



“Geotourism - Pathways for Future Development in Australia”

Geotourism Workshop, Global Echo 2015
19th November 2015



Angus M Robinson

Today's Agenda

- Landscapes, natural heritage & the environment
 - What do we mean by geotourism?
 - Australia's National Landscapes
 - Geotrails
 - Take Aways
- 

Environment, Natural & Cultural Heritage

comprises the following:

1. **Abiotic** - non-living aspects such as the climate & geology e.g. landscape and landforms: **GEODIVERSITY**

2. **Biotic** - the living parts eg. fauna (animals) and flora (plants): **BIODIVERSITY**

3. **Cultural** - past & present, non-living & built

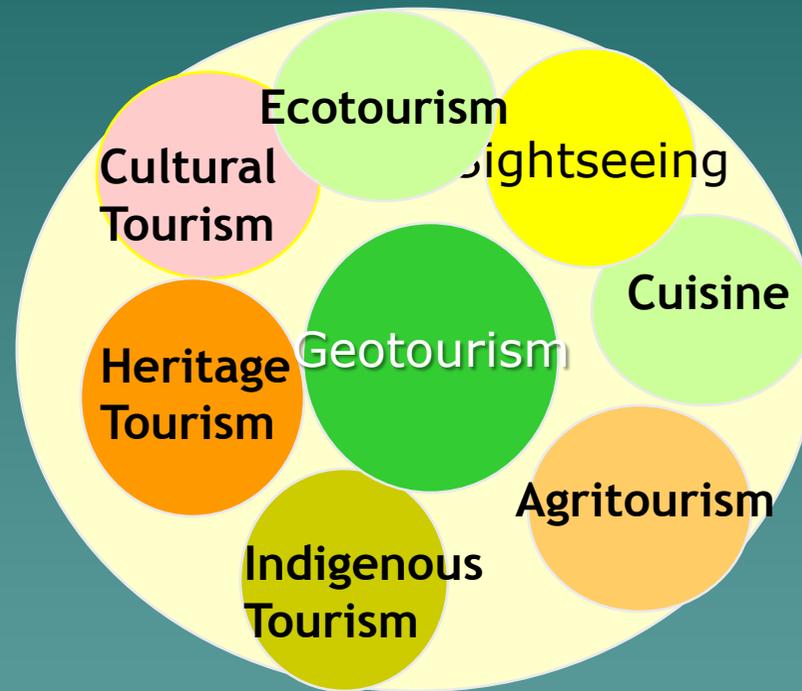
Parts **B+C** are well interpreted within tourism, especially through ecotourism and cultural tourism, **but A has typically not been addressed**

Geotourism Definition

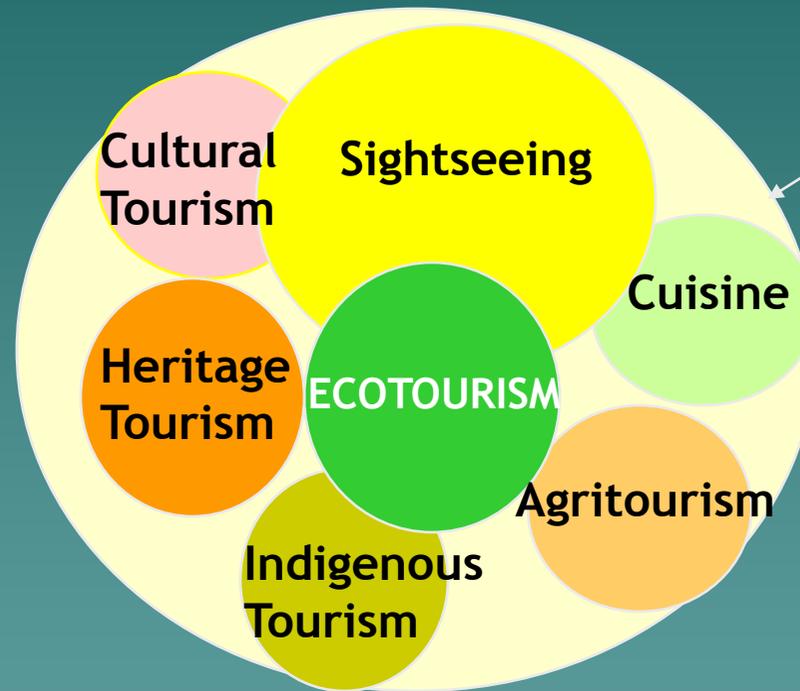
‘Geotourism is tourism which focuses on an area's **geology and landscape** as the basis for providing visitor engagement, learning and enjoyment’.



Geotourism - as one of the components of the many types of 'place-based' tourism



Geotourism incorporating all types of 'place-based' tourism National Geographic Perspective



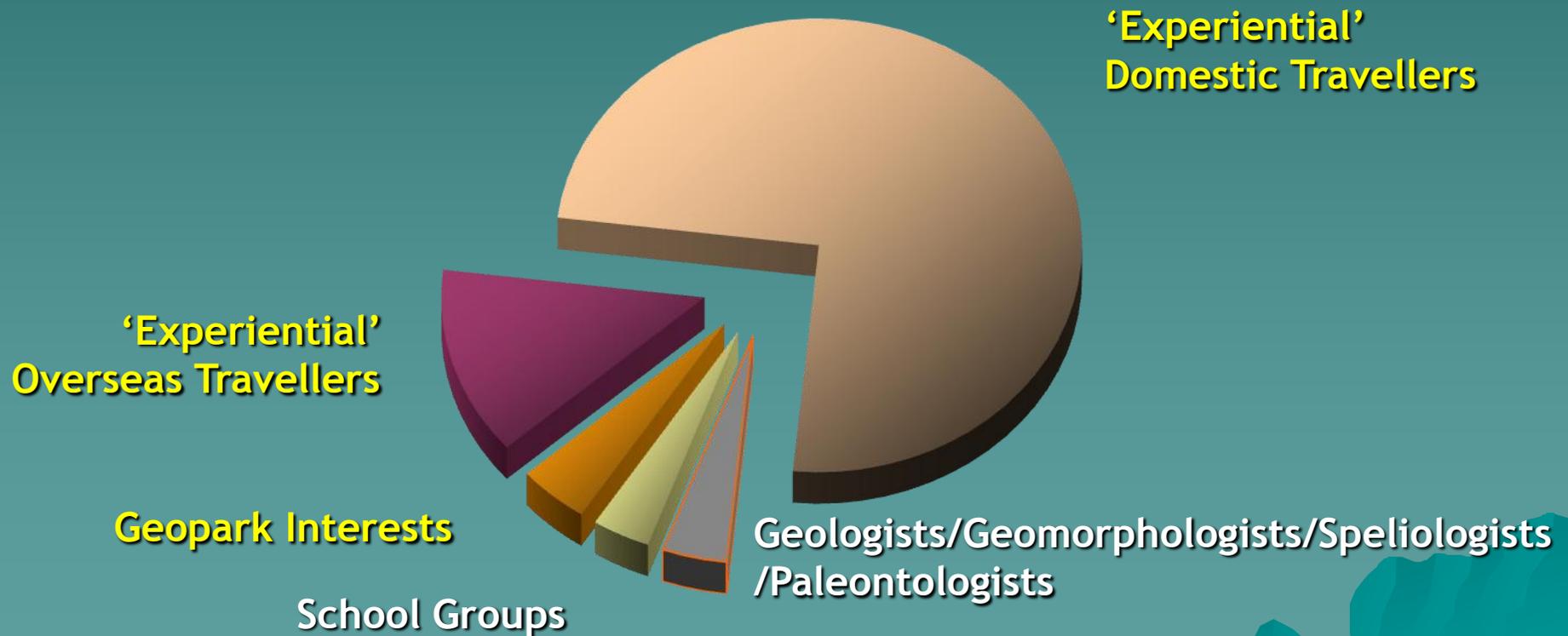
Geotourism
i.e. 'experiential
tourism'

