



Consultation Report

Community input to inform the final location of an Adelaide metropolitan shellfish reef

*Prepared by The Nature Conservancy and the Department for Environment and Water
– March 2020*

Project Background

Oyster reefs are arguably one of the most threatened marine habitats in the world, with an estimated 99% of shellfish reefs classified as 'functionally extinct' in southern Australian coastal waters and up to 85% lost globally. Shellfish reefs, dominated by the native flat oyster *Ostrea angasi*, were once a key ecological feature of the South Australian coastline-extending across more than 1,500km from Eyre Peninsula to Adelaide. From historical fishing records, we know that the reefs supported a significant oyster fishery in the state during the 1800s, but today only 1% of former reefs remain. Research has highlighted the importance of shellfish reef habitats to the quality of the marine environment, fish breeding, and water quality as well as delivering recreational and economic opportunities.

As part of an election commitment, the South Australian Government committed \$1.2 million towards building a shellfish reef in Adelaide's metropolitan waters.

The global conservation organisation, The Nature Conservancy (TNC), is leading the construction of the project in partnership with the South Australian State Government and the Department for Environment and Water (DEW). This project is expected to be completed by late 2020.

Recently a shellfish reef, Windara, was established off Ardrossan in the Gulf St Vincent through a successful partnership between TNC, the South Australian State Government and Yorke Peninsula Council. The project was also supported by the University of Adelaide, RecfishSA, SA Tourism Commission, South Australian Research and Development Institute and Regional Development Authority Yorke and Mid North. Learnings from the construction of this reef will be used to enhance the new Adelaide metropolitan shellfish reef.

Introduction

A public consultation process inviting feedback to inform the location of the metropolitan shellfish reef commenced on 20 January 2020 and closed on 2 March 2020.

Scientific information and advice from experts resulted in three location options (refer to map in Appendix A):

1. **Glenelg**, between Glenelg jetty and West Beach boat ramp.
2. **O'Sullivan Beach**, between Christies Beach and O'Sullivan Beach boat ramp.
3. **Port Noarlunga**, between Port Noarlunga jetty and Onkaparinga River mouth (within Encounter Marine Park Port Noarlunga Sanctuary Zone).

To determine these three location options, a 70km region of Adelaide's metropolitan coastline was assessed from Port Adelaide to Sellicks Beach. Locations were analysed based on relevant environmental and socioeconomic parameters, such as water depth, wave energy, sand or seagrass presence, and accessibility from boat ramps. This information was then reviewed and refined by a team of restoration experts and marine scientists. The outcomes of this process were used to create a spatial map of suitable areas. The three locations identified were considered to have the most suitable conditions for overall restoration success.

Through this consultation process, community input was sought and will be taken into consideration by the government when deciding on the final location for the reef. This decision will be made by the Minister for Environment and Water.

Consultation Process

There are two main stages for consultation:

- Stage 1: Engagement with key stakeholders and seeking community feedback on site options for the location of the reef (current stage); and
- Stage 2: Informing stakeholders and the community of the reef's progress once the reef design is finalised and construction commences.

The four objectives for Stage 1 engagement are:

1. Community and stakeholders are aware of the project and shellfish reef restoration benefits.
2. Community has an opportunity to be involved in the decision-making process by submitting comments and voting for a preferred site.
3. Key stakeholder are engaged in the project and have opportunities to contribute to the consultation and site selection.
4. Community and stakeholders have positive views about the project and adequate opportunities to engage in it.

The steps undertaken for Stage 1 of the consultation process are described below (and in Appendix B) and detailed in Table 1.

The public consultation process involved inviting feedback to inform where the metropolitan shellfish reef will be located. It commenced on 20 January 2020 and closed on 2 March 2020. The following information was provided to the public as part of the consultation process:

- **YourSAy website** – consultation portal with project information. Accessed via: <https://yoursay.sa.gov.au/decisions/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa/about>
- **Survey** – to vote for a preferred reef site. Accessed via YourSAy

- **Map** of reef site options. Accessed via YourSAy: <https://yoursay.sa.gov.au/decisions/yoursay-engagements-restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa/proposed-locations>
- **Public forums** – presentations by the project manager at three forums at:
 - Glenelg Surf Life Saving Club on 19 February 2020 (15 attendees),
 - Christies Beach Surf Life Saving Club on 20 February 2020 (80 attendees), and
 - The Nature Conservancy's office on 21 February 2020 (2 attendees).

Attendees accessed these events via YourSAy and social media posts.

- **Brochure** - A project background document was developed. Accessed via YourSAy: https://s3-ap-southeast-2.amazonaws.com/assets.yoursay.sa.gov.au/production/2020/01/14/00/33/43/34b23f8c-4542-4e0b-828d-08f2ee4f8242/TNC4431%20PublicConsultation_FINAL.pdf

Table 1. Consultation for the selection of the location for the metropolitan Adelaide shellfish reef.

Techniques used	Stakeholders	Dates
Project briefing meetings with relevant Councils	<i>Council CEOs</i> • <i>City of Onkaparinga</i> • <i>City of Holdfast Bay</i> <i>Council elected members,</i> • <i>City of Onkaparinga</i> • <i>City of Holdfast Bay</i>	28 August 2019 14 October 2019 25 February 2020 2 March 2020
YourSAy online survey and discussion board	<i>SA Community, including:</i> • <i>Local business owners</i> • <i>Divers/snorkellers, fishers, boaters, surfers and other marine recreational users</i> • <i>Councils</i> • <i>Coastal residents</i> • <i>Coastal conservation groups</i> • <i>Surf Life Saving organisations</i>	20 January to 2 March 2020 (6 weeks)
Community public forum events	<i>Three Q&A forums were held at:</i> • <i>Glenelg Surf Life Saving Club</i> • <i>Christies Beach Surf Life Saving Club</i> • <i>The Nature Conservancy's office</i>	19 February 2020 20 February 2020 21 February 2020

Table 1 (continued). Consultation methods for the location of the new metropolitan Adelaide shellfish reef

Techniques used	Stakeholders	Dates
YourSAy consultation shared and published in: Newspapers Messenger West, Messenger Coast and Messenger South (12 February 2020) and Advertiser (13 February 2020) Social Media advertisements DEW, TNC and Council's Instagram and Facebook sites Other Direct emails PIRSA fishfacts newsletter YouSAy newsletter	<i>SA Community, including:</i> • <i>Adelaide residents</i> • <i>Coastal residents</i> • <i>Organisation networks and subscribers</i> • <i>Organisation members</i>	January- February 2020
Media promotion Newspaper and radio articles, Blogs, including: NewsPapers: The Advertiser, The Times on the Coast, Southern Times Messenger. Radio: 5AA- Rowleys Fishing Show, 5AA Breakfast Radio, ABC North and West, Radio Adelaide, 3CR Melbourne Earth Matters Show. Blogs: DEW Goodliving Blog	<i>SA and broader Australian community</i>	January – February 2020

Engagement results

The YourSAy survey was one of the primary consultation tools used to assist Government to identify:

1. Is the community supportive of the establishment of an Adelaide metropolitan shellfish reef?
2. What do they see as the benefits?
3. Out of the three locations, where would the community most like to see the reef established.

