



Gladstone  
Healthy Harbour  
Partnership

# 2017 GLADSTONE HARBOUR REPORT CARD

Independently monitoring & reporting  
on the health of Gladstone Harbour

*Healthy Harbour, Healthy Future*

# Environmental Results



unchanged  
2016 to 2017

medium  
confidence

ENVIRONMENTAL	SCORE	GRADE
<b>OVERALL ENVIRONMENTAL</b>	<b>0.60</b>	<b>C</b>
<b>Water &amp; Sediment</b>	<b>0.87</b>	<b>A</b>
- Water	0.78	B
- Sediment	0.95	A
<b>Habitats</b>	<b>0.33</b>	<b>D</b>
- Seagrass	0.39	D
- Coral	0.28	D
<b>Fish &amp; crabs</b>	<b>0.63</b>	<b>C</b>
- Fish	0.71	B
- Crabs	0.55	C

Environment remains a C grade overall, despite an improvement in the underlying score (0.50 in 2016 to 0.60 in 2017). Water and sediment quality have continued to receive good and very good grades respectively. Mud crabs (including measures of health) have been included in the 2017 report card for the first time. Fish recruitment improved from D to B, although this may be partly because of natural cycles.

# Cultural Results



unchanged  
2016 to 2017

medium  
confidence

CULTURAL	SCORE	GRADE
<b>OVERALL CULTURAL</b>	<b>0.62</b>	<b>C</b>
<b>Sense of Place</b>	<b>0.65</b>	<b>B</b>
- Distinctiveness	0.57	C
- Continuity	0.54	C
- Self-esteem	0.72	B
- Self-efficacy	0.58	C
- Attitudes to Gladstone Harbour	0.81	B
- Values of Gladstone Harbour	0.66	B
<b>Cultural Heritage</b>	<b>0.55</b>	<b>C</b>
- Cultural health	0.61	C
- Management strategies	0.50	C

The overall grade for cultural (C) remained the same as the previous year. Indigenous cultural heritage now has additional sites and weightings for site importance, determined by Traditional Owners and Elders. The grade for sense of place remained the same (B).

# Social Results



unchanged  
2016 to 2017

high  
confidence

SOCIAL	SCORE	GRADE
<b>OVERALL SOCIAL</b>	<b>0.66</b>	<b>B</b>
<b>Harbour Usability</b>	<b>0.62</b>	<b>C</b>
- Satisfaction with harbour recreational activities	0.69	B
- Perceptions of air & water quality	0.56	C
- Perceptions of harbour safety for human usage	0.60	C
<b>Harbour Access</b>	<b>0.66</b>	<b>B</b>
- Satisfaction with access to the harbour	0.72	B
- Satisfaction with boat ramps & public spaces	0.65	B
- Perceptions of harbour health	0.63	C
- Perceptions on barriers to access	0.65	B
<b>Liveability / Wellbeing</b>	<b>0.66</b>	<b>B</b>

The overall grade for social (B) remained unchanged from 2016. Data is largely sourced from an annual community survey of residents. Results of the community survey were largely consistent with the previous year, where community perception of harbour health was satisfactory. Harbour usability declined from a B (in 2015 and 2016) to a C (2017) because of a small change in the underlying score.