Geotourism - National Geographic Society & the Travel Industry Association of America (1997)

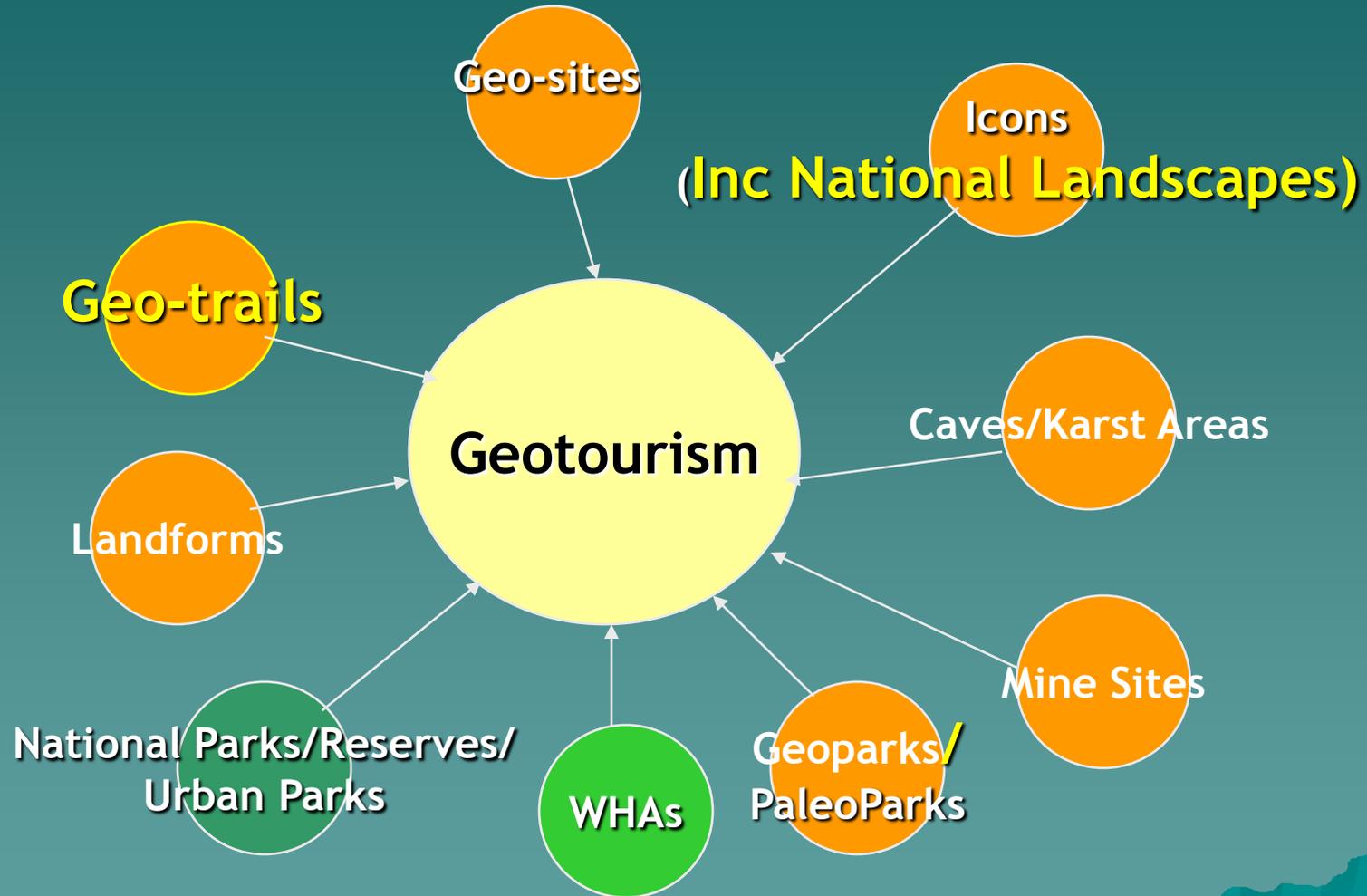
- Geotourism is "best practice" tourism that sustains, or even enhances, the **geographical character of a place**, such as its culture, environment, heritage, and the well-being of its residents.
- Like ecotourism, **geotourism promotes a virtuous circle** whereby tourism revenues provide a local incentive to protect what tourists are coming to see, but extends the principle beyond nature and ecology to **incorporate all characteristics that contribute to sense of place**.
- Geotourism incorporates **sustainability principles**, but in addition to the do-no-harm ethic, **geotourism focuses on the place as a whole**.

Geotourism - Potential Markets

Tourism Industry View



Geotourism - Diversity of Sites



Australia's National Landscapes Programme

Partnership between tourism and conservation that aims to:

- Promote world class, high quality visitor experiences
- Increase the value of tourism to regional economies
- Enhance the role of protected areas in those economies
- Build support for protecting our natural and cultural assets



A long term strategic approach

To differentiate Australia's iconic natural and cultural destinations from anything else available in the world.



