

Geoheritage, Geotourism, Geotrails and a South Australian Songline Global Eco 2017, 29 November



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GSA Geotourism Standing Committee

Today's Agenda

- Natural Heritage and Geoheritage
- Geotourism
- Australia's National Landscapes
- Geotrails - Canada and Australia
- Proposed Great Central Geotrail, South Australia
- Take Away

Understanding Natural Heritage and Geoheritage

Natural heritage is the legacy of natural objects and intangible attributes encompassing the countryside and natural environment, including flora and fauna, scientifically known as **BIODIVERSITY**, and geology, landforms and soil landscapes, i.e. **GEODIVERSITY** - its Geoheritage!



Geotourism Definition adopted by the Geological Society of Australia

Recognising that interpretation outcomes in Australian national parks had largely ignored geoheritage elements of national heritage, the GSA set about addressing this deficiency with the following definition.

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

Geotourism

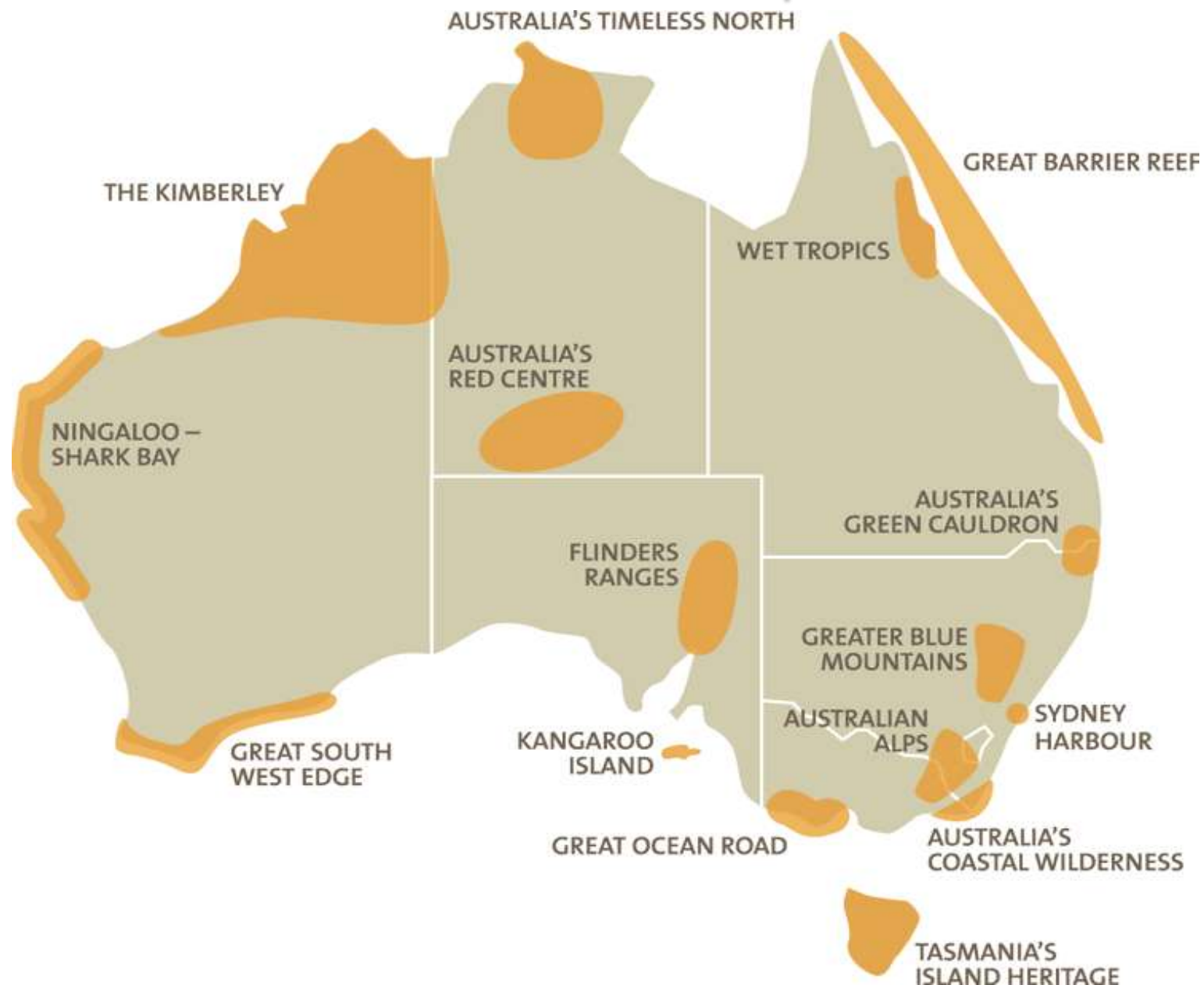
comprises the following features of natural & cultural heritage:

1. **Abiotic** - non-living aspects such as the climate & geology e.g. landscape and landforms: GEODIVERSITY (i.e. Geoheritage)
2. **Biotic** - the living parts eg. fauna (animals) and flora (plants): BIODIVERSITY
3. **Cultural** - past & present, non-living & built

Holistic in scope, geotourism is the key driver for Geoparks, Geotrails , World Heritage Areas & Australia's National Landscapes.