# Economic Results



unchanged  
2016 to 2017

high  
confidence

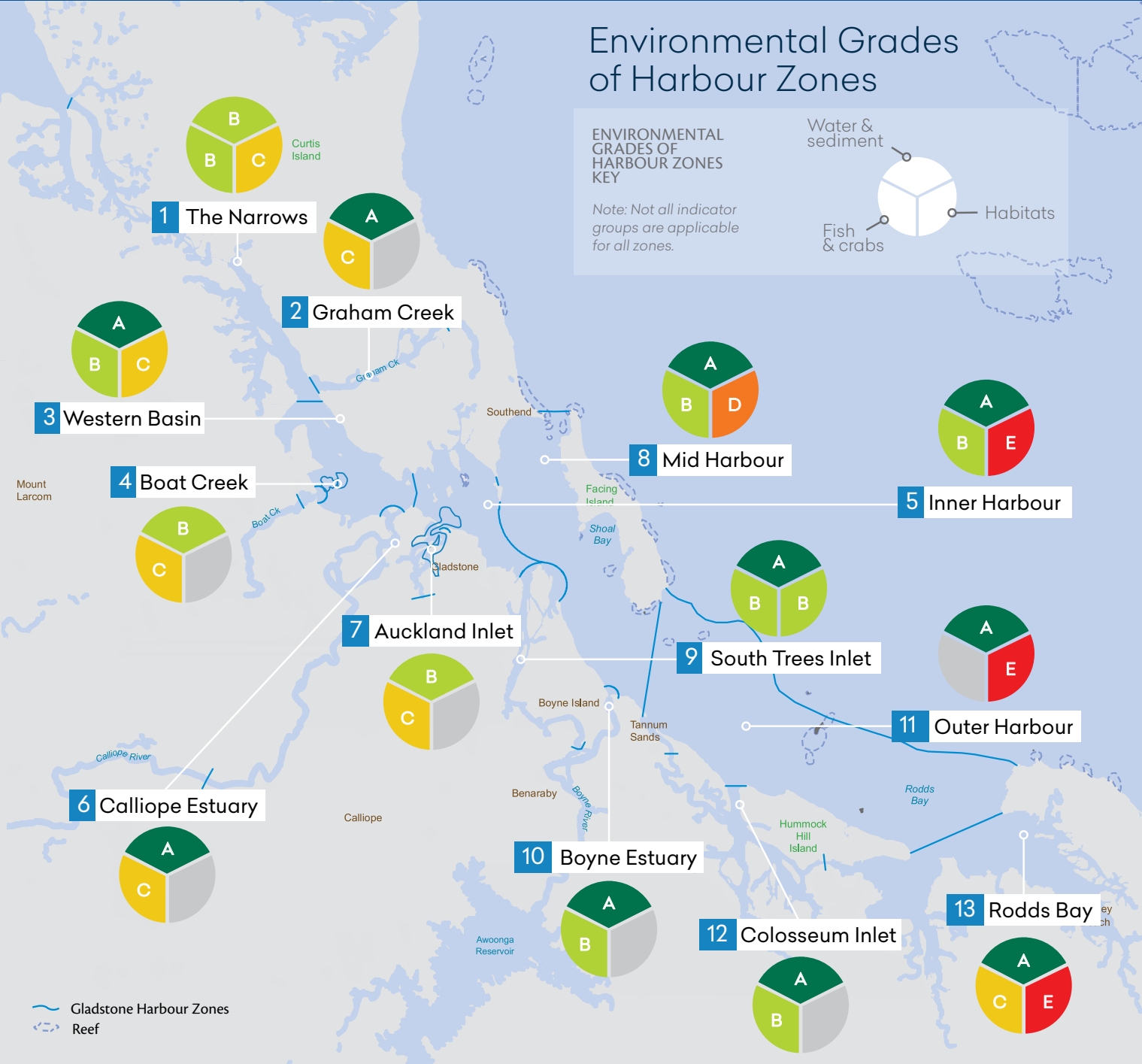
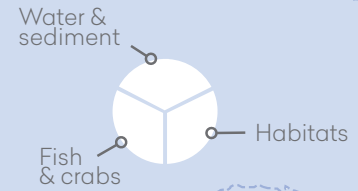
ECONOMIC	SCORE	GRADE
<b>OVERALL ECONOMIC</b>	<b>0.74</b>	<b>B</b>
<b>Economic Performance</b>	<b>0.90</b>	<b>A</b>
- Shipping activity	0.90	A
- Tourism	0.90	A
- Commercial fishing	0.35	D
<b>Economic Stimulus</b>	<b>0.67</b>	<b>B</b>
- Employment	0.53	C
- Socio-economic status	0.70	B
<b>Economic Value (Recreation)</b>	<b>0.73</b>	<b>B</b>
- Land based recreation	0.76	B
- Recreational fishing	0.65	B
- Beach recreation	0.74	B

The overall economic grade (B) remained unchanged from the previous year. Economic performance remains an A with a slight improvement in the underlying score (0.87 in 2016 to 0.90 in 2017) due to an increase in shipping and tourism expenditure. Economic stimulus remains a B but there was a fall in the score from 0.74 in 2016 to 0.67 in 2017 due to higher unemployment and lower socio-economic status. Economic value (recreation) remained good (B).