THE KIMBERLEY

NINGALOO –
SHARK BAY

GREAT SOUTH
WEST EDGE

AUSTRALIA'S
RED CENTRE

FLINDERS
RANGES

KANGAROO
ISLAND

GREAT OCEAN ROAD

WET TROPICS

AUSTRALIA'S
GREEN CAULDRON

GREATER BLUE
MOUNTAINS

AUSTRALIAN
ALPS

SYDNEY
HARBOUR

AUSTRALIA'S
COASTAL WILDERNESS

TASMANIA'S
ISLAND HERITAGE

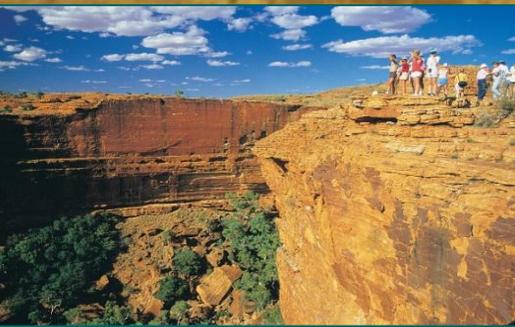
GREAT BARRIER REEF

Red Centre National Landscape

Alice Springs



‘features an ancient landscape with erosional remnants (geosites) linked to a common geological heritage’



★ **Uluru**



Iconic Geotourism Themes of the Red Centre National Landscape

- **A:** Landforms and ancient geology
 - **B:** Red Kangaroo species, and other type flora/fauna
 - **C:** Indigenous (and European) culture
- 
- A stylized silhouette of a mountain range in shades of teal, located at the bottom right of the slide.

Geotrail Characteristics - A First Definition

‘A Geotrail delivers geotourism experiences through a journey linked by an area's **geology and landscape** as the basis for providing visitor engagement, learning and enjoyment’.



Red Centre Way



RED CENTRE WAY



West MacDonnell National Park

Bare bones of ranges and exquisite gorges

Millions of years ago, the West MacDonnell Ranges were a lush, green landscape. Today, the West MacDonnell National Park is a vast, open landscape of red earth and rock.



Tjornetya - A Cultural Treasure House
This is a traditional Aboriginal house built from stone and wood. It is a fine example of the traditional architecture of the Anangu people.

Dramatic rock formations and desert oases

Parks and Reserves south from here...

This panel provides information on parks and reserves south of the current location. It includes a 'Locality Map' showing the regional context, and descriptions for three specific areas:

- Watarka National Park:** Red sand dunes by the sea of the coastal range with dramatic and unusual rock formations, sand gullies and permanent waterholes. This is Luritja Country. Accommodation is available at Kings Canyon Resort and Kings Creek Camp. Camping is not permitted in the National Park.
- Red Centre Way:** The Red Centre Way (formerly the Sturtville Loop Road), offers visitors access to striking desert scenery between West MacDonnell and Victoria National Parks. You will be travelling on Aboriginal land, owned and looked after by Anangu Ansett and Luritja people.
- Finke Gorge National Park:** Finke Gorge shows the path that the Finke River has taken for 100 millions years past beautiful gorge and river scenery. Finke Valley is home to groves of the rare tropical looking Red Cabbage Palms. The Park is only accessible to high clearance four-wheel drive vehicles.
- Tnorala (Gosse Bluff) Conservation Reserve:** A remarkable circle of rocky hills rising abruptly from the surrounding plain, top the sign 'Extraordinary Scenery in the landscape' for more information on this reserve.

Red Centre Way

The Red Centre Way (formerly the Mereenie Loop Road), gives visitors access to striking desert scenery between West MacDonnell and Watarrka National Parks. You will be travelling on Aboriginal land, owned and looked after by Western Arrernte and Luritja people.

Permits are needed for travelling on the Red Centre Way.

These permits set out the conditions of travel and are available from the Central Land Council in Alice Springs, Glen Helen Resort and Kings Canyon Resort.

The permits are available on-the-spot for a small fee. Camping in tents or campervans is not permitted in the carpark nor off-road in the Park.





HELP PROTECT THE VEGETATION

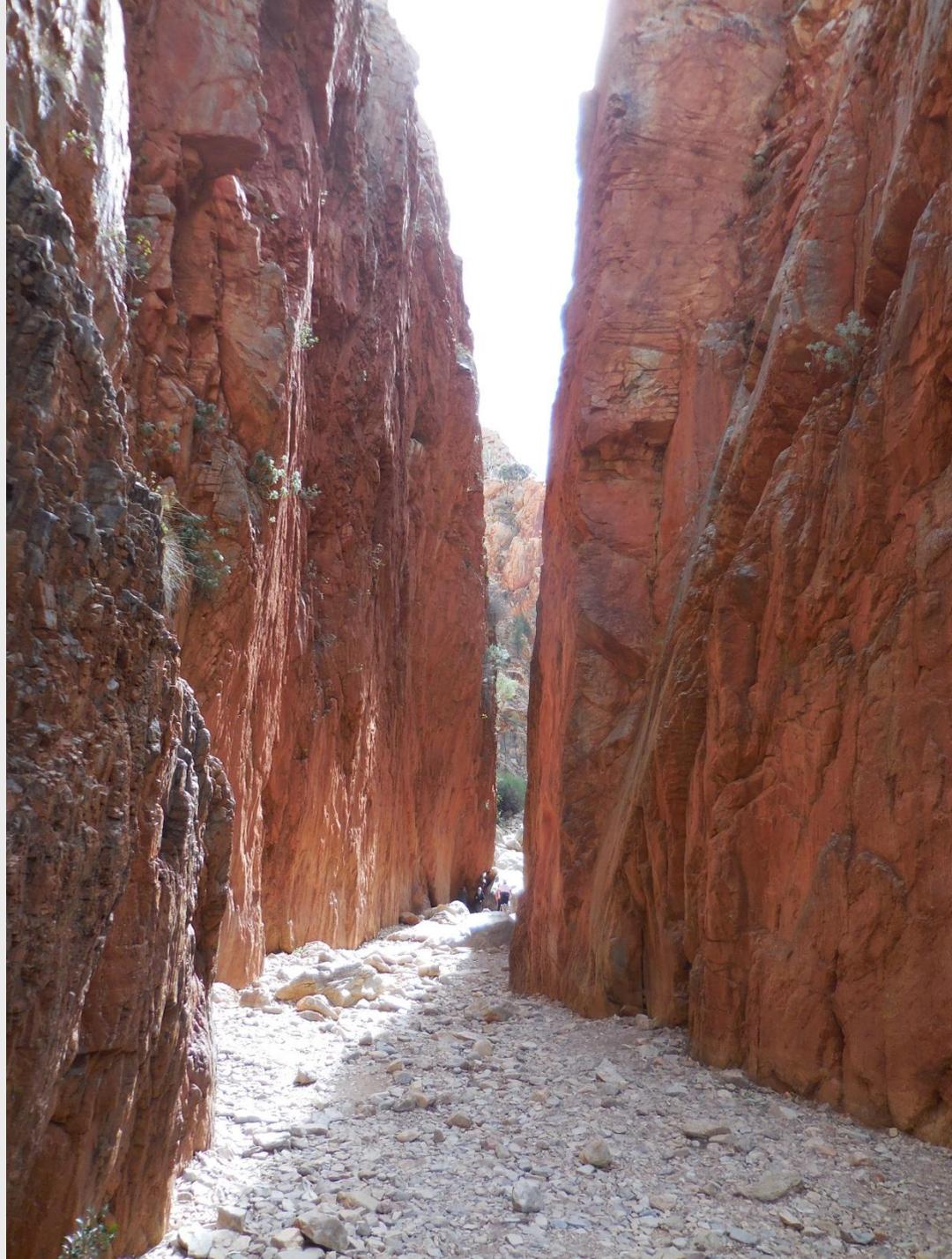
REMAIN ON THE TRACK























Araluen
Araluen Arts Centre







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OFFICE**

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the office on 08 9477 1111.



