

## COASTAL EROSION FREQUENTLY ASKED QUESTIONS

### **What areas of the Shire of Gingin's coastline are being affected by erosion?**

Much of Western Australia's coastline is being affected by coastal erosion with evidence of rising sea levels in recent years (i.e. CSIRO – <https://research.csiro.au/slrwavescoast/sea-level/>).

The Shire's hardest hit areas identified in the WA State Government's 2019 Coastal Erosion Hotspots report ([www.transport.wa.gov.au/imatech/coastal-erosion-and-stability.asp](http://www.transport.wa.gov.au/imatech/coastal-erosion-and-stability.asp)) include:

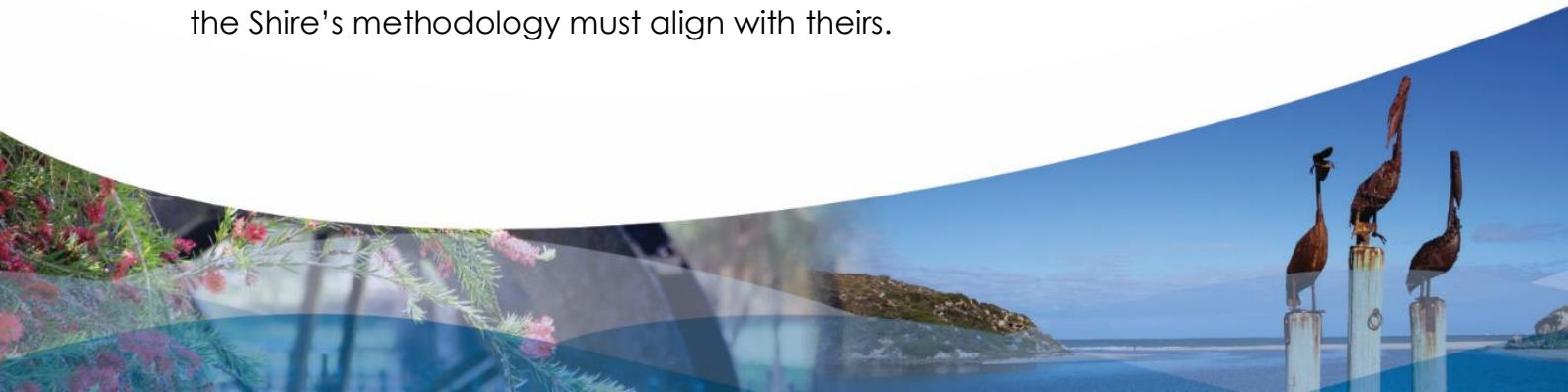
- Seabird
- Lancelin
- Ledge Point

Other areas of coastline along the Shire's coast are rated at a lower risk though that rating is likely to change with the advance of years.

### **How is the Shire of Gingin going to combat coastal erosion?**

Given the complexity of the matter, whatever the Shire does it needs to be carefully researched as the Shire can ill-afford to make an incorrect decision. Unfortunately researching a solution can take some time to complete depending upon the circumstances as in each instance, the strategy to combat erosion needs to be tailored to suit the area affected.

The Shire must also take into account the methodology of higher authorities such as the WA State Government and potentially the Federal Government as the Shire's methodology must align with theirs.



The WA State Government has its own stance on the matter which is “to have a sustainable coast for the long term benefit of the community and visitors to the State.”

For further information on the WA State Government's strategy and to view it please visit – [www.dplh.wa.gov.au/information-and-services/state-planning/coastal-planning-and-management/wa-coastal-zone-strategy](http://www.dplh.wa.gov.au/information-and-services/state-planning/coastal-planning-and-management/wa-coastal-zone-strategy).

At this point in time the Shire has undertaken several studies including the Coastal Hazard Risk Management and Adaptation Plan (CHRMAP – refer [www.gingin.wa.gov.au/services/coastal-hazard-risk-management-and-adaptation-plan-chrmap.aspx](http://www.gingin.wa.gov.au/services/coastal-hazard-risk-management-and-adaptation-plan-chrmap.aspx)).

The Shire will consider whatever strategy is most appropriate to deal with the affected area. Strategies could potentially include:

- Sea walls (built from rocks, sandbags, etc.)
- Sand re-nourishment
- Sand dune rebuilding
- And others as appropriate...