There were five questions for the respondents to answer

1. Please provide your details?
2. Rank from 1 to 3 your preferred locations for South Australia's metropolitan shellfish reef to be built? (1 is your most preferred location).
3. Please provide any other feedback you have about South Australia's metropolitan shellfish reef.
4. Select your top 3 values about shellfish reef restoration projects for South Australia. (1 is your most important value).
5. Are you interested in receiving updates about South Australia's metropolitan shellfish reef project?

The results from these questions are summarised in the following pages.

During the six week consultation period, there were 1583 respondents to the Shellfish Reef survey on YourSAy. Not all respondents answered every question, hence each question will state the number of respondents. The results clearly show the South Australian community are supportive of the establishment of a shellfish reef.

Survey Questions and results

Q1. Please provide your details?

An analysis of respondents local residence post codes was undertaken. The map on the following page (Figure 1) shows a breakdown of where the respondents reside in South Australia.

Of the 1582 respondents, 1560 were identified with South Australian post codes, and of those with SA postcodes, the majority (over 40%) were within the two councils, City of Holdfast Bay and City of Onkaparinga, abutting the proposed shellfish reef locations.

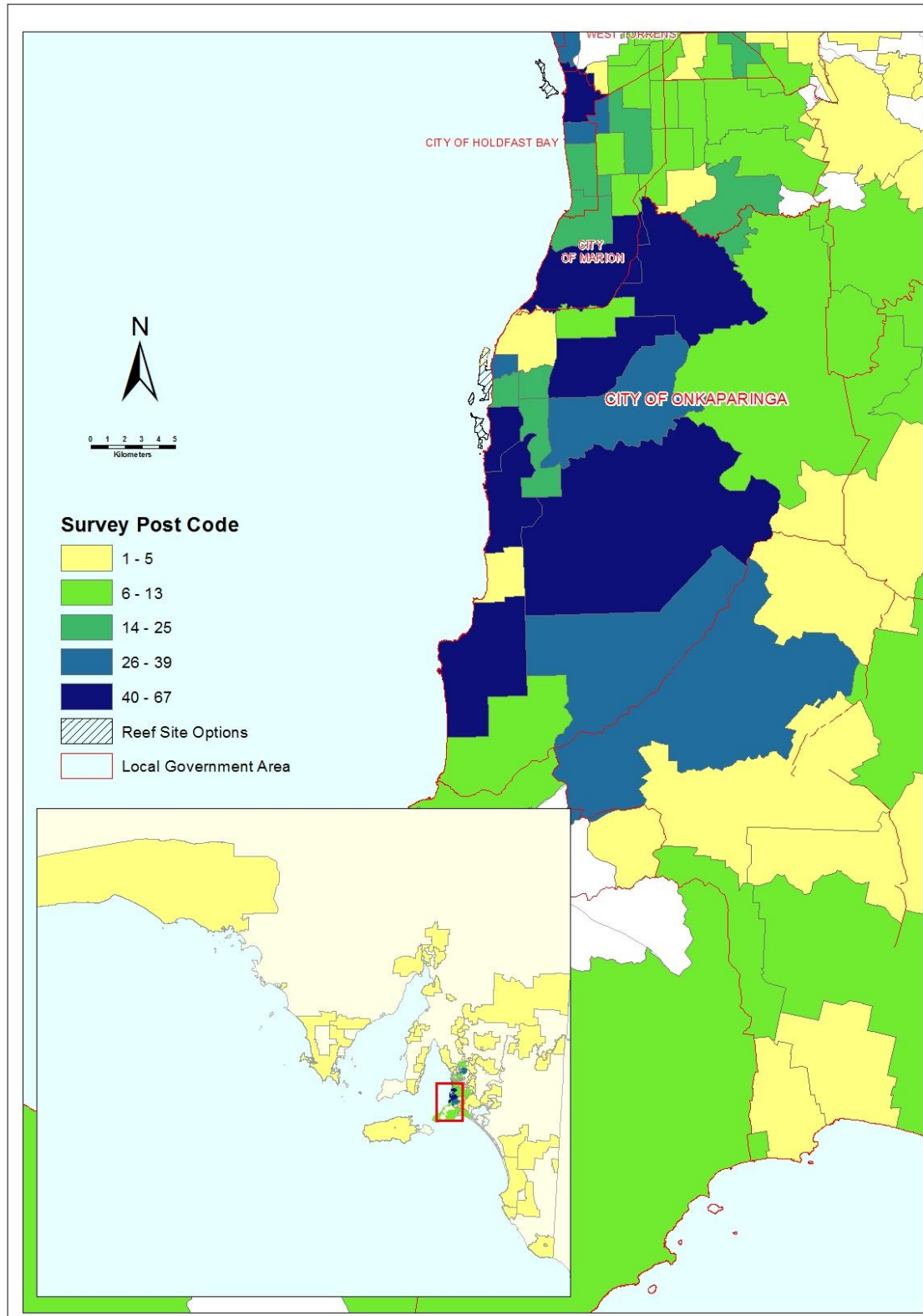


Figure 1: Weighting of the residential locations of the YourSay respondents within South Australia.

Q2. Rank from 1 to 3 your preferred locations for South Australia's metropolitan shellfish reef to be built? (1 is your most preferred location).

There were 1430 respondents to this question. The most preferred location was Port Noarlunga (45.7%) with 654 respondents selecting this site as their number 1 ranking, followed by Glenelg (33.8%) with 484 respondents identifying this site as their most preferred location and thirdly, O'Sullivan Beach (20.4%) with 292 respondents ranking it as their most preferred site (refer to Figure 2).

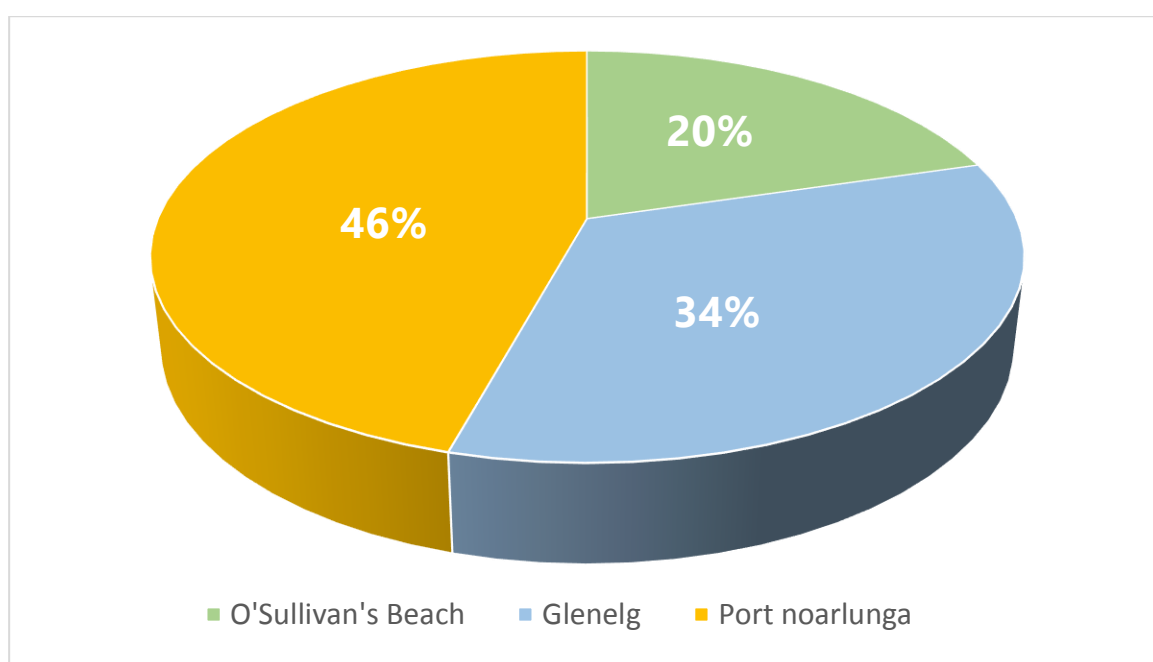


Figure 2: Number 1 preferred site for a new Adelaide metropolitan shellfish reef

Table 2 includes a breakdown of respondents rankings.