Island of Tasmania National Landscape

Cradlecoast GeoTrail

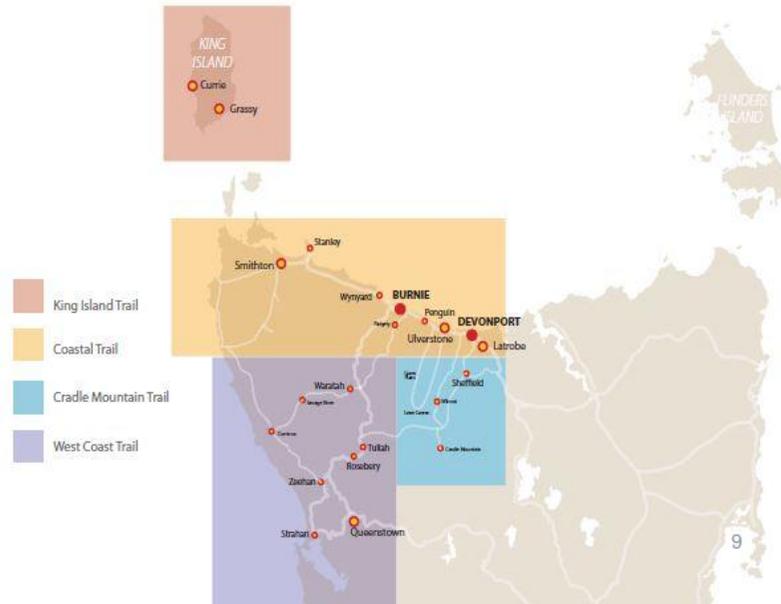


'The Living Earth' - Cradle Coast Geotrail

The proposed experience

The experience is a self-guided geological and social tour brought together by the theme 'The Living Earth'. It involves 70 sites within four main trails: the Coastal Trail from Devonport to the Edge of the World; the West Coast Trail, Cradle Mountain and King Island. Visitors can come into and out of the Trail at any point along it.

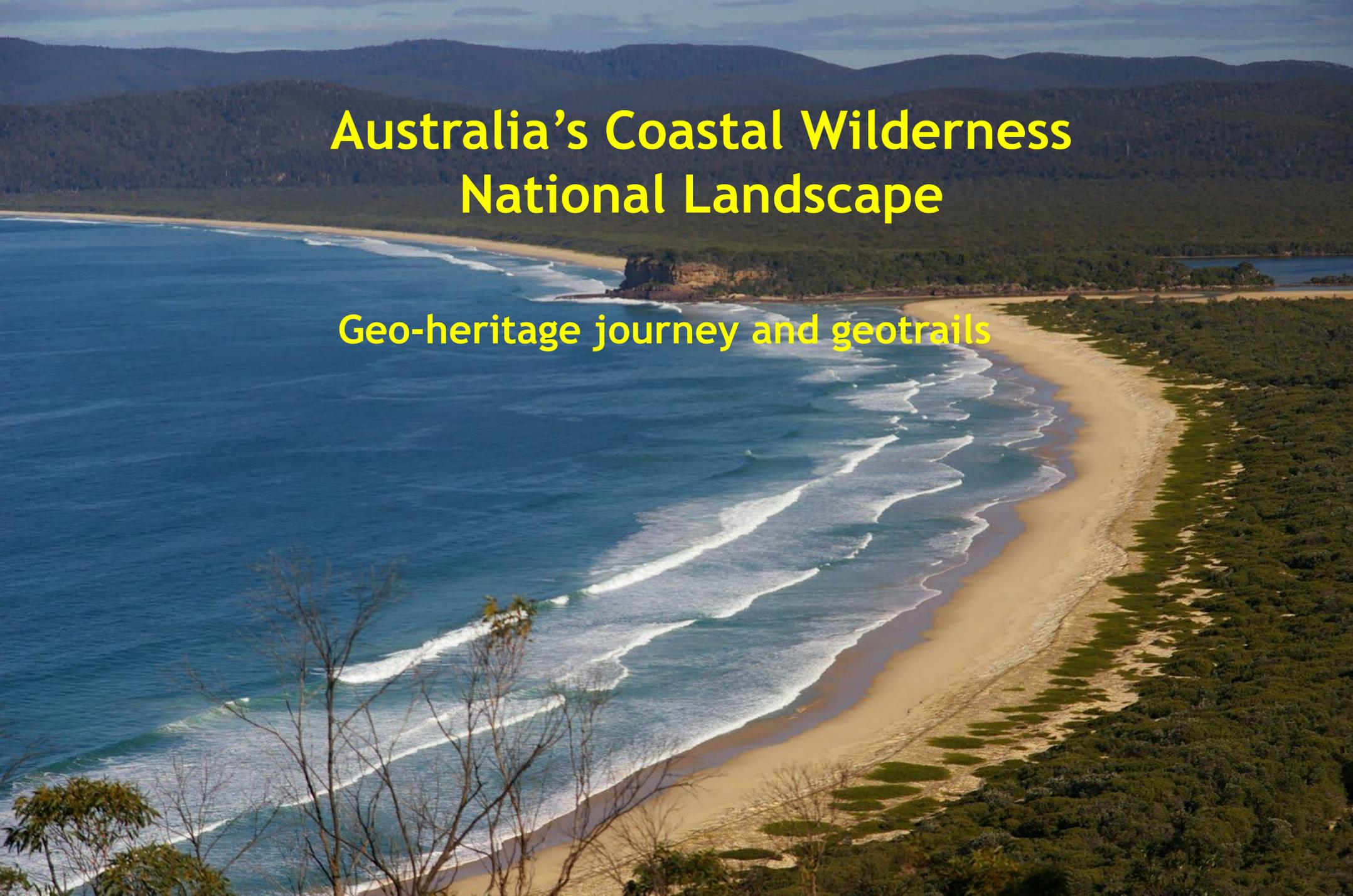
- Information is accessed via a smartphone App, sign markers, interpretation panels, guided experiences, as part of other guided experiences and through engagement with EarthCaching.
- It is also recommended that the Aboriginal people, ideally through guided experiences, offer their own experience of *'The Living Earth'*.
- There are two proposed 'anchor' interpretation presentations, one on the breaking up of Gondwana and the other on the rise of geology as a science.
- The values of GeoConservation are also stressed so it is clear that these amazing geological places and features need to be protected. Interpretation plays a key role in public education.
- It is suggested that implementation takes place over a two-year period with the Coastal Trail being the first priority.