The Shire will not make any ad-hoc decisions that are likely not to stand the test of time, to be ineffective or that may cripple the Shire financially.

### **Why is it taking the Shire of Gingin so long to address the coastal erosion issue?**

Coastal erosion is not an easy issue to address for the Shire of Gingin nor for any other local government having to deal with it. It costs the Shire thousands of dollars every year to carry out short term solutions being predominantly sand re-nourishment works.

More medium term solutions such as sea walls and groynes cost significantly more to build. The Shire is consequently reliant on the State Government for additional funding which is not always forthcoming unless the Shire can meet certain criteria which can take time to achieve.



Unfortunately there is no permanent solution for coastal erosion, hence why it is an ongoing issue that the Shire cannot permanently address. Consequently the Shire is taking its time to explore its options and to seek the advice of coastal engineers, State Government representatives and other expert persons as required to ensure that any solutions employed will be successful for the duration of their installation.

**What does the Shire plan to do about the erosion at Grace Darling Park, Lancelin?**

The Shire plans to tackle erosion at Grace Darling Park as soon as possible with a viable strategy that won't leave an excessive financial impact upon any future Shire Council.

At its July 2019 Ordinary Meeting Council decided to pursue the construction of a geo textile wall to protect Grace Darling Park after consulting with coastal engineers. However, when the Shire later applied for 5 x WA State Government grants it was informed that it was ineligible to receive the majority of these as the WA State Government found that there were other impact studies the Shire needed to undertake, specifically an inundation study. Whole of life costs of the wall (which will only last approximately 20 years) were also higher than was initially calculated.

Consequently at its October 2019 Ordinary Meeting Council decided to rescind its previous motion to do a geo textile wall and instead to undertake further studies.

A complete copy of Council's new decision at its October 2019 meeting can be found on the Shire's website ([www.ginggin.wa.gov.au/council-meetings/past-meetings/2019](http://www.ginggin.wa.gov.au/council-meetings/past-meetings/2019)).

In the meantime the Shire will continue to utilise the short term strategy of sand re-nourishment.



### **What is the Shire doing about Coastal Erosion at Seabird?**

In 2015 the Shire installed a seawall at Seabird which is expected to last 20 years. During this time the Shire will maintain the wall as necessary and undertake further research to develop a viable strategy for managing coastal erosion in Seabird following the decommissioning of the wall.

### **What is the Shire doing about Coastal Erosion in other hot spots along its coastline?**

Where required sand re-nourishment works will be carried out if and when they are necessary.

Otherwise the Shire is continuing to undertake further studies to determine the best course of action to manage coastal erosion as the years advance. This course of action is not set and will change as new strategies are developed or as new information is brought to light.

### **What sort of impact does the sand re-nourishment works have and should the Shire be doing them at all?**

Sand re-nourishment has been shown to combat coastal erosion for a short term – usually 6 months to 5 years. It is popular with many local governments not only within Australia but all over the world as generally it involves taking sand that has previously eroded from the beach and pumping it back up onto the beach. Alternatively fresh sand is trucked in from a nearby local source instead.

The Shire prefers to carry out these works as they cost significantly less and the Shire is able to afford to do them when they are necessary.



## **Does Council need approval for the sand re-nourishment works from the State Government?**

The Shire of Gingin does not need approval from any department under the State Government to carry out sand re-nourishment works. There is no legislation that prevents the Shire from doing sand re-nourishment works and this treatment aligns with the CHRMAP outcomes.

## **Why does the Shire keep doing sand re-nourishment when this tactic doesn't seem to be working?**

The Shire utilises sand re-nourishment as a short-term tactic. The reason the Shire employs this tactic is because it is cost effective and it works to shore up the coastline quickly and to protect the existing coastline from further damage whilst the Shire (together with the State Government) works on a more medium term solution.