# Environmental Grades of Harbour Zones

## ENVIRONMENTAL GRADES OF HARBOUR ZONES KEY

Note: Not all indicator groups are applicable for all zones.



## Grading, Confidence & Trends

Grades for this report card were calculated using 30 indicators derived from 99 different measures of the environmental, social, economic and cultural health of Gladstone Harbour. The components and indicator groups were graded A, B, C, D or E, based on the scores of the measures specific to each component.

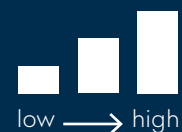
Confidence levels for the component grades were measured on a three point scale. Low, medium and high levels were established to reflect the confidence of the Independent Science Panel in the calculated grades. The confidence levels are affected by multiple factors, including the completeness of indicators used and quality of monitoring data.

Changes in grades for components from the 2016 to 2017 report cards are presented as improved, declined or unchanged.

### GRADING SYSTEM

- A** Very good (0.85-1.00)
- B** Good (0.65-0.84)
- C** Satisfactory (0.50-0.64)
- D** Poor (0.25-0.49)
- E** Very poor (0.00-0.24)
- Data not available

### CONFIDENCE



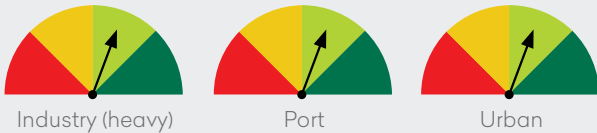
low → high

### CHANGE 2016 to 2017

- improved
- declined
- unchanged

# Stewardship

Stewardship is defined as 'responsible planning and management actions'. The framework describes and evaluates environmental management efforts around and in Gladstone Harbour. It captures information on management efforts to maintain or improve harbour health and water quality. It is based on the nation-wide State of the Environment Report management effectiveness framework.



### RATING SYSTEM

■ Not Effective  
 ■ Partially Effective  
 ■ Effective  
 ■ Fully Effective

For the full Stewardship Report refer to [www.ghhp.org.au](http://www.ghhp.org.au)

# Acknowledgement of Country

The Gladstone Healthy Harbour Partnership acknowledges the Traditional Owners of the land and sea in the Port Curtis Coral Coast region, the Gurang, Gooreng Gooreng, Taribelang Bunda and Bailai people, and pays respect to the ancestors, the Elders both past and present, and to the people.

# Research Highlights

## GLADSTONE HARBOUR MODEL

Developed by the CSIRO and completed in 2017, the Gladstone Harbour Model will enable GHHP to model the environmental, social and economic health of the harbour. The ability to model potential futures will help to understand annual report card results and provide a tool to explore potential management options.

The model has fully functional hydrology, food-web and human sectors.

## FISH HEALTH

Fish are key biological indicators of environmental condition, as they are inevitably exposed to any changes in aquatic ecosystems. GHHP already monitors fish recruitment in Gladstone Harbour (the breeding performance of two bream species) and in 2018 will include new measures of fish health in the report card to complete the fish and crab indicator. This new project will provide scores for fish health and improve our understanding of fish stocks within the harbour.

## GHHP CORAL CORING

Cores taken from skeletons of long-lived massive corals provide annually dated growth and records of environmental conditions including flooding and human impacts. GHHP in conjunction with the Australian Institute of Marine Science (AIMS) is undertaking a coral coring study in Gladstone Harbour to study environmental conditions in the harbour dating back to the early 1900's. Coral cores have already been collected from around the harbour and geochemical analysis of the cores is underway. The study will be completed in early 2018.



# Acknowledgements

The Gladstone Harbour Report Card 2017 was produced with the support of our partners:



For more information, resources and fact sheets please contact:



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