Flinders Ranges National Landscape

The image captures a vast landscape of the Flinders Ranges. In the foreground, there are rolling green hills with scattered trees, bathed in the warm light of the sun. The middle ground shows a dense forest of green trees covering the slopes of the hills. In the background, a range of rugged, rocky mountains with distinct peaks and ridges stretches across the horizon under a clear, light blue sky. The overall scene is a beautiful representation of the natural beauty of the Flinders Ranges National Landscape.

Brachina Gorge Geological Trail and Bunyeroo Valley

An aerial photograph of a coastal wilderness landscape in Australia. The scene shows a long, curved sandy beach on the right side, bordered by dense green forest. The ocean is a deep blue, with white waves breaking onto the shore. In the background, there are dark, forested hills under a clear sky. The text is overlaid in yellow.

Australia's Coastal Wilderness National Landscape

Geo-heritage journey and geotrails

Great Ocean Road National Landscape

An aerial photograph of the Great Ocean Road National Landscape in Australia. The image shows a rugged coastline with prominent, layered limestone cliffs. Several sea stacks, including the famous Twelve Apostles, are visible in the deep blue ocean. White waves are crashing against the base of the cliffs and around the sea stacks. The land is covered in sparse, low-lying vegetation. A road is visible on the left side of the image, winding along the coast.

Great Ocean Road and Kanawinka Geotrail ?

Australia may be referred to as a relatively young nation, but the well preserved ancient landscape provides many precious windows into the past. The Kanawinka Geotrail takes you on a surprising journey through Australia's most extensive volcanic province, with over 60 sites enabling visitors to travel back in time over thousands of years.

The Kanawinka region gets its name from the geological fault that stretches from Portland (Victoria) to Karoore (South Australia). Kanawinka is an Aboriginal term meaning 'Land of Tomorrow'. The area is also internationally recognised as the Kanawinka Global Geopark.

The Kanawinka landscape of southwest Victoria and southeast South Australia is a striking contrast of sweeping limestone plains studded with remarkable sinkholes and caves, spectacular mountains and extensive lava flows.

The area features nearly 400 individual eruption points, most of which occurred between 4.5 and 2 million years ago, and several hundred caves west of the Kanawinka Fault. Aboriginal people have inhabited this region for up to 45,000 years. The region features prominently in stories of the "The Dreaming" and stories from the lava flow were used by local language groups to construct channels linking the wetlands, water, fish-traps, wind trails and stone huts. Excellent examples created by the Gunditjmarra people can be found around the Lake Condah region.

Later, European settlers constructed dry stone walls in order to enclose crops and stock. Many examples can be found around Campedown along the Dry Stone Walls Heritage Trail.

Your Kanawinka experience will take you from the Cosmonauta in South Australia through to Lake Corangamite and the Great Ocean Road in Victoria and offers a range of visitor experiences including beautiful waterfalls, caves and coastal formations, and even a climb into the region's youngest volcano.

More information is available on-line at www.kanawinka.org.au



- 1. Mt Sun Range (A2)
- 2. Mt Moorhead (A2)
- 3. Mt McIntyre (A2)
- 4. Lake Leake (A2)
- 5. Lake Edward (A2)
- 6. Tantoola Caves (A2)
- 7. Cosmonauta (A2)
- 8. Cosmonaut National Park (A2)
- 9. Mt Moorhead Blue Lake & Valley Lichen Complex (A2)
- 10. Inglebricht Caves (A2)
- 11. Cane Garden (A2)
- 12. Simpson Sink Hole (A2)
- 13. Mt Schick (A2)
- 14. Swere Ponds (A2)
- 15. Pockwinse Ponds (A2)
- 16. Cape Northumberland (A2)

PLATEAUS & FALLS PRECINCT

- 21. Dundas Tablelands (A, B & C) (A1)
- 22. The Plains Aboriginal (A1)
- 23. Weynon Falls (A1)
- 24. Nigrella Falls (A1)
- 25. Bungee Rocks (A1)
- 26. Giant Rock (A1)

- 17. Throms Margaret Road Caves (A1)
- 18. Gairing Shear Gorge (A1)
- 19. Cape Inghwater & Inghwater Bay (A1)
- 20. Mt Richmond and Tarnagat Caves (A1)
- 21. Portland Limestone (A1)
- 22. Cape Nelson and Lawrence Rocks (A1)
- 23. The Kanawinka Fault (A, B & C) (A1, A2, A3)

CONES & FLOWS PRECINCT

- 25. Turral (A3)
- 26. Harmer's Valley (A3)
- 27. Zygadic Caves (A3)
- 28. Mt Napier (A3)
- 29. Pinesford Volcano Discovery Centre (A3)
- 30. Mt Howa Hill (A3)
- 31. Badj Blm Lake Flow (A3)
- 32. Lake Condah (A3)
- 33. Lady Julia Perry Island (A3)
- 34. Tower Hill and Interpretive Centre (A3)
- 35. Highby Falls (A3)

- 36. Mt Sheshelli (A3)
- 37. Mt Noon (A3)
- 38. Lake Kallambate (A3)
- 39. Lake Buller Merr (A3)
- 40. Lake Conook (A3)
- 41. Mt Leake (A3)
- 42. Mt Superlat (A3)
- 43. Lake Fumbarba (A3)
- 44. Mt Pomorie (A3)
- 45. Sissy Dam (A3)
- 46. Lake Solac (A3)
- 47. Mt Hamilton (A3)
- 48. Widdow's Caves (A3)
- 49. Mt Clapham (A3)
- 50. Lake Congenientia (A3)
- 51. Red Rock (A3)
- 52. Harding Islands (A3)
- 53. Lake Coler (A3)
- 54. Lake Soobar (A3)
- 55. Lake Tooloook (A3)
- 56. Dry Stone Walls (A, B & C) (A3)
- 57. Lake Tarnag (A3)



