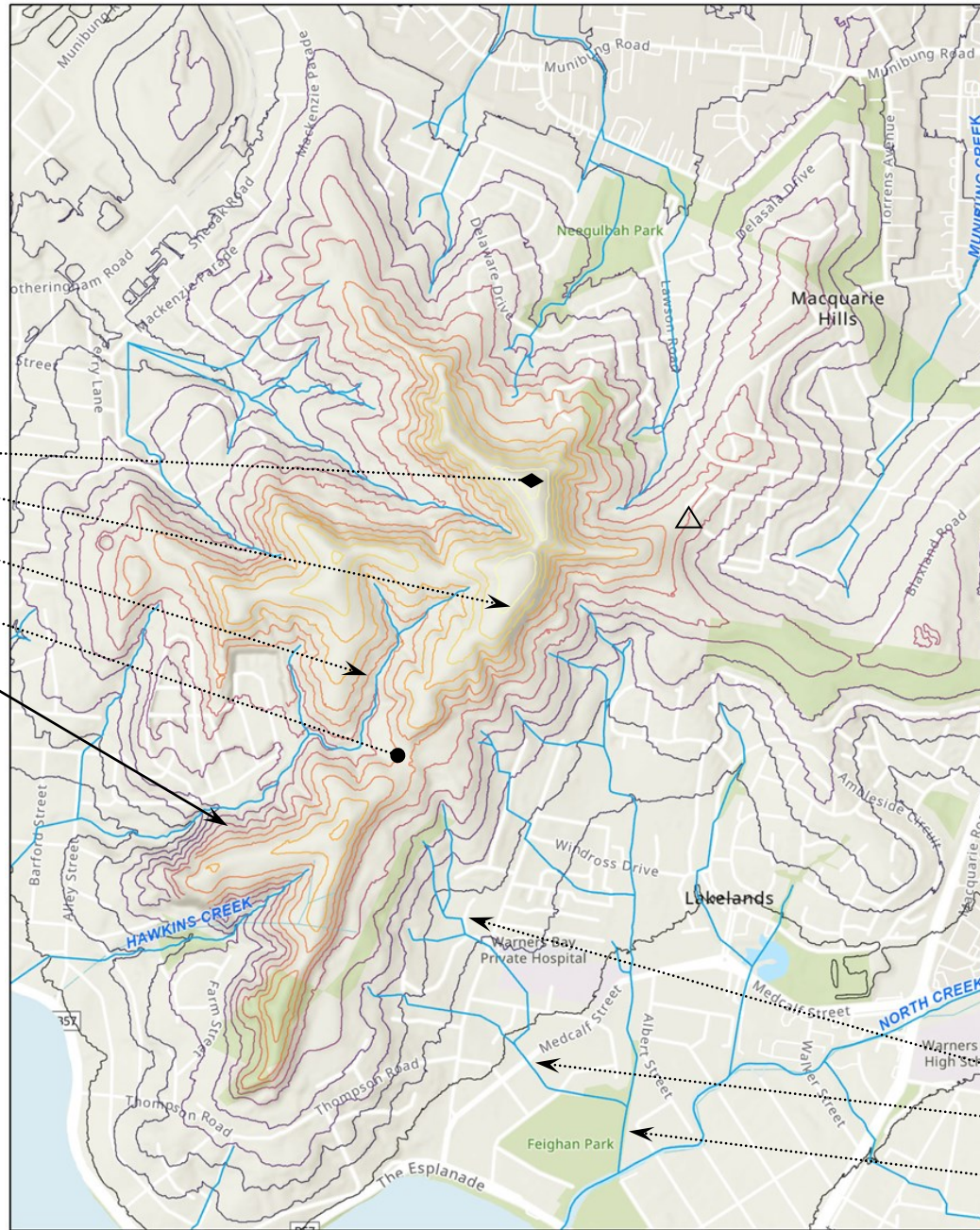
THERE ARE NINE ENTRY POINTS TO MUNIBUNG HILL.

Here is an example: On the 80 metres contour line is Lucilla Ridge: \triangle take the formed path, then use care to walk the two stages—up 30m to the 110 m contour line. From this 110m contour line, the headwaters of Owl¹ Creek is to the right and Biddabah² Creek is to the left.

At this Lakelands track intersection turn right onto the track along the spur, for the final 40m climb to the 150m contour line—to reach the crest of Munibung Hill. There are spectacular views of the lake and coast.

Keep an eye open for the small caves that run along the cliff line running along the summit. The closer the contour lines on the map, the steeper the slopes running down the Hill.

NOTE: \triangle If travelling by car, park in Lawson Road.
^{1,2} Colloquial names



Munibung Hill - 10 metre contours

Creeks in catchments

JUST BECAUSE A CREEK APPEARS SMALL does not mean it is not important. Most huge rivers start off as small streams high up in the catchment. With the confluence of many tributaries, they grow in size and volume. It is no different at Munibung Hill, albeit on a smaller scale.

Riparian zones are the areas on the sides of creeks. Watershed protection is something for us all to aim for. Water sensitive communities and sponge cities are important to reduce runoff and flooding.

Daylighting streams that have been hidden away in pipes and contained in concrete can help keep creeks visible and valued as landscape essentials.

Creek catchment order

ORDER 1 AND 2 CREEKS ARE NURSERIES for plant and animal species.

It can sometimes be the case that these water-courses are poorly defined or obscure, that they are described as being ephemeral, meaning they are not running with water, or intermittent, running infrequently. But there may well be seepages and underground water that emerges lower down the slopes and then appear as a running stream. If we think of the soil as a sponge, or an underground tank with an overflow, we can better appreciate the critical nature of these upstream catchment areas.