Australia's 16 National Landscapes - 'Scenic Areas'



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’.

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.

Geotrail Network
Canada

Map data ©2015 Google, INEGI Terms of Use



Baker's Falls - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Ten's Falls - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Shanley Falls - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Trinity Falls - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Shanley Creek Bridge - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Little Cemetery Falls - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Darby Cascade - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Hamilton City View - hamiltonwaterfalls...

hamiltonwaterfalls.geotrail.ca



Whitby Falls - hamiltonwaterfalls...

Choose Your Own Adventure

1 2 3 4 5 6 7 8



Get Outside! Choose your region

Welcome to Geotrail

Geotrail is an online trail map that provides information on over 1000 trails from all over Ontario and across Canada. Users can search our growing trail cloud for any number of trails, from a variety of locations, all in one place. Search your region, find your trail, and go outside. As a geosocial enterprise, we also work with our network of partners including cities, conservation authorities and tourism agencies to help manage, promote and communicate trail networks and eco-tourism programming. [Read more.](#)

Geotrail Wins Active Transportation Award

Geotrail has won the Pedestrian Friendly Business/Organization Award for the Community in Motion Awards for Active Transportation. The winners were announced at the ACT Mobility Summit Read more.

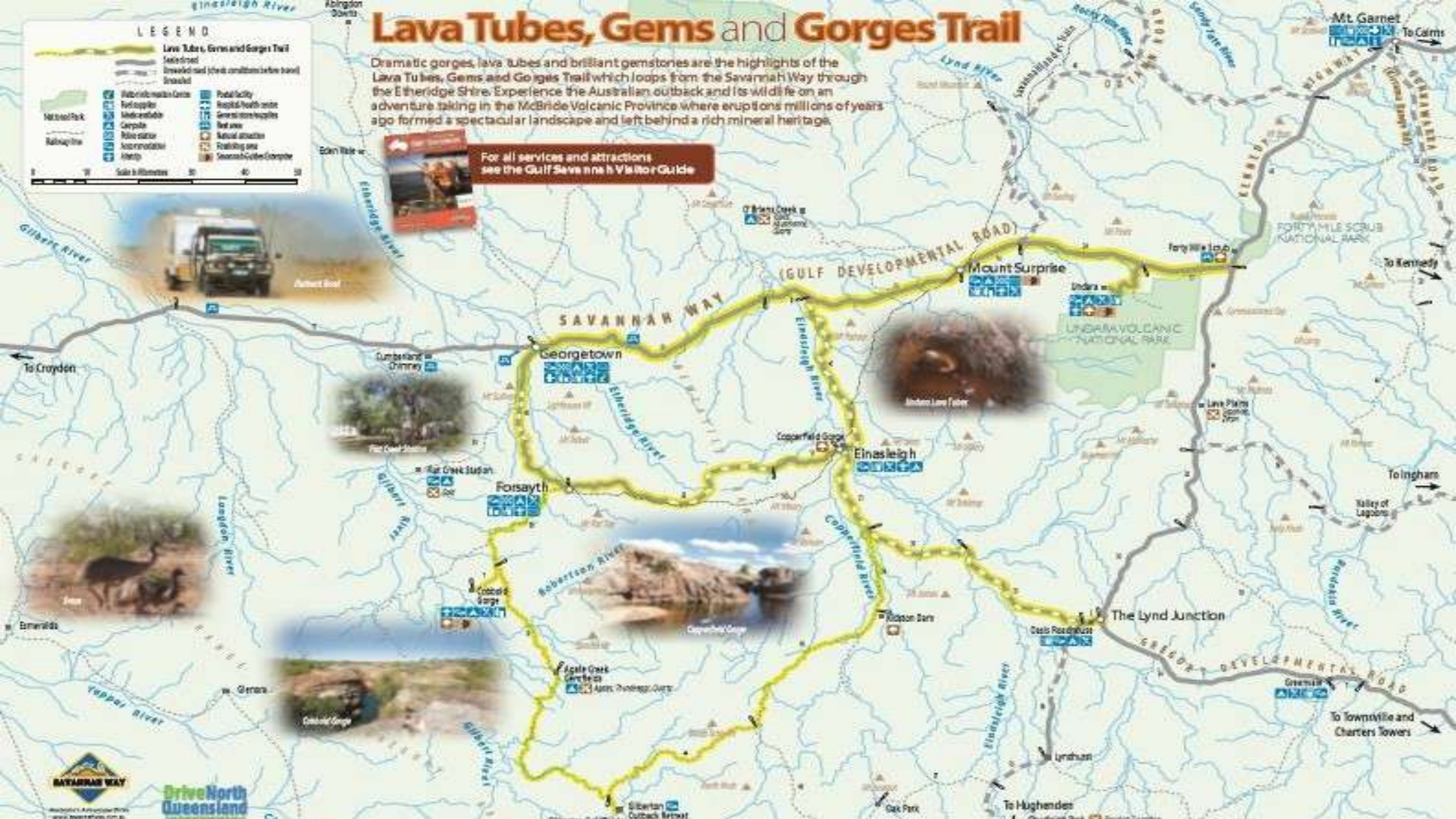
The Proposed Savannah Way Geotrail linked to a 'Defacto' Geopark in the State of Queensland