Table 2: Percentage breakdowns of rankings:

Metropolitan Shellfish Reef Sites	1	Rankings 2	3
O'Sullivan Beach , between Christies Beach and O'Sullivan Beach boat ramp	20.4% (292)	57.2% (818)	22.4% (320)
Glenelg , between Glenelg jetty and West Beach boat ramp	33.9% (484)	14.3% (204)	52.0% (742)
Port Noarlunga , between Port Noarlunga jetty and Onkaparinga River mouth (within Encounter Marine Park Port Noarlunga Sanctuary Zone)	45.7% (654)	28.5% (408)	25.7% (368)
Total respondents	1430		

Q3. Please provide any other feedback you have about South Australia's metropolitan shellfish reef?

Of the 1583 respondents, 465 provided feedback to this optional question. These responses were summarised into seven categories of similar topics. A summary of responses is included below:

- 40.2% provided additional comments relating to their site preferences (n= 187).
- 24.3% were positive responses to shellfish reef restoration (n=113). Out of these, 42.5% suggested that reefs are built in all three sites (n=48).
- 9.2% suggested other location options for shellfish reef restoration including St Kilda, Outer Harbour, Maslins Beach, Moana, Yorke Peninsula, Port Wakefield, Semaphore, Brighton, Grange, Port Gawler, Wirrina Marina, Spencer Gulf (n= 43).
- 6.6% expressed comments related to recreational fishing opportunities, fishing pressure concerns and fishing management of the reef (n=31).
- 2.4% commented on tourism accessibility for boats and divers, parking and the potential opportunities to coastal communities (n=11).
- 1.5% expressed a concern about shellfish reef restoration such as not messing with wildlife, concerns for surf breaks on the mid-coast and it being a shark attractant (n=7).
- 11% provided other general comments.

Appendix C includes the full list of comments received.

Q4. Select your top 3 values about shellfish reef restoration projects for South Australia? (1 is your most important value).

There were 1359 responses to this question. The top three values for shellfish reef projects in South Australia, in rank order, were: re-establishing shellfish reef habitat (49.6% respondents, n=668); increasing fish stocks (fish productivity) (25.9% respondents, n=352); and educating and involving South Australians in the state's marine environment (such as schools and community groups) (27.6% respondents, n=375).

Producing cleaner water and creating more recreational and tourism opportunities like diving and snorkelling were also valued by respondents.

Table 3 provides a breakdown of respondents top three values for shellfish reef restoration projects.

Table 3: Percentage breakdowns of respondents top three values for shellfish reef restoration projects

Answer choices	1	2	3	Total
Re-establishing shellfish reef habitat	49.1% (668)	17.2% (234)	14.6% (198)	1100
Increasing fish stocks (fish productivity)	15.4% (209)	25.9% (352)	14.3% (195)	756
Producing cleaner waters	13.2% (180)	20.9% (284)	15.1% (205)	669
Establishing more recreational and commercial fishing opportunities	3.4% (46)	5.6% (76)	7.4% (100)	222
Creating more recreational and tourism opportunities like diving and snorkelling	11.8% (160)	16.8% (228)	21% (286)	674
Educating and involving South Australians in the state's marine environment (like schools and community groups)	7.1% (96)	13.6% (185)	27.6% (375)	656
Total respondents	1359			

Q5. Are you interested in receiving updates about South Australia's metropolitan shellfish reef project?

A total of 1354 respondents responded to this question, with over 55% of these expressing interest in receiving updates on the project (refer to Table 4).

Table 4: Number of respondents interested in receiving updates on the shellfish reef project.

Answer choices	Responses
Yes	55.7% (755)
No	44.2% (599)
Total respondents	1,354

General Feedback and Responses on the Metropolitan Shellfish Reef Project

The following specific feedback was received during the public and stakeholder consultation via a range of sources including the discussion board on YourSay, social media, and conversations with key stakeholders.

Feedback or Query provided	Shellfish Team response
Comment via email: I'm following up regarding the misplaced community concern that the Port Noarlunga reef could be located close to the Onkaparinga River mouth. I was pleased when DEW committed at the Christies Beach forum to replacing the maps that were causing the confusion. Unfortunately, the maps are still online and the survey questions still allow for the mistaken belief that the reef could be located close to the mouth of the Onkaparinga river. Given the consultation closes on Monday, this is not ideal. It would be great if you could please prioritise replacing the maps and amending the survey question as a matter of urgency. It will also be important to ensure that the Minister understands the following: During the community engagement processes, there was misplaced concern expressed by some community members about the location of the Port Noarlunga reef being too close to the mouth of the Onkaparinga river. This concern was based upon a misinterpretation of the maps, and the areas of concern are of no relevance to the proposed reef sites, which are nowhere near the river mouth. Community concern was allayed at the Christies Beach Community Forum, however some of the survey responses and discussion board comments that were provided prior to the community forum may still include commentary about this misplaced concern.	Response via YourSay: The team noted from discussions with people at the forums, that there was concern about the location of the Port Noarlunga reef being too close to the mouth of the Onkaparinga river. This concern was based upon a misinterpretation of the maps, and the areas of concern are those that the modelling process highlighted as being potentially suitable (60 hectare area) but the actual proposed reef site (only a 2 hectare area) within this larger area will be nowhere near the river mouth. We have undertaken underwater video transects within this area to validate our model and from this confirm that the highlighted areas south of the southern end of Port Noarlunga Reef would not be suitable for reef construction as there is a high risk that oysters could be smothered by sediment caused by sand movement near the river mouth and a reef could interfere with surf breaks if the water depth is shallow. To clarify, if the Port Noarlunga site is selected, a 2 hectare sized reef would most likely be built on western side (i.e. the ocean-side) of Port Noarlunga Reef. This is still within the highlighted area on the map. While these concerns were allayed at the Christies Beach Community Forum, we note that some of the survey responses and discussion board comments that were provided prior to the community forum may still include commentary about this misplaced concern. This will be considered during the review process and communicated to the Minister.
Comment via YourSay: Port Noarlunga, if the purpose of this shellfish reef is to restore and create a diverse ecosystem / breeding zones surely it should be in a sanctuary zone. Or if it is developed out of a zone it should be a no fish zone for 3 to 5 years to help it establish	Response via YourSay: Thanks so much for your comments and getting involved in the discussion. We can advise that if the Shellfish reef is developed at Glenelg or O'Sullivan Beach, then fishing will be allowed after a period of establishment of five years. Spearfishing would similarly not be allowed for five years. Anchoring of boats near the reef structure would be allowable, however this would depend on any resulting damage and on how the reef has been establishing.
Comment via YourSay: This is a great idea, I live at O'Sullivan Beach - so I would love it to be here - also Pt Stanvac coastline is being petitioned at the moment, to be opened for public use, by Amanda Rishworth please make this a Marine	Response via YourSay: Thanks so much for your comments and getting involved in the discussion.