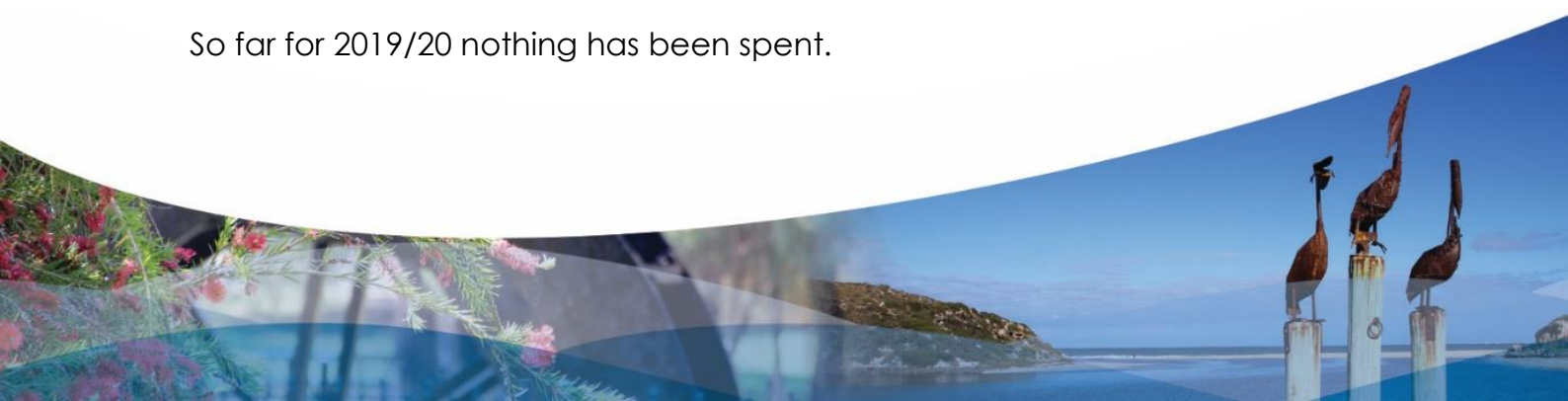
The downside is that the Shire has to undertake this practice often but the upside is that existing infrastructure is secured in the short term. If erosion is sustained then the sand used for the re-nourishment is eroded as opposed to more damage being sustained by the existing coast and public infrastructure.

## **How much money has the Shire spent on sand re-nourishment works since they started doing them?**

At Grace Darling Park in Lancelin the Shire has spent a total of \$69,269.63 over the past 5 financial years.

\$44,451.88 was spent in 2017/18, \$24,817.75 was spent in 2018/19 and nothing was spent in 2014/15, 2015/16 and 2016/17.

So far for 2019/20 nothing has been spent.





### **Is climate change the cause of the rising amount of coastal erosion?**

Sea level rise, whilst still not an exact science, has been proven to be occurring and is the reason for the rise in the amount of coastal erosion the Shire of Gingin is experiencing.

It is also predicted to continue to rise and it is highly likely that eventually it will no longer be sustainable to continue to try to maintain the current coastline as it is.

### **Is the government (local or state) obligated to protect private or public property from coastal erosion?**

The Shire of Gingin and the WA State Government is not responsible for protecting private or public property from coastal erosion. Landowners should seek coastal hazard information that may be relevant to their property and use this information in their own decision making processes.

### **Where can I find out more information on coastal erosion?**

The Shire of Gingin is preparing for the predicted impact of climate change and consequent sea level rise at the coastal settlements of Guilderton, Seabird, Ledge Point and Lancelin. The CHRMAP document has been prepared to provide a long term view of the potential future coastal erosion impacts to the coastal townships and to provide possible strategies to adapt to the changing oceanic and coastal conditions.

The CHRMAP is available for viewing on the Shire's website here - [www.gingin.wa.gov.au/services/coastal-hazard-risk-management-and-adaptation-plan-chrmap.aspx](http://www.gingin.wa.gov.au/services/coastal-hazard-risk-management-and-adaptation-plan-chrmap.aspx).



There is also a vast amount of information available online in relation to coastal erosion. The Shire of Gingin recommends the following sources:

- Australian Parliament  
[www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/Browse\\_by\\_Topic/ClimateChangeold/theClimate/seal\\_evels](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Browse_by_Topic/ClimateChangeold/theClimate/seal_evels)
- WA Department of Transport  
[www.transport.wa.gov.au/imagine/coastal-erosion-and-stability.asp](http://www.transport.wa.gov.au/imagine/coastal-erosion-and-stability.asp)