Lava Tubes, Gems and Gorges Trail

Dramatic gorges, lava tubes and brilliant gemstones are the highlights of the Lava Tubes, Gems and Gorges Trail which loops from the Savannah Way through the Etheridge Shire. Experience the Australian outback and its wildlife on an adventure taking in the McBride Volcanic Province where eruptions millions of years ago formed a spectacular landscape and left behind a rich mineral heritage.

For all services and attractions
see the Gulf Savannah Visitor Guide



Drive North
Queensland

Island of Tasmania National Landscape

Cradlecoast GeoTrail



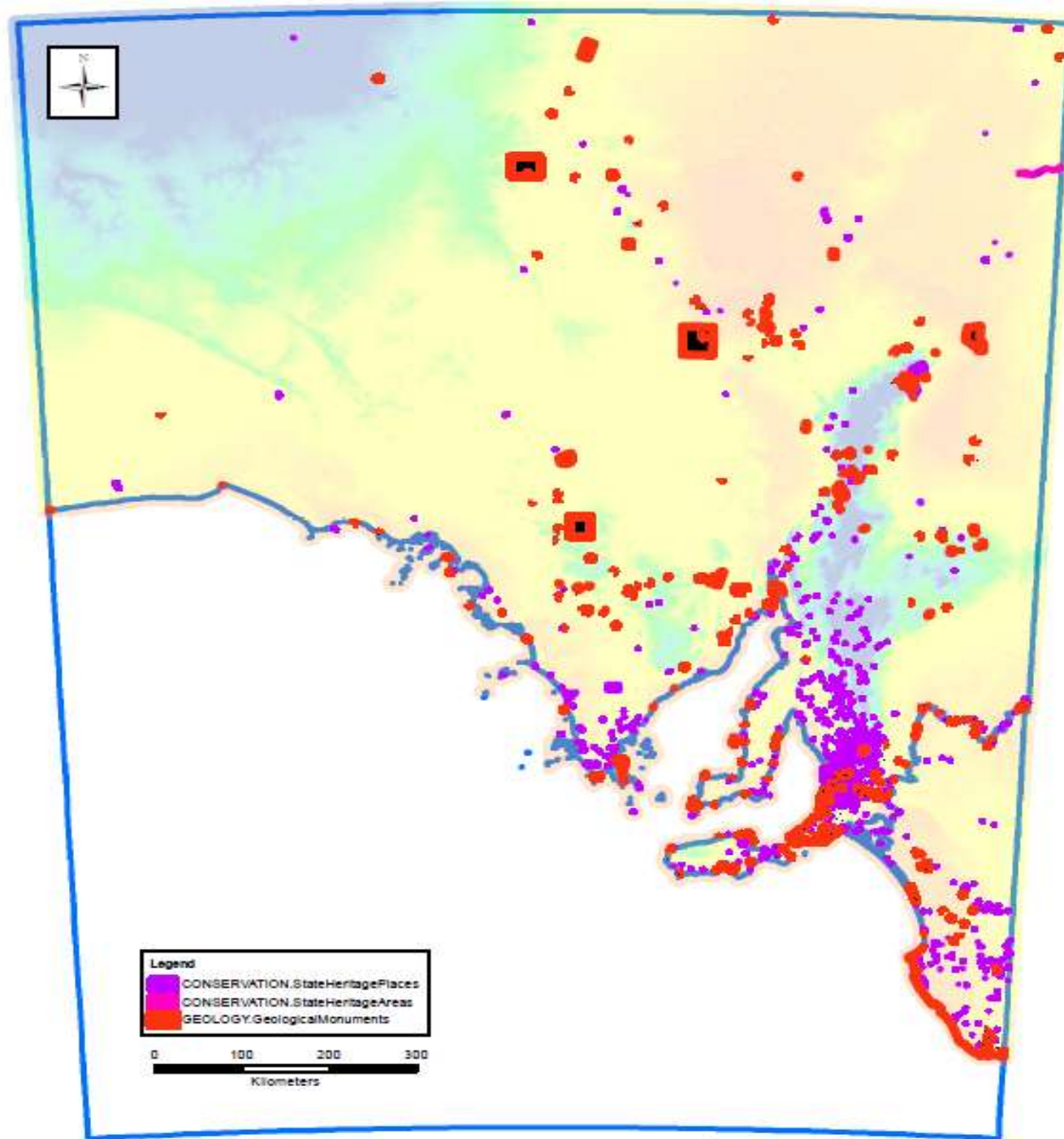
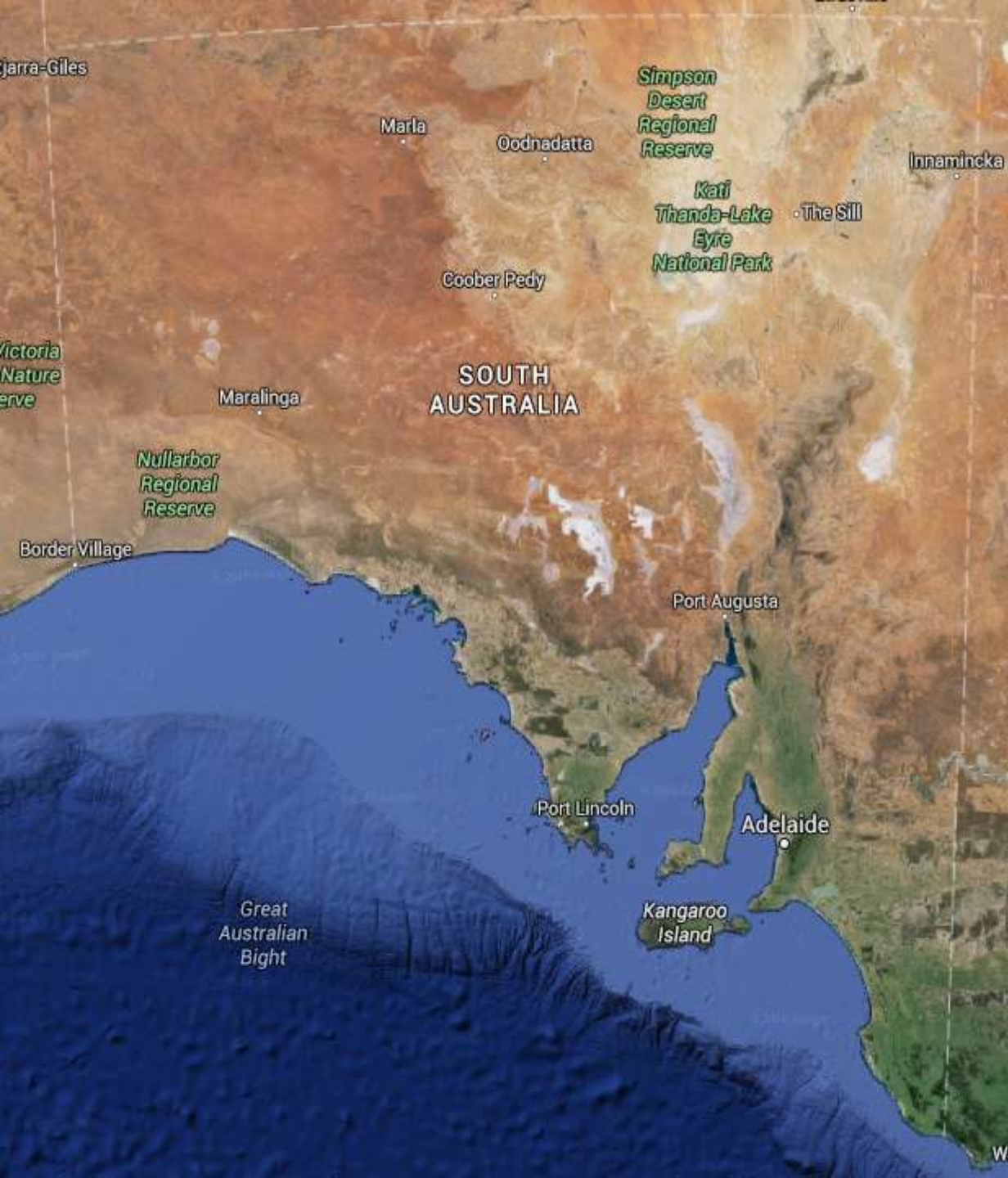
‘The Living Earth’ - Cradle Coast Geotrail

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.