Reserve, (no fishing) as it has been protected for so long already - thanks :)	
Comment via YourSAy: As a field ecologist I applaud any efforts to conserve and manage species. I think this project has great merit however there are quite a few issues I have that are of great concern to me. First and foremost is your chosen location, in particular the Port Noarlunga proposed site which coincidentally already has a marine reserve. By your own admission it has very low numbers of naturally occurring shellfish recorded on its preferred substrate within the marine reserve. There's usually a very good reason for this. Natural selection, predation, habitat suitability, tidal movement among others. I also note your findings of fossil records showing a more abundant and widely distributed occurrence. This in no way means that the habitat or conditions are suitable at this present time for a colony to thrive and survive in this location. Shellfish require low energy tidal movement within a protected bay and Port Noarlunga is a high energy beach/reef system with occasional storm surges. I also find it quite frustrating that a balanced system like the Noarlunga reef and intertidal zones might be subject to great disturbance with the introduction of a favoured species and potentially an artificial substrate. This has the potential for displacing other 'in balance' species, especially considering the vast scale of the project. If an artificial substrate for the shellfish is introduced then I hold grave concerns for the natural movement of sands and other biological processes involved with the movement and distribution of species. This will also impact the wave action to a certain degree which is also potentially undesirable. In summary, I appreciate any efforts to preserve and enhance marine biodiversity, but your site selections need to be carefully considered and I feel the Port Noarlunga site is unsuitable for so many reasons as outlined above. I would encourage this project to be moved to a low energy sheltered biodiversity bereft location.	Response via YourSAy: We value your input and consideration. The Nature Conservancy and the South Australian Government are overseeing the site selection process. We are doing this in consultation with marine experts and restoration scientists to ensure that these reefs are built safely and sustainably. Using a modelling process that took into consideration factors that may influence reef survival and oyster recruitment (eg. wave energy, proximity to historic oyster reef locations and distance to other existing marine ecosystems), these three sites were determined as being most suitable. We used existing spatial data and maps to inform this process to narrow down sites along the 70km metro coastline. We definitely agree with you and understand that oysters prefer lower wave energy, so this is a key limiting factor for southern coast shellfish reefs. Our understanding of their exact tolerances and thresholds are unknown. For this reason, we have set up an Oyster Watch program which has settlement plates placed in various offshore sites from Rapid Bay to Port Adelaide to identify higher wave energy areas. This will help inform the geographic scope for future reef locations. There is a low risk that oysters may recruit to other areas as a result of this project and marine experts think that this is so because: 1. There is evidence of wild oyster larvae in all three locations, we find patches of wild native oyster spat in places like Aldinga Reef, Onkaparinga River, O'Sullivan's Beach boat ramp and West Beach. This suggests that there is oyster larvae already access Port Noarlunga reef but have not established there, likely due to the reasons you mentioned. 2. The footprint of the planned reef is small. Around 1 million hatchery-reared oysters will be placed into the marine environment but only a small percentage (<10% survival) of these will survive to maturity to breed and spawn. From what we have witnessed at Windara Reef, the availability of wild oyster larvae is not a limiting factor in this system, and we suspect the addition of these new angasi oysters will not considerably increase the propagule pressure along the coast. 3. Competition for space on hard substrate in the Gulf St Vincent is a factor limiting the natural recovery of shellfish reefs. There are other species which are outcompeting oysters currently on natural reefs. 4. We expect a balanced system to be resilient to slight increases in propagule supply from the seeded oysters. For

	the reasons you suggested (e.g. wave energy, competition) the likelihood of angasi oysters forming substantial habitat on Port Noarlunga Reef seems minimal. 5. There are shellfish already on Port Noarlunga Reef, predominantly mussels and hammer oysters (<i>Malleus</i> sp.)- some parts of the existing Port Noarlunga Reef (viz. inside northern reef) have previously been impacted by human disturbance (elevated nutrients and sediments) and changes have been observed whereby macro algae (kelp) has disappeared and been replaced with mussels and/or turfing algae. If oysters were to take hold on Port Noarlunga we might expect that they would do so in these disturbed areas first. 6. Our monitoring and evaluation program will include monitoring nearby control sites to measure any changes to the local environment. The reefs will be low profile, built in small reef patches in around 8 metres of water. Advice from the coastal protection board is that a reef of this scale and design is unlikely to negatively impact natural coastal processes. We are reassured by our 20-hectare reefs at Ardrossan, which at a size of 10 times the current project, has not shown any negative influence on wave energy or sand movement. The aim of this restoration initiative isn't to recreate the past ecology. We need to plan and prepare to support a coast which is resilient to current and future scenarios. The shellfish reefs will return the functions to the marine environment that these reefs once provided such as water filtration, fish habitat and sand stabilisation.
Comment via YourSAy: I nominate the Glenelg site as this would enable Adelaide University Scuba Diving Club to monitor the establishment of the reef in terms of flora and fauna. We usually launch our boats from West Beach and would be delighted to contribute in a citizen science role.	Response via YourSAy: Thank you for getting involved in the discussion. We welcome your offer to contribute to citizen science monitoring, we have a Monitoring Evaluation and Reporting Working Group established that are currently developing a MER Plan. Depending on the final location of the shellfish reef we would definitely be interested in discussing citizen science led monitoring opportunities with you in the future. I encourage you to come along to one of the events to find out more. Details are available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums.
Comment via YourSAy: I do not really feel qualified to comment on the various locations, so will leave that to the experts, but do want to commend the whole idea of shellfish reefs and the many benefits that can flow from constructing them, I hope to eventually see more constructed around the coast.	Response via YourSAy: Thanks so much for your feedback. We encourage you to come along to one of the public events to learn more. Details available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums

Comment via YourSAy: I would like to see the reef installed at West Beach. I wish it could be elongated so that it could multitask as a sand stabilizing device. The important thing is to provide assistance to an ecosystem so badly affected by past activities. As a bonus Adelaide's most popular beaches of Henley and Grange are near enough to benefit from a reef at West Beach.	Response via YourSAy: Thank you for getting involved in the discussion. In regard to your query regarding locating a reef at West Beach I can advise that when determining an appropriate location Government assessed a 70 km region of Adelaide's metropolitan coastline from Port Adelaide to Sellicks Beach. A spatial map of suitable areas was compiled based on relevant environmental and socioeconomic parameters, such as water depth, wave energy, sand or seagrass presence and boat ramps, and reviewed and refined by a team of restoration experts and marine scientists. The three locations - Glenelg, O' Sullivan Beach and Port Noarlunga - were selected based on accessibility, water depth, seabed composition, cultural sensitivity, and current environmental conditions, all to ensure that the restored shellfish reef can grow and thrive. We have been advised that the proposed shellfish reef will not be large enough to impact on the existing sand movement. I encourage you to come along to one of the events to find out more. Details are available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums.
Comment via YourSAy: The reef should go wherever it will give the gulf as a whole the best water filtration outcome. I'd assume that would be O'Sullivan's beach as it has waste treatment plant outlet and the desalination plant. I'd prefer to leave the decision to the experts but have their decision making process be guided on where it has the best health outcome for the gulf and not tourism diving etc. I'm not against diving in any way, my heart would actually prefer it in Port Noarlunga but having surfed at Sullys for years I can say the the water there needs some help.	Response via YourSAy: Thank you for getting involved in the discussion. The three locations - Glenelg, O' Sullivan Beach and Port Noarlunga - were selected based on accessibility, water depth, seabed composition, cultural sensitivity, and current environmental conditions, all to ensure that the restored shellfish reef can grow and thrive. We appreciate your feedback in regards to O'Sullivan's beach and encourage you to come along to one of the events to find out more information. Event details are available at: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums.
Comment via YourSAy: My concern with the Glenelg location is for West Beach residents and the surf club. If the reef is located south of the boat ramp as suggested, it would stop any sand from reaching this beach that is currently in serious trouble. I have been informed by Murray Townsend that some sand does drift north offshore to West Beach even with the sand pipeline (at Glenelg) pumping 100,000 cubic metres of sand south each year. I would have thought the proposed location would stop this offshore drift from happening by stabilising the seabed at the reef site. Why is West Beach not being considered for the reef? The seabed there has dropped by 2 metres since the boat ramp was built and this beach is in need of urgent help. The reef (if it were placed off West Beach) would help reduce wave action and further sand erosion. The	Response via YourSAy: Thank you for getting involved in the discussion. We have been advised that the proposed shellfish reef will not be large enough to impact on the existing sand movement. In regard to your query regarding locating a reef at West Beach I can advise that when determining an appropriate location Government assessed a 70 km region of Adelaide's metropolitan coastline from Port Adelaide to Sellicks Beach. A spatial map of suitable areas was compiled based on relevant environmental and socioeconomic parameters, such as water depth, wave energy, sand or seagrass presence and boat ramps, and reviewed and refined by a team of restoration experts and marine scientists. The three locations - Glenelg, O' Sullivan Beach and Port Noarlunga - were selected based on accessibility, water depth, seabed composition, cultural sensitivity, and current

sand being brought from Semaphore and Largs Bay may stay in place longer providing West Beach locals with a beach.	environmental conditions, all to ensure that the restored shellfish reef can grow and thrive. I encourage you to come along to one of the events to find out more. Details are available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums.
Comment via YourSAy: As an active member of a local dive club, we have been using and enjoying the Port Noarlunga reef for years. I feel that an extension of this would benefit the local area significantly. As an existing marine park is already established, it should be a formality to extend it to include this structure. This area is renowned for its beauty, and there is enormous potential to attract even more snorkelers, divers and visitors from local and interstate. Giving the port Noarlunga community, businesses and economy a significant boost now and into the future. These reefs will be accessible to more people more often. Putting them off shore will have the desired affect I am sure. But if we want to change public opinion about what reefs are, and how they benefit the ecosystem. We need to be serious and what better way to demonstrate this by putting them where they can be seen and experienced by the majority, not the minority who own boats.	Response via YourSAy: Thanks so much for your comments and getting involved in the discussion. Have you registered to come along to one of the community events? Details are here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums
Comment via YourSAy: West beach and North Glenelg have problems with sand movement, would this make it a good place to set up a reef and protect the coastline and perhaps help filter the discharge from the water treatment plant?	Response via YourSAy: Thanks for getting involved in the discussion. The reef will not be large enough to help manage the sand movement issues at West Beach or Glenelg North. In regards to water filtration, the addition of millions of filter feeding oysters will improve surrounding water quality as they remove water pollutants. Two of the sites, Glenelg/West Beach and O'Sullivan's beach are close to waste water treatment plant outlets. We encourage you to come along to one of the events to find out more. Details are available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums
Comment via YourSAy: The Port Noarlunga area, north of the jetty away from the surfing would be ideal. The closeness to the various marine life already present may offer the best opportunity to benefit from exiting life forms. Already a marine reserve and popular with scuba divers and snorkelers it would have the potential to increase tourism.	Response via YourSAy: Thanks for getting involved in the discussion and for your feedback. If you'd like to find out more about the project, please come along to one of the events. Details here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums
Comment via YourSAy: My main concern is how this will affect the Surf at Port Noarlunga and Christies beach. The Glenelg option seems to be the best. It is already setup for increased tourism with Hotels and Trams and might also assist in making an area that has seen several	Response via YourSAy: Thanks for your comments. We understand your concerns. We will consult with the surfing community before selecting the final placement of the reef within those designated priority areas. We are aware that the area south of Port Noarlunga reef near

drownings safer.	Onkaparinga mouth and the esplanade/Beach Road, Christies Beach are popular sites for surfing. Shellfish reefs tend to do better in calmer waters so for those reasons as well, we will avoid those high swell areas. I recommend you attend one of the info sessions if you would like to find out more about the reef site options.
Comment via YourSAy: If the reef was built in the Noarlunga sanctuary zone would this not then become a nursery and help build a much wider variety of marine life that would at some stage bring in tourist divers that would then spend money in the dive shops .Having dived on many local sites up and down the coast it's amazing to see the difference in marine life within the sanctuary zones.	Response via YourSAy: Thanks for your input. Connectivity between different marine habitats definitely benefits marine life along the metro coast as it increases diversity and helps to colonise the reef in the initial phases of establishment. All three sites have taken this into consideration, to provide the best chance for marine habitat and nursery enhancement. If the Port Noarlunga site were to be selected, the reef would be located within the sanctuary zone and protected from fishing. The new shellfish reef will provide opportunities for tourism including diving, citizen science, research and educational programs.
Comment via YourSAy: The only choice here is which should be first. All three sites would benefit from artificial reef placement. What would be good to have some discussion about is the use of the inner springs / wire frames from mattresses to be used in reef deployment. These will rust back into the environment in a handful of years, but during that time provide an excellent framework for marine growth. In addition, these would provide much improved habitat for fish and crustacea than rock reefs. There is the added benefit of reducing landfill of the mattress carcasses which are uneconomical from which to recover the steel. One might imagine that a number of these could be strapped together for deployment. A cottage industry waiting for sponsorship and assistance. In regards distance from shore, let's be mindful that reefs will attract other apex predators besides recreational fishers - 2kms seems somewhat too close to be comforting for beach goers. Comment via YourSAy: Not quite sure of your logic here. If the number of reefs are increased, then the food source for larger predators will also increase. As such, larger marine species which are uncommonly seen in these areas of Gulf St. Vincent such as fur seals, sea-lions and even potentially orca are likely to frequent the new reef areas in larger numbers. While tracking of sharks shows 'most' of them to be nearer their natural food source, such research does not include historical sightings/encounters when natural reefs occurred and/or when both whale and seal/sea-lion populations were vastly greater than	Response via YourSAy: Thanks for your comments. The metro coast shellfish reef will be made from limestone and oyster shell to create its structure, as these provide the most suitable substrate for oysters to grow on and for the reef ecosystem to establish. While apex predators are present, the reef's location will be in 5 to 12 m water depth, which is generally deeper than where beach goers go. Also, shark tagging research along the metro coast shows that most tagged sharks stay around the 20 m depth contour. While shellfish reefs will mean more fish in the area, they will not attract sharks any more than the existing healthy reefs along the coast already do. Response via YourSAy: Dear Ross, apologies for not replying to your follow up comment sooner. I will pass your comments onto the team for consideration. We encourage you to come along to one of the community events being held next week, where you'll have the opportunity to find out more and chat with the team. Details are available here: https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums

currently occur. A process which increases the number of reefs in the gulf will obviously change the balance of the marine food cycle in this area. If a shark attack occurs on a metro beach after the reefs are deployed, then those associated with that project will undoubtedly attract attention from the media. Disappointed that you have provided a myopic response to an alternate proposal of reef material. Metal in seawater is an attractant and a different biota will populate a reef composed of such material.	
Comment via YourSAy: If we are serious about protecting SA waters then we absolutely cannot drill in the Great Australian Bight. Please have a thought for future generations and not take all the earths gifts for ourselves	Response via YourSAy: Thanks for your input.
Comment via YourSAy: I think option 2, O'Sullivan Beach is the best option. Definitely keep out of the Port Noarlunga Marine park.	Response via YourSAy: Thanks for your comment.
Comment via YourSAy: We already have a reef in Port Noarlunga and do NOT want it disturbed. Stop dreaming while polluting. Stop building and destroying natural environment. It is the high temperature that you need to lower in order to save and restore reefs. So, stop burning coal and burning forests. No drilling and digging fossil fuels anywhere in Australia. Australia already is the global leader in emissions per capita, and in extermination of fellow animals. Having stolen the whole continent Australian apartheid is now using it to kill the entire Planet. NO MORE COAL & Oil!	Response via YourSAy: Thanks for your comments.
Comment via YourSAy: Great idea but you are going to meet massive resistance from surfers for the Port Noarlunga site, and also the Christies site. It is in fact a surf reserve, refer https://www.midcoastsurfreserve.com/urf Options on this coast are very limited and crowded as it is. Unless of course you are skilled enough to create a reef that provides both marine habitat and surf options you are in for a fight.	Response via YourSAy: Thanks for the your input and website referral. We will consult with the surfing community before selecting the final placement of the reef to avoid popular surf areas. I have contacted the site organiser to make sure that we speak to as many of the surfers that use that area as possible. Given the reef will most likely consist of segments about half a metre high and in water depths of between 5 and 12 metres, it is unlikely the reef will affect the surf. We'll work with the Coast Protection Board and marine engineers on hydrodynamic modelling to ensure that the reef doesn't negatively affect natural coastal processes. If you would like to find out more about the site options there are three info sessions planned in February (see: attend a community event).
Comment via YourSAy: If there's going to be oysters harvested we need to take into account that whole industries impact on the area, facilities to be built & transport from the area. Having	Response via YourSAy: Thanks for your contribution. It's a good point to clarify. Harvesting of oysters from the reef will not be permitted at any stage, to protect the

said that, I believe that discounts Glenelg & Pt Noarlunga being tourist areas with a high content of people living there that this will impact on with noise and air pollution. So O'Sullivan's Beach would be my suggestion	oysters and allow the ecosystem to develop. Commercial oysters produced for human consumption undergo extensive quality assurance checks, whereas wild oysters may not be safe to eat. Hope this helps.
Comment via YourSAy: It's hard to pick, but I feel that the site contiguous with the Onkaparinga estuary would have the greatest potential to restore both the estuary and the inshore environment	Response via YourSAy: Thanks for your comment. The Port Noarlunga zone option is an interesting one as it is within the Encounter Marine Park Port Noarlunga Sanctuary Zone, further out from the Port Noarlunga reef. There are other coastal restoration and management activities occurring in and around the Onkaparinga estuary. If the shellfish reef were to be built offshore nearby, it would add to those.
Comment via YourSAy: Not sure why you pick these area's as they already have natural reefs along with artificial reefs northern area's such as St Kilda to Middle beach as the area is flat and void of any reefs and artificial reefs plus help damage caused by dredging over the years	Response via YourSAy: Thanks for your feedback. The three metropolitan locations were selected based on accessibility, water depth, seabed composition, historical locations of shellfish reefs and current environmental conditions, to ensure that the restored shellfish reef can grow and thrive. The current project scoping study only considered the metropolitan coastline (defined as from Port Adelaide to Sellicks Beach). There is historic evidence that the Northern Gulf St Vincent areas once had native oyster reefs so could be potential sites in the future. If future native oyster reefs can be supported, the areas to the north would be considered. I hope this information helps.
Comment via YourSAy: I believe that O'Sullivan's beach would be the ideal area for a new metropolitan shellfish reef. The reason is the jetty has been removed and only the pylons remain. this are will be used for recreation fishing snorkelling and diving. This area has basically been untouched by human influence for many years, and by putting down a reef will enhance the marine life already there. I have dived along all the metropolitan beaches for many years and have seen a decline in the marine habitat. Why not introduce a shellfish reef into and already abundant marine society. This will increase the marine population quicker than an area that is in decline Conversation continued: Comment via YourSAy: Thanks. I have been involved with a small shellfish reef in the Port River. I am amazed at the difference this little section has made to the marine population. We have placed native oysters amongst the reef and they have already reproduced. To place a small reef among mud and silt makes so much difference.	Response via YourSAy: Thanks for getting involved in the discussion. The O'Sullivan's Beach zone is the largest of the three selected for the 2 ha sized reef. A key consideration to reef placement is the proximity to existing marine habitats for connectivity and colonization. If the new shellfish reef were to be located in the O'Sullivan's Beach zone (or the other options), further investigations will hone in on the best spots between 5 and 12 m depth of water for it. Restoration of shellfish reef habitat aims to create building blocks within the marine ecosystem to contribute to the health and productivity of our coastal environment. Research shows that the habitat setting influences restored shellfish reef communities. Thanks again for your contribution. Response via YourSAy: Thanks. Good to hear about your small shellfish reef in the Port River. The new metro coast shellfish reef will be around 2ha (or the size of the Adelaide oval), likely to be made of numerous smaller reef segments depending on its final design. Similar segments were used for Windara Reef off the coast of Ardrossan on Yorke Peninsula, although that

Creating a shellfish reef on a larger scale can only increase our marine life, but having recreational fishing will have an impact. Is this the intention of the reef to encourage growth of all marine animals? so to bring in more fishing? Cheers	reef is much larger, up to 20 ha, and is intended to enhance marine habitat as well as cater for recreational fishing. The metro coast shellfish reef will also enhance marine habitat and provide opportunities for the community. If it is built off Glenelg or O'Sullivan Beach, then fishing would be allowed after a period of establishment of at least five years, given its smaller size compared to Windara Reef and the number of people who would potentially have access to it. If it is decided to build it off Port Noarlunga, this is within a sanctuary zone and fishing will not be allowed.
Comments via phone call (not verbatim): Commented that the council does not have a large coastal jurisdiction. Understands that the proposed reef would be south of the west beach boat ramp within the City of Holdfast Bay area. Recognised the benefit of increased tourism that the reef could bring to the area. Suggested sharing the project details on the council's social media, that the project manager contact West Beach Parks and that a meeting with key council members would be arranged during March/April.	Response via email: The team provided information about the project that could be shared on social media and contacted Mr Dean Wetherill, West Beach Parks via email. No response has been provided by Mr Wetherill.
Comments via phone call (not verbatim): Could not see that the Boating Industry Association members would be very affected by this reef proposal in either area. Would share information on social media.	Response via email: The team provided information about the project that could be shared on social media
Comments via phone call (not verbatim): Had been disappointed to first hear about this project through social media and would have liked Recfish SA to have been formally invited to have a say on the proposal. Not to assume that all recreational fishers will be notified about the project through the BIWG. The project had been shared on the RecfishSA facebook page. Was appreciated that direct contact had been made. Suggested to keep RecfishSA updated on progress through him to ensure the voices of recreational fishers were included.	Response via phone (not verbatim): We will keep RecfishSA updated on project progress. The official recreational fisher representative who sits on the BIWG (project's technical advisory group) was provided.
Comments via phone call (not verbatim): The metropolitan sites will not have a significant impact for commercial fishers due to the fishing limitations in those areas. Wildcatch is supportive of the project and being involved in the wider South Australian strategy for restoring shellfish reefs across the state. Will continue to represent commercial fishers as part of the BIWG.	
Comments via email: We believe that the proposed site for a shellfish reef at Port Noarlunga has changed following the public meeting last week. Can you please provide us with the latest details?	

