

Remedial

The Shire of Dandaragan is acutely aware of the hazards posed by a limestone coast;

- It has engaged leading consultants to review the problems and define remedial works.
- It may fence off hazardous areas, and put up numerous signs of advice and warning.
- In the meantime it wants to spread the work about care and responsibility on our cliffs.
- Your safety and welfare are our concern but are your responsibility.

Coastal Limestone Hazards

Limestone cliffs, caves and overhangs can collapse without warning;

For your safety

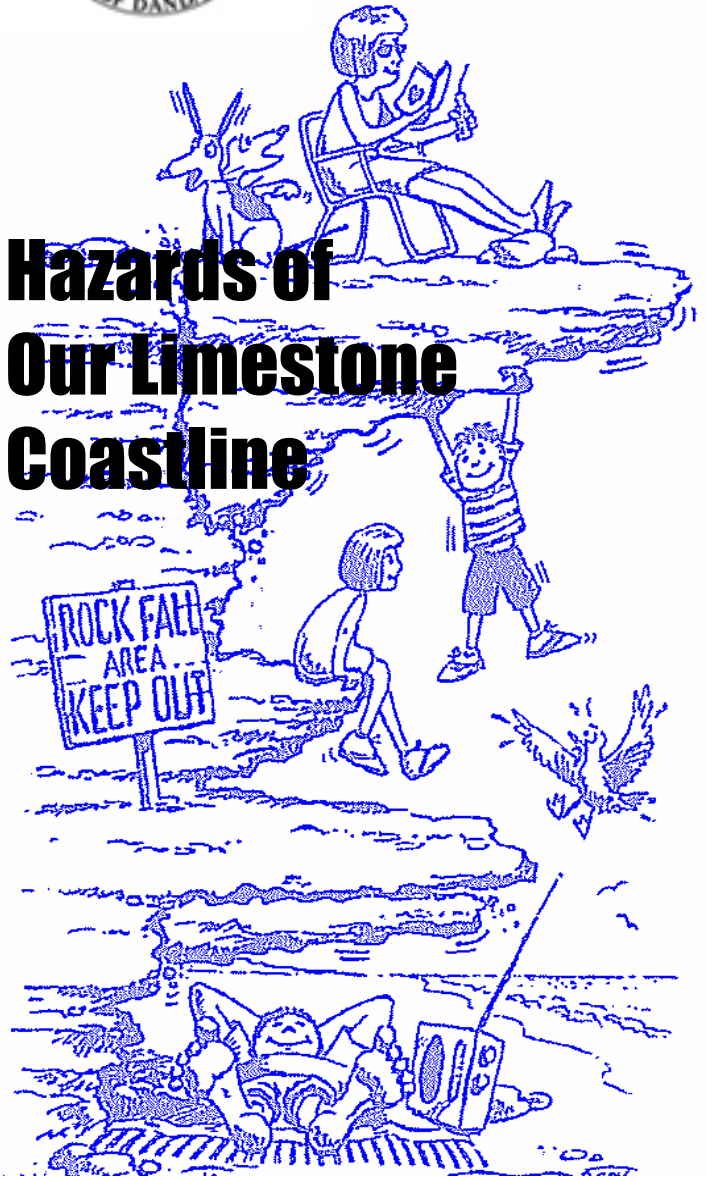
- Keep away from cliff edges.
- Do not stand or jump on limestone overhangs.
- Do not climb on cliffs
- Do not sit, shelter or camp under a limestone overhang.
- Do not light fires in a cave or overhang.
- Solution tubes with a sand bridge may collapse, do not sit on them.

Parents

- Explain the hazards of the limestone rocks of the Shire of Dandaragan coast to your children.
- Supervise your small children at all times, they must not be allowed to ramble freely near cliff areas.
- Observe warning signs and fences.
- If you spot a new hazard let us know about it on 9652 0800 Jurien Bay.



Hazards of Our Limestone Coastline



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The Changing Limestone Coast



On our coastline nothing remains the same, there is always change. On a limestone coast the changes are dynamic and can be dangerous to humans as marine erosion, solution, salt, wind, rain, sand blasting and root wedging erode the cliffs. As a result there may be rock falls, cave break up, cliff collapses and rock platform toppings.

Life would be less risky if we know exactly when these events were to occur. Unfortunately we do not, and people may be in the wrong place at the wrong time and suffer the consequences.

We do know that the rock faces and cliffs become more venerable with time. We put up notices to warn of impending rock fall. Yet some people ignore these signs and put their lives at risk. Some signs are even vandalized.

The Limestone Rocks of the Coast

Three main types of coastal limestone in the Shire of Dandaragan Coastal line;

- Limesands of broken up shells are blown up on a shoreline into sand dunes and become cemented in place.
- Beach sands shells and gravels also become cemented into place to become beachrocks.
- Bands of brown or red fossil (ancient) soils deposited when dune building ceases; and are interbedded with the limestone layers.

Cap rock layers may form on top of the limestone because of rainfall and the pumping action of the sun.

At the same time a weakened zone is formed under the hard strong cap rock. This is known as the **zone of roots** because fossil rootlets have been preserved as casts or moulds.

Large eucalypts growing in the fossil soil put down taproots and these become enclosed in large solution tubes. The zone of roots erodes easily leaving overhangs of cap rock, held up in place by solution tubes.

Limestone differs from other rocks because it is soluble in water, and apart from the surface cap rock it is a soft rock highly vulnerable to erosion.

The Benefits of Limestone

The limestone coast of Western Australia provides spectacular landforms and scenery;

- Headlands, breathtaking coastal views and sea-scapes.
- Sea caves.
- Tourist caves and dolines.
- Rock platforms and rock holes for fishing.
- Coastal reefs for surfing.
- Distinctive flora, trees and vegetation.
- Headlands enclose fine sandy beaches.

About one quarter of our coastline consist of coastal limestone rocks.