Heysen Trail Map

View **Google**
map showing the
Heysen Trail with:

- accommodation options
- re-routes
- Fire Ban Districts
- Tourism Regions

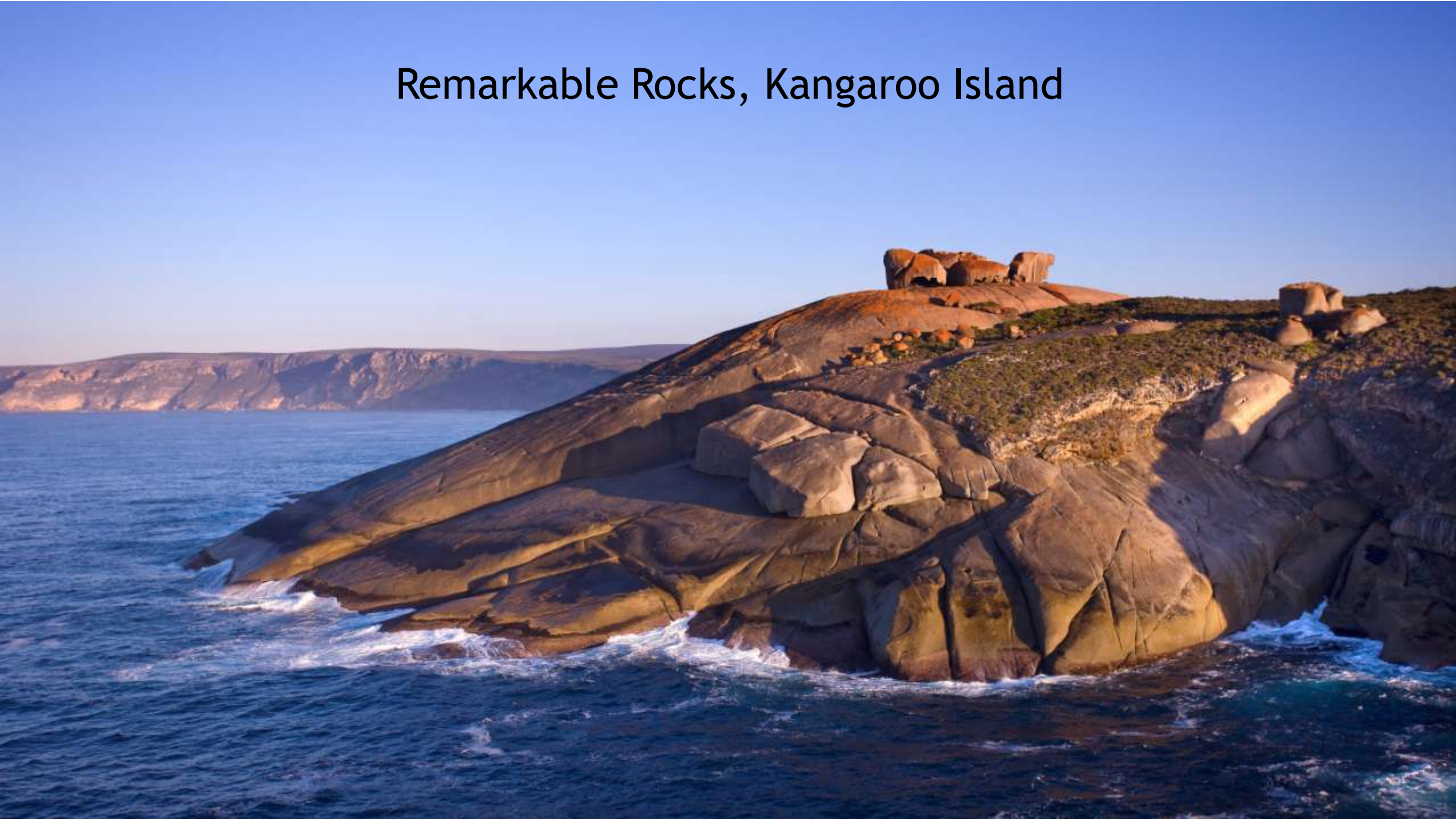
View Map



Admirals Arch, Kangaroo Island



Remarkable Rocks, Kangaroo Island



VICTORY
HOTEL

Sellicks Beach, Fleurieu Peninsula

SELICKS BEACH





HALLETT COVE CONSERVATION PARK



NORTH TERRACE, ADELAIDE

Geological trail

A city walk observing geology, building stones and building stone use



1 Parliament House of South Australia (constructed 1883–89, 1936–39)

South Australia's Parliament House is constructed of grey marble sourced near Kapunda, 90 km north from Adelaide, on a plinth (base) of grey granite sourced from West Island, an island off the south coast near Victor Harbor.

Note the particularly large crystals of feldspar in the "West Island Granite", many of which are concentrically zoned. Other characteristic minerals in this and most other granites are glassy quartz and a black-coloured mica (biotite).