EXPLANATION OF SYMBOLS

VISITOR INFORMATION CENTRES

<p>KANAWINKA REGION</p> <p>VICTORIA</p> <p>Camerton Sheik, Terarra 03 5371 2010 www.kanawinka.org.au</p>	<p>Cable 5th Murray and Queen Streets 03 5231 3730 www.melbtop.com</p> <p>Dandenong Parker Street 03 55 77 2508 www.victsouthern.com.au</p> <p>Humblyton Lonsdale Street 1800 367 026 www.victsouthern.com.au</p> <p>Malleson Leake Street 08 8738 4953 www.shelby.vic.gov.au</p>	<p>Port Fairy Bank Street 03 5568 2682 www.melbtop.com</p> <p>Portland Law Brucewater Road 1800 020 3617 www.shelby.vic.gov.au</p> <p>Apollo Bay 125 Great Ocean Road 03 5337 0209 www.victsouthern.com.au</p> <p>Port Campbell 25 Marks Street 03 5548 0280 www.victsouthern.com.au</p>	<p>Warrambool Main Street 1800 037 725 www.warramboolinfo.com.au</p> <p>Volcano Discovery Centre 21 Market Street, Portland 03 5376 7233 www.portlandvolcano.org.au</p> <p>SOUTH AUSTRALIA</p> <p>Deadport Millicent Road 08 8725 0220 www.volcanos.org.au</p>	<p>Millicent 1 Mount Canobie Road 08 8721 0804 www.volcanos.org.au</p> <p>Mount Gambier 31 Adelaide Highway East, Mount Gambier 1800 387 150 www.mountgambier.com.au</p> <p>Penola 27 White Street 08 8727 2255 www.volcanos.org.au</p> <p>Port MacDonnell 5-7 Charles Street 08 8738 2000 www.volcanos.org.au</p>
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CRATERS & LIMESTONE PRECINCT



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Towns of the Craters & Limestone Precinct include: Mount Gambier, Millicent, Penola, Port MacDonnell, Coonawarra, Allendale East, Tantanoola, Glencoe, Mount Burr, Carpenter Rocks

1. Mt Burr Range (R2)
Mt Burr Range contains 13 volcanic eruption points, and is much closer to the nearby Mount Gambier and Mt Striban, ranging from 20,000 to two million years old. The local Aboriginal people of this region hold the memory of the eruptions in their legends of giant animals, called, who live from the Mt Burr area only to hulk its owners, recognizable by the rising granitic peaks, the low, flat crater rim around Mount Gambier. Mount Meehan was another one of the giant.

2. Mt Meehan (R2)
Spectacular views can be obtained from the lookout opposite Mt Meehan located approximately 5km from Millicent where you can see across to the town and further south to the Coonawarra National Park and extensive vine farms. Mt Meehan is privately owned and public access is not permitted.

3. Mt Meehan (R2)
Located 20km from Millicent is another member of the Mt Burr Group. Subvolcanic dykes and rhyolite flows track northeast extensively. Remains are visible for horse riding, cycling, walking tracks and birdwatching. There are a number of beautiful picnic spots in the forest, but camping is not permitted. Roads may not be suitable for all vehicles.

4. Lake Laska (R2)
Lake Laska features a wide, open crater with a low, gently rising ash ring, and is open to the public for your riding, fishing, watercolouring, power boating and water skiing are permitted. There are boat launching facilities and a campsite on the shore. It is a beautiful lake from time to time to visit.

5. Lake Edward (R2)
Lake Edward is a volcanic lake where the most hot cracked open and been filled having bottom fields of ash that was quenched off the craters. Lake Edward is an amazing game playground, one for birds and is integrated area with a boat ramp and panoramic view, lake to view bird life and enjoy a picnic.

6. Tantanoola Cave (R2)
A large chamber cave. Known for its warm, beauty, good climate caverns and an array of unusual speleothems, it has a probable Aboriginal access for visitors.

7. Coonawarra (D1)
Coonawarra is an Aboriginal word meaning "horseyquatta". It is renowned as one of Australia's finest wine regions and is particularly known for producing world class wine, especially Cabernet Sauvignon. Its secret lies in a magical marriage of rich red soil, temperate climate, limestone, plus underground water and a long cool growing season for the grapes.

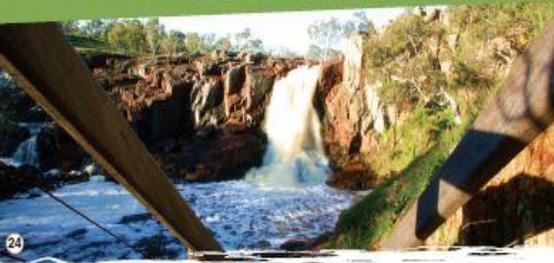
8. Canunda National Park (R4)
Canunda is a large region of high coastal dunes built up on the limestone plateau by the relentless power of the Southern Ocean. Protected behind by dunes to Lake Korwey, South Australia's largest freshwater lake. Canunda is a DMO area only from the last long ocean beaches.

9. Mount Gambier Blue Lake (R4) and 10. Valley Lakes Complex (R4)
This volcanic area, estimated to have been formed some 20,000 years ago over two closely spaced periods, incorporates Blue Lake, Valley Lakes, Beaman Lake and Lake of Mount Lake. The Blue Lake is world famous due to its unique colour change from amber under a clear sky to brilliant turquoise lake between November and March each year. It is also the source of water for the City of Mount Gambier which feeds the volcanic crater. Start at the Blue Lake Reception Centre where interpretive signage describes the features of the Mount Gambier Crater Lake Complex. The 3.2km track and walking track around the circumference provides access to many recreation venues. It is a popular place for all ages with its picnic areas and undercover shelter, the lake, barbecue, adventure playground and the Valley Lake Wildlife Park and Seaworld which also has a boat ramp and open to visit each day.

11. Conception Cave (R4)
This complex limestone cave runs under the city (Burr) and was first explored around 1861. Highly mineralised water regularly seeps. This extensive wet cave system which has hidden water filled chambers under the City.

12. Cave Garden (R4)
State Heritage Area situated in the centre of the city. This artwork was the original source of water supply for the nearby parklands. To its right, the Cave Garden is a great place for a picnic. Its beauty and significance can be appreciated from the viewing area which experiencing the true nighty sound and light show.

PLATEAUS & FALLS PRECINCT



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12. Urquhart Sink Hole (R4)
This sinkhole was created when the top of the chamber fell to the floor of the cave, creating the perfect environment for its "sulfur garden". A beautiful geyser which erupts out of the sink.

13. Mt Striban (R5)
Mt Striban, located 10 minutes' drive south of Mount Gambier is considered to be the youngest volcano in Australia (6,000 years). Producing 150 million litres of ash, it is a prominent volcano on the limestone plain. Interpretive signage explains the volcanic significance of this site and provides information on the two adventures walks, one to the top of the volcano, the other descending directly to the crater floor. The rim offers fantastic views of the surrounding limestone plains, coast and the nearby volcanic formations, Blue Lake and a small cone on the southern rim which is believed to have been formed at the first stage.

14. Sweeneys Ponds (R5)
Sweeneys Pond, Conception Cave incorporates a small bush land park & a ponds which has led right into Mt Striban. Located off the road near the entrance to the Conception Cave, it is a beautiful sight which bubbles up through the limestone at the bottom of the ponds.