Comments via email: I email further to attendance at last week's community meeting held last Thursday at Christies Beach Surf Club. I'm glad I attended as if not I would have been deadset against the two proposed southern sites as were identified on materials distributed earlier, and which I believe are still incorrect on current materials. I need to let you know that my earlier opinion and voting on YourSay will be tainted due to the miss-information originally distributed, particularly delineation of the two southern sites. This opinion was regarding the potential effect on surf breaks in our region, particularly where the original diagram identified one of the proposed sites south of the Port Noarlunga reef and covering nearly all of South Port Beach! As I'm wearing two hats as President of the South Port Surf Club and also a member of the Mid Coast Surfing Reserve Steering Committee, my main comments/feedback are that I don't have any issue with either of the two southern sites that were so well explained last Thursday. I suggest it will be a well needed tourism benefit to the local area if the selected site was down south rather than Glenelg. The Glenelg area is the current 'tourism mecca' of the state so why not share the benefits around and not have another attraction added to an already busy tourist area.	Response via email: Thanks for getting in touch and nice to see you at the community forum last week. Surfers can be great allies for marine conservation as we have seen with the equinor outcome so I am pleased that we have your support. I have logged your comments as part of the consultation report as that there were misplaced concerns expressed by some of the surfing community about the location of the Port Noarlunga reef being too close to the mouth of the Onkaparinga river. This concern was based upon a misinterpretation of the maps, and the areas of concern are of no relevance to the proposed reef sites, which will not be near the river mouth. These concerns were allayed at the forum but some of the survey responses and discussion board comments that were provided prior to the community forum may still include commentary about this misplaced concern. Based on the feedback we received at the forum, DEW has committed to replacing the maps that were causing the confusion. If you have any other questions or concerns please reach out. I also offer a presentation to the surfing community at some point too if you would like.
Comments via email: For a decade I've lived with my husband, at Sellicks Beach and in 2015 we established Friends of Sellicks to foster community activities and responsible lobbying of State and local government. I email to support the idea of a Shellfish reef and given my constituency, I obviously urge that it be located near Sellicks, namely the Port Noarlunga option. All locations have merit but I would point to the fact that for many people living in the Southern suburbs there is not quite the disposal income to travel far and wide so to facilitate improvement in recreational fishing and diving would be welcome.	
Comments via email: Thanks for the presentation you and your colleagues gave at The Christies Beach SLSC last week and for the chat we had afterwards ... It was great to clarify that the map that showed proposed areas close to Southport Beach were actually areas considered rather than reef sites ...At the time while commenting on the feedback questionnaire I thought the map made no sense at gladly that was the case .. Personally I think it would be great to have the reef	Response via email: Thanks for getting in touch and nice to see you at the community forum last week. You beauty, regarding the equinor outcome. Now to protecting that coast in perpetuity. The minister will review the science and the community feedback in making his decision. We will let everyone know the outcome as soon as we know. Thanks for extending out to mid-coast reserve. Richard Olesinski emailed yesterday with a response and I have logged his comments as part of the consultation report as that there were misplaced

built at the site close to Port Noarlunga within The Marine Park as I feel that fishermen would absolutely thrash The Reef if it was located 2 kms out from Christies Ck with the resource being so close to the O Sullivan Beach ramp as they would hit it even in very short weather windows and as this reef once established could become a stop off point for migrating Snapper this could be detrimental to already stressed stocks as current fishing bans are lifted in time ... From an environmental perspective a reef out from Christies Ck would be of high value as higher nutrient water is washed out of the Creek and the oysters could soak up some of these and overall improve water quality as well as the discharge from the SA Water Treatment Plant may get further filtering another potential plus ...As for Glenelg ultimately may be the best site as the water generally is of poorer quality and needs more help and from what I gather was more of a historical Oyster Reef zone compared to the more open beaches further South ...I guess the Minister wants an announcement that appeases fishermen in view of the recent Snapper Fishing Ban I hope the site is chosen based on the best scientific basis rather than political point scoring I messaged the Mid Coast Surfing Reserve hierarchy and they said they would cobble something together as a response to the various proposals ...I can't imagine anything negative as the proposed reefs have no real impact on the beaches or wave action Anyway thanks again and keep up the good work and I hope these reefs keep proving themselves and more funding is granted for future and bigger projects ...

Furthermore it was great new to see Equinor has pulled out of the Bight now to drive the other potential exploration lease holders out as well ...

Ps Keep enjoying the sea ... I certainly did on the weekend when swimming at Porties on Saturday a pair of dolphins popped up and I got to swim around with them for about 40m or so ...10/10

concerns expressed by some of the surfing community about the location of the Port Noarlunga reef being too close to the mouth of the Onkaparinga river. This concern was based upon a misinterpretation of the maps, and the areas of concern are of no relevance to the proposed reef sites, which will not be near the river mouth. These concerns were allayed at the forum but some of the survey responses and discussion board comments that were provided prior to the community forum may still include commentary about this misplaced concern.

Based on the feedback we received at the forum, DEW has committed to replacing the maps that were causing the confusion.

If you have any other questions or concerns please reach out.

Comments via email:

Once upon a time, many many years ago I was on a NRM task force that addressed the high sediment exiting Christies creek and then spent 4 years in Council as an elected member from 2006 -2010, to see the a stormwater harvesting project to completion, then had a very long rest!