The variation in colour and banding in the marble, as well as cross-cutting veins, have been thought to be unattractive characteristics, so this stone has rarely been used for other building projects, despite its ongoing availability.



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412054

2 Granite block seating adjacent Parliament House

The lack of accessibility of granite from West Island, due to it being proclaimed a Conservation Park, has meant that alternative granite was sourced during the 1970s from Kingston SE for block seating next to Parliament House along King William Road.

This "Kingston Blue Granite" has large bluish-coloured feldspar crystals, also with concentric banding. There are also dark pieces of altered sedimentary rock that have been incorporated into this granite. These are termed xenoliths. This stone has been used spectacularly in a sculpture park located at Maria Creek in rural Kingston SE.

The term "Kingston Blue Granite" is used by stonemasons and marketers. Other stone names in inverted commas in this guide are also stonemason terms.



412055



412056

Near this point, cross King William Road at the traffic signals

3 South African War Monument (erected 1904)

This is Adelaide's first war memorial, commemorating involvement in the South African (or Boer) War, 1899–1902.

The bronze statue, by English sculptor Adrian Jones, of an Australian bushman soldier is placed on a base of orange coloured Murray Bridge Granite having both a sawn or rock faced finish. This stone was sourced near Murray Bridge and was the first granite to be used widely in South Australia in the late 19th and early 20th centuries.

The unusual orange colour of this granite is due to minor impurities in the mineral feldspar in this rock. On this walk, South Australian granites of many different colours — orange, red, green, blue and grey — will be observed. The colour difference in each instance is mostly due to different impurities in the constituent mineral feldspar.

The main quarry for this granite at Murray Bridge was located at the position where Highway 1 (SE Freeway) crosses the Murray River and remaining evidence of the quarry can still be seen near the northwest corner of the Swanport Bridge.

Other examples of Murray Bridge Granite can be seen on this excursion and around Adelaide.



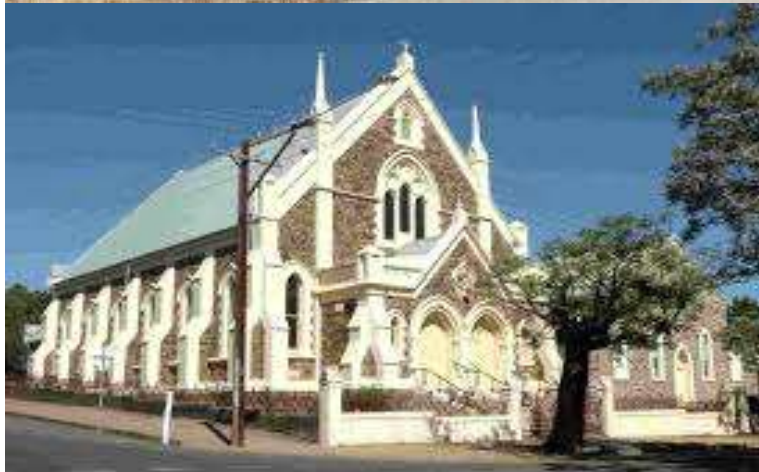
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Proceed to walk on the outside pathway closest to North Terrace



Government of South Australia
Department for Manufacturing,
Innovation, Trade, Resources and Energy