15. Piccaninnie Ponds (R5)
Striban, walk, camp or observe the natural wonder of Piccaninnie Ponds. Conception Cave where the crystal clear water flows its way to the surface after filtering slowly underground through a 100metre deep limestone canyon. A world renowned cave diving site permits an ascent to the crater floor only.

16. Wapitiwa Cutting (Just off map to the west)
A series of ancient faults. Some limestone ranges were left by the sea retreat over the last million years. Wapitiwa Caves was cut to drain the mountains behind it and the deep cutting marks the complex layering within a 100,000-year-old deposit.

17. Beachport (Just off map to the west)
Featuring the Bell of Steam and one of South Australia's biggest jetties, Beachport is a haven of hidden beauty rugged extensive limestone cliffs flanked by the Southern Ocean.

18. Cape Northumberland (R5)
Runs of a historic lighthouse near dramatic dramatic limestone cliffs with exposed strata and which shelter a rugged cove. Sweeping views show where the pebbles sea has shaped Spit Rock, Camel Rock and Brink Rock above extensive limestone reefs.

Towns of the Plateaus and Falls Precinct include: Casterton, Coleraine and Hamilton.

21A, 21B & 21C. Dundas Tablelands (R2, D & Z)
A sweeping view across the Dundas Tablelands above Casterton at Mountbush Lane lookout (D1) and along the road near Coleraine (D1 & 21C) shows where the Warrenton River has cut deeply into the limestone capped Tablelands, forming high wide plateaus, which drop away to the south and west along the Karanetina (R2).

22. The Pielts Adventure (R2)
Located at Coleraine, this contains over 10,000 plants including 60 rare and endangered species. Its rugged collection is a renowned local reference for the native vegetation that complements the Karanetina region's geology and soils.

23. Warrenton Falls (R2)
The Warrenton Falls were created by two basins that surged upstream to the Warrenton River. The water which cascades over a 20metre vertical precipice into a deep plunge pool below, is actually flowing over horizontal local Lias. Further downstream, rapids wind their way around large boulders of basalt, dislodged over time about the embankments of the narrow valley. A confirmed swimming platform at the Warrenton Falls offers spectacular views. A nearby nature reserve interpretation centre for visitors, covering geology, flora & fauna, local history and details of local birds which partook in the area. Camping facilities are available at Warrenton Falls.

24. Negretta Falls (R2)
It is thought that the site where the Negretta Falls on land may have been the location of volcanic activity about 650 million years ago. It has excellent river walks, viewing areas, barbecue facilities, wet gun picnic tables and a jettie timber stoney leading to the base of the falls.

61. Balley Rocks (R5)
Balley Rocks are an unusual group of large green rounded granite boulders which are part of a long series of outcrops through the Dundas Tablelands & the Warrenton Ridge to the west. They formed before the separation of Australia from Antarctica. Only an Awarua Lurch at "The Pub in the Bush" at Georgetown.

62. Giant Rock (R1)
Giant Rock protrudes through the Dundas strata as a huge volcanic plug of altered tuffaceous the Jurassic Coleraine volcanic cone. It formed from magma which cooled slowly deep in the crust and contains many small crystal grains. It is a picnic spot properly but can be viewed from a bin walking track available to the public. A much smaller plug is along the road near city.

COAST & CAVES PRECINCT



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Towns of the Coasts and Caves Precinct include: Portland, Nelson, Dartmoor, Cape Bridgewater and Heywood.

17. Princess Margaret River Cave (R5)
Of the many limestone caves in Lower Geelong National Park, the Princess Margaret River Cave is the most attractive and the only cave suitable for public use. It contains excellent examples of actively growing stalactites, stalagmites, helictites and other spectacular limestone formations, all contained within an elegant network of rifts that access a large bend of the Geelong River. You can take a beautiful river gorge cruise to the cave and take lunch amongst the largeness of the forest in its natural habitat.

18. Glenroy River Gorge (R5)
The Glenroy River runs in the Grampians and which 600km to the sea, over its last 10 km carrying a 50m deep spectacular gorge through limestone. The river offers excellent opportunities for fish and water canoeing over the 75 km from Dartmoor. In its mouth near Nelson, the river flows through the Lower Geelong National Park, entering water enthusiasts to observe wildlife in its natural habitat.

19. Portland Lighthouse (R5)
A new cruise is available from Nelson near the river mouth, travelling upstream between the cliffs of the limestone gorge which was cut downwards by the river in the most limestone plain was slowly applied by regional forces of very deep magma beneath. Full picnic grounds, laundry and the life of logs. The fishing town of Nelson is a delightful place to relax and watch the life of the river when it meets the estuary.

19. Cape Bridgewater and Bridgewater Bay (R4)
Situated 18 km from Portland and overlooking beautiful Bridgewater Bay, once a volcanic island. About 5,000 years ago, rising sea levels built a bridge of sand dunes between Cape Bridgewater Volcanic Neck and the mainland. Over time, rainfall and groundwater have hardened these into dunes of quartz limestone.

Bridgewater Bay is such a large and beautiful natural area that it is often photographed for commercial from the sweeping lookout. A fine limestone walk is available from the lookout. About 5,000 years ago, rising sea levels built a bridge of sand dunes between Cape Bridgewater Volcanic Neck and the mainland. Over time, rainfall and groundwater have hardened these into dunes of quartz limestone. Bridgewater Bay is such a large and beautiful natural area that it is often photographed for commercial from the sweeping lookout. A fine limestone walk is available from the lookout. About 5,000 years ago, rising sea levels built a bridge of sand dunes between Cape Bridgewater Volcanic Neck and the mainland. Over time, rainfall and groundwater have hardened these into dunes of quartz limestone.

The walk continues along dark basalt cliffs to the Blowhole at Cape DuRoi and can be walked in either direction.

26. Tarragone Caves (R5) and Mt Richmond (R1)
Tarragone Caves are unvisited in ancient dunes limestone with spectacular views overlooking Cape DuRoi, the Bridgewater Lighthouse and Richmond Bay. Areas are made for limited Aboriginal modern.

An extinct volcano surrounded by low flat land. Mt Richmond consists of red basalt of porous rock called tuff, which was formed when the volcanic are gradually farmed over two million years ago. Apart from the occasional outcrops of basalt near the summit, the volcanic geology is almost entirely buried by dune limestone and sand blown inland from Cape DuRoi Bay. Noted for its flora and fauna, the park is covered with forest, open heath and scattered swamps. Various walks and picnic areas are available.

28. The Blowhole Forest (R4)
A walk from the Blowhole beach past the "The Blowhole Forest" which is thought to have developed when a Murchison forest was unshowered by a large sand dune, creating unusual sandstone formations around the blowing tree trunks.