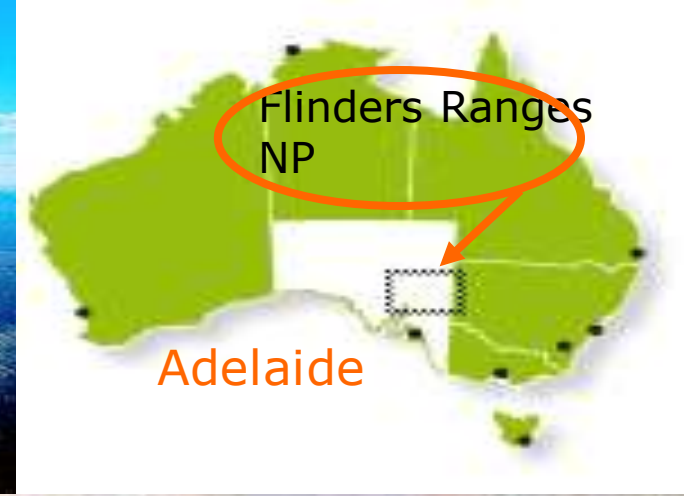
Burra, South Australia



Flinders Ranges World Heritage Nomination







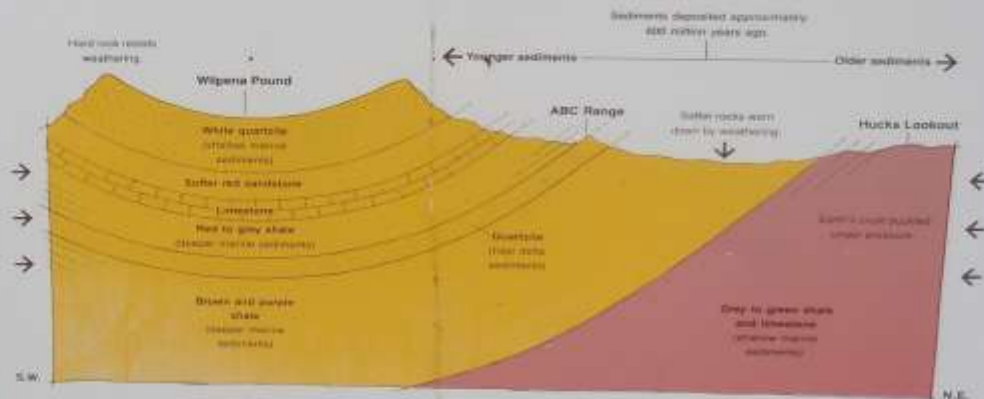
Brachina Gorge – self-guided geological trail - (The Ediacaran Fossils)

Wilpena Pound, South Australia

Brachina Gorge Geotrail, Flinders Ranges

Hucks Lookout

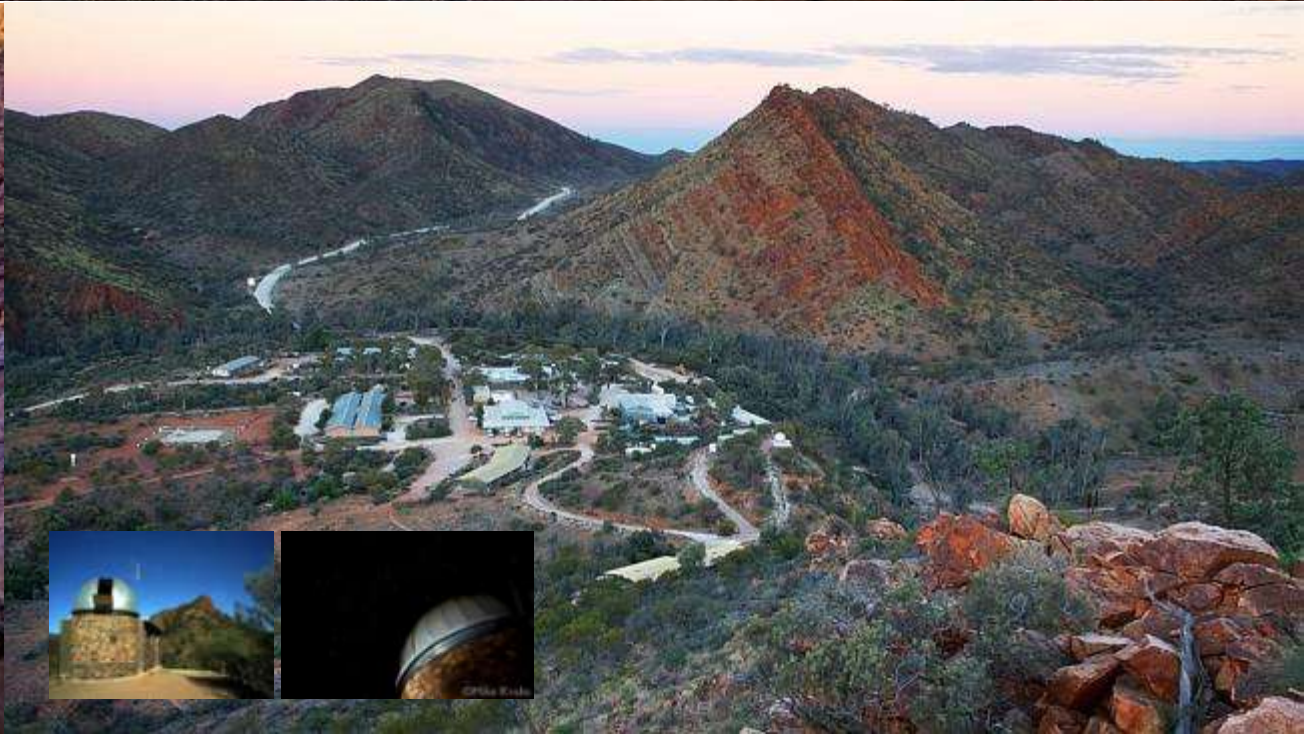
The rocks which form the Flinders Ranges were originally deposited as sediments between about 1000 and 500 million years ago. Movement of the Earth's crust caused a trough (called the Adelaide Geosyncline) to sink, forming a long system of narrow depressions. During this period, sediments accumulated to a depth of 20 kilometres, recording evidence of ancient environments and lifeforms. Subsequent folding of the strata, combined with uplift and weathering over hundreds of millions of years, has created the landscape we see today.