34. Cape Nelson, Yellow Rock and Lawrence Rocks (R5)
Large basalt flows have formed the base of the Cape and the Island, which are both capped by wind-blown sands now hardened into limestone shells. The bay itself is actually a field of volcanic cones and craters now submerged by the sea. There are three lookouts around the bay, starting from the lighthouse. The white cone of Lawrence Rocks is actually a huge colony of yellow-brown granite, built on the island. Now so well protected, they have also contained Cape Nelson on the mainland opposite.

60A, 60B & 60C. The Karanetina Falls (R5, D6 and G7)
The large Karanetina Falls runs for over 100 kilometres across the Geelong and Gippsland regions. It can be seen along the Geelong-Melbourne road (R5). A few km from the falls, the Karanetina Falls is actually a huge colony of yellow-brown granite, built on the island. Now so well protected, they have also contained Cape Nelson on the mainland opposite.

KANAWINKA

South West Victoria & South East South Australia

GEOTRAIL

DISCOVER AUSTRALIA'S MOST EXTENSIVE VOLCANIC PROVINCE

CONES & FLOWS PRECINCT



Towns of the Cones and Flows Precinct include: Hamilton, Penhurst, Macarthur, Hawkesdale, Woodroffe, Carramut, Heywood, Kororo, Port Fairy.

25. Turrell (R5)
13 kilometres west of the Ypsalau Caves are circular mounds or hummocks of rock called "Turrells" or "Cone Hilltops" up to 10 metres high and 20 metres in diameter, closely lined up in order of the world.

26. Humana's Valley (R5)
The Humana's Valley flow is one of the youngest lava flows, dated on the continent. A spectacular lava fountain once erupted 100 metres high from a deep lake in Mt Napier's crater approximately 4,000 years ago. The lava rose from a depth of over 200m and its temperature was about 1200 degrees Celsius. It flowed in two directions, and the westerly flow, down Humana's Valley, extends for approximately 20km.

27. Ypsalau Cave (R4)
The Ypsalau Cave in Mt Napier State Park are the most extensive and accessible set of lava caves in Australia (only 1,000 years). They are largely unvisited and in their natural state. The caves are accessed through rugged and steep limestone and display many well-preserved features left by the retreating and cooling flow. The largest tunnels are up to 18 metres wide, 10 metres high, and extend to depths of 20 metres below the surface.

28. Mt Napier (R4)
Approximately 100 km south of Hamilton lies Mount Napier, the youngest volcano in Victoria and the highest volcanic peak in the Western District Plains, with many eruptions and low flow features that are remnants from the last stage of volcanic activity 10,000 years ago. Some lava flows reach as far as the sea between Port Fairy and Portland. Mount Napier is best attempted with a DMO. There are a number of off-trail wet sites around Mt Napier State Park.

29A, 29B Peninsula Volcanics Discovery Centre and Mt Napier (R4)
The Peninsula Volcanics Discovery Centre provides an insight into all types of volcanism with specific information about Australia's most recent volcanoes, found along the Karanetina Geocast.

LAKE & CRATERS PRECINCT



Towns of the Lakes and Craters Precinct include: Colac, Camperdown, Lismore, Derwentham, Terang, Skipton, Morletts, Lake Lake, Derrinallion.

36. Mt Studwell (R4)
Mt Studwell is a volcanic cone with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.

37. Mt Napier (R4)
Mt Napier is a volcanic cone that erupted after the Ypsalau flow, and is a beautiful meeting and bartering place for the Koori Aboriginals. It is a volcanic cone with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.

38. Lake Balley Rocks (R5)
Lake Balley Rocks is a volcanic lake with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.

39. Lake Balley (R5)
Lake Balley is a volcanic lake with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.

40. Lake Grout (R5)
Lake Grout is a volcanic lake with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.

41. Mt Napier (R4)
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LAKE & CRATERS PRECINCT



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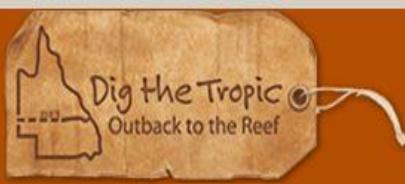
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45. Mt Napier (R4)
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46. Mt Napier (R4)
Mt Napier is a volcanic cone that erupted after the Ypsalau flow, and is a beautiful meeting and bartering place for the Koori Aboriginals. It is a volcanic cone with a commercial quarry. Within the quarry it is possible to look for a pale green crystal found in volcanic "Bubbles" blown out during volcanic eruptions.



The Tropic of Capricorn Story

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Dig the Tropic Geo-Tourism trail - Linking the Outback to the Reef

Dig The Tropic is a themed Geo-Tourism Trail linking the wonders of the Southern Great Barrier Reef with the mysteries of Queensland's Outback. It is the only known trail of its kind in the world, enabling visitors to experience a self-drive trail like no other. Following the Tropic of Capricorn, you will experience a living museum created by ancient events left behind. Visit sites such as the Stone House Museum, Age of Dinosaurs Museum, Lark Quarry, the Sapphire Gemfields, Capricorn Caves and the Great Barrier Reef. For more information, download the brochure and start planning your journey to this ancient world today.

Grand Canyon Time Trail

Descends ~1.3km and trail is >5km long



Grand Canyon Time Trail



Why Geotrails?

1. Relates directly to the tourism experience of a **journey linking destinations**.
2. In Australia, unlike geoparks, **geotrails have widespread appeal**, and do not compete with or impact on land management/access issues.
3. Geotrails are relatively easy to establish and represent a **very cost effective means of enhancing regional development**.

Best Practice Geotrails

1. Should be constructed around **routes currently used by tourists**; geotrails should form logical journeys linking accommodation destinations.
 2. Should **meld the geological heritage features of a region with a cohesive story**.
 3. Should **incorporate and package in the biodiversity and cultural components (including mining heritage) of the region through which the geotrail traverses**.
- 

Take-Aways

- The incorporation of the geotourism experience (with traditional nature tourism and elements of other 'place based' tourism) creates a more holistic experience, and is a move towards the experiential tourism model. In short, 'experiential' tourists seek memorable experiences.
- Australia's National Landscapes and many other regional areas of Australia are key 'iconic' places where geotourism is centre stage.
- Australia has a big future for geotourism particularly given the emerging demand from overseas markets.

Take-Aways

- **Creating geotrails** is arguably the easiest way of providing early pathways for geotourism activities in Australia.
- **New ICT technologies** offer cost effective solutions of providing travellers with interpretative information.
- Successful roll-out of **geotrails will instill confidence in geotourism**, providing a future pathway to geopark establishment and development in Australia.
- Ecotourism operators would be advised to start **promoting geotourism features of their products.**



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Join the LinkedIn Discussion Group:
'Australian Geotourism Development'