The sedimentary rocks which form the Flinders Ranges have preserved mud cracks, ripple marks, raindrop impressions and glacial deposits, evidence of changing environments during an enormous time span of hundreds of millions of years.



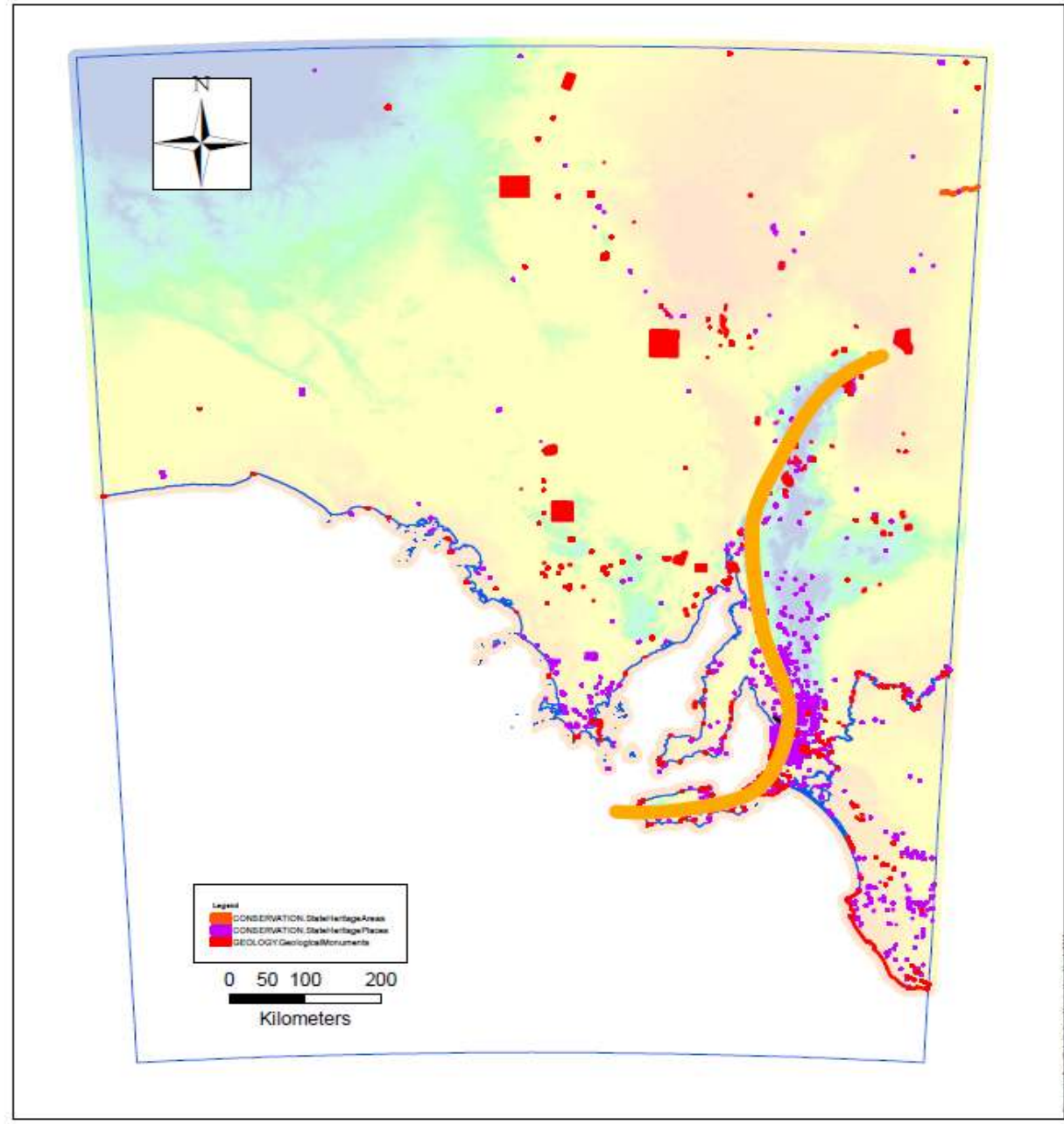
Arkaroola, Flinders Ranges



Walk, ride,
drive or
fly the
Songline!



South Australia's Heritage & Geosites - a Great Central Geotrail?



Take Away

The establishment of a Great Central Geotrail offers the potential of linking key geosites within the Flinders Ranges World Heritage Area Nomination with other outstanding geosites across Central South Australia, including the Kangaroo Island National Landscape Area.

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<http://www.leisuresolutions.com.au/index.php/geotourism-industry-groups/>

GSA Geotourism Portal

<https://tinyurl.com/yb7yceyh>