Unfortunately after 10 years, the completed project is only as good as the maintenance and it appears that within the City of Onkaparinga that there have been budget cuts. As in May 2019 there was a breakout of sediment after about 12 mm of rain at Christie beach which tended to sit inshore between horseshoe reef

Response via email:

Thank you for the information. You make a good point which we will take into consideration. We had a conversation with the Sustainability Coordinator at the City of Onkaparinga about your concerns. We have referred this on to them to further investigate. Please consider registering to come

Please consider registering to come along to one of our information sessions to find out more about the project. Details can be found here:

<https://yoursay.sa.gov.au/events/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa-community-forums>

Thanks

and the beach. Which lead me to go searching for original business case for the sedimentation basin at Morrow road, Christie Beach/ Lonsdale (copy available). On page 20 it seems that it is supposed to be desilted approximately every 5 years. As it was built in 2009/10 and was desilted in around 2015, but appears not to have been recently. So keep in mind that any proposed shellfish reef at Christies or Port Noarlunga is going to be dependent upon the health of the surrounding marine waters and forward budget allocations from the City of Onkaparinga

Appendices

Appendix A: YourSAy consultation map



APPENDIX B: Engagement methodology

Information provision

The public consultation process involved inviting feedback to inform where South Australia's metropolitan shellfish reef will be located. It commenced on 20 January 2020 and closed on 2 March 2020. The following information was provided to the public as part of the consultation process:

- **YourSAy website** – consultation portal with project information. Accessed via: <https://yoursay.sa.gov.au/decisions/restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa/about>
- **Survey** – to vote for a preferred reef site. Accessed via YourSAy.
- **Map** of reef site options. Accessed via YourSAy: <https://yoursay.sa.gov.au/decisions/yoursay-engagements-restoring-adelaide-s-lost-shellfish-reefs-a-new-metro-reef-for-sa/proposed-locations>
- **Public forums** – presentations by the project manager at three forums at:
 1. Glenelg Surf Life Saving Club on 19 February 2020 (15 attendees),
 2. Christies Beach Surf Life Saving Club on 20 February 2020 (80 attendees), and
 3. The Nature Conservancy's office on 21 February 2020 (2 attendees).

Attendees accessed these events via YourSAy and social media posts.

- **Brochure**– A project background document was developed. Accessed via YourSAy: https://s3-ap-southeast-2.amazonaws.com/assets.yoursay.sa.gov.au/production/2020/01/14/00/33/43/34b23f8c-4542-4e0b-828d-08f2ee4f8242/TNC4431%20PublicConsultation_FINAL.pdf

Promotion and Notification

The opportunity to be involved in the consultation process was promoted through the following:

- Advertisement published in the Messenger West, Messenger Coast and Messenger South (12 February 2020) and Advertiser (13 February 2020). See Figure 3.
- Articles published in the *DEW Good Living Blog* on 24 January 2020, *The Advertiser* on 21 January 2020, *The Times on the Coast* on 20 January 2020 and *Southern Times Messenger* on 6 February 2020 and *The Advertiser* on 6 February 2020.
- Radio interviews on *Rowley's Fishing Show 5AA* on 2 December 2019, *ABC North & West* on 21 January 2020, *Radio Adelaide* on 11 February 2020, *3CR Melbourne Earth Matters show* on 23 February, and *5AA* on 15 February 2020.
- Letters to City of Onkaparinga Council and City of Holdfast Bay councils.
- Meetings with the Chief Executive Officers of City of Onkaparinga, Mr Mark Dowd on 28 August 2019 and City of Holdfast Bay, Mr Roberto Bria on 14 October 2019
- Presentations to the elected board members of City of Onkaparinga council on 28 January 2020 and the elected board members of City of Holdfast council on 25 February 2020.
- Presentation to the project's technical advisory group the *Blue Infrastructure Working Group* (BIWG) on 10 December 2019.

- Presentation to the project's scientific advisory group the *Blue Infrastructure Monitoring, Evaluation, Reporting and Research Group* (BIMERRG) on 2 March 2020.
- Direct email to key stakeholders and Council networks and businesses.
- Consultation promoted through direct email to over 3000 The Nature Conservancy members who live in South Australia.
- Consultation promoted on the *YourSAy* email newsletter distribution list on 28 January and 28 February 2020.
- Consultation promoted on the *PIRSA Fish Facts* email newsletter distribution list on 28 February 2020.
- Consultation promoted through paid advertisements on The Nature Conservancy's facebook and Instagram pages.
- Consultation promoted through DEW, City of Onkaparinga and City of Holdfast Bay council facebook and instagram accounts.



 **Government of
South Australia**  **The Nature
Conservancy
Australia**

Healthy Reefs for Healthy Coasts

RESTORING ADELAIDE'S LOST SHELLFISH REEFS

The Government of South Australia has committed \$1.2 million towards restoring shellfish reefs along Adelaide's metropolitan coast to benefit the community, natural environment and local economy.

Historically, South Australia once had a vast network of shellfish reefs but almost all of them have disappeared. The aim of this project is to establish a shellfish reef along South Australia's metropolitan coastline and realise the benefits that it can bring to all South Australians.

Global conservation organisation, The Nature Conservancy is leading the construction of the reef in partnership with the Department for Environment and Water. The community, as beneficiaries of the restored reef, are invited to have a say about the location of the reef and its long-term management.

Community events

Learn more, see site options and talk to the project team at a community event.

- Wed 19 February 2020, 6:30 pm – 7:30 pm
Glenelg Surf Life Saving Club
- Thu 20 February 2020, 6:30 pm – 7:30 pm
Christies Beach Surf Life Saving Club
- Fri 21 February 2020, 6:00 pm – 7:00 pm
The Nature Conservancy office,
451 Pultney Street, Adelaide

Register online at <https://yoursay.sa.gov.au/restoring-reefs>

For further information, telephone 8204 1910 or email shellfishreefsA@sa.gov.au.

www.environment.sa.gov.au

Figure 3. Advertisement for the metropolitan shellfish reef public consultation published in The Advertiser Adelaide and messenger newspapers.

Appendix C: Full Summary of Stakeholder responses

There were 465 comments provided in the YourSAy survey for Question 2, which asked respondents to provide any other feedback about South Australia's metropolitan shellfish reef. The full list of comments are provided below.

24.3% were positive responses to shellfish reef restoration

- *I would prefer to give my vote to a marine biologist. This makes a compelling case for all 3 sites - why not incrementally implement in all 3?*
- *A great idea*
- *A must!*
- *A very exciting conservation project to see happening. I will be ensuring our school Henley Primary knows of it and can hopefully incorporate some learning around it within their curriculum this year!*
- *A wonderful thing to do in our dreadfully depleted waters.*
- *Absolutely support it's creation!*
- *All 3 should be done!*
- *All 3 would be best*
- *An excellent project*
- *Any work done in our marine environment is crucial for our State and the welfare our oceans and wildlife*
- *Awesome initiative! Great project.*
- *Bring them on!*
- *Build more*
- *Do all 3 sites*
- *Do them all*
- *Excellent for the sea, great for locals to experience*
- *Excellent initiative - comforting to know this is being actioned!*
- *excellent initiative. Could be the first of several*
- *excellent plan build more*
- *Exciting*
- *Fantastic for the environment*
- *Fantastic Idea*
- *Fantastic idea, one is not enough, why cant we have at least two in Gulf St Vincent*
- *Fantastic initiative*
- *Fantastic initiative*
- *Get on with it*
- *Good news, hope to see more positive decisions like this.*
- *Good on you all, this is a nice thing*
- *Great idea*
- *Great idea*
- *Great idea*
- *Great idea for tourism and conservation. Good learning tool for students*
- *Great idea for tourism just make sure you analyse the effect on sand flow and all the other things it may affect in the area*
- *Great idea keep it up*
- *Great idea, well done*
- *Great idea. Already proven to be of benefit*
- *Great idea. Hope it works*

- *Great initiative*
- *Great initiative for education, recreation, tourism and the environment.*
- *great initiative that supports research, fisheries and community*
- *Great project :)*
- *Great to see an active restoration project.*
- *Great to see restoration of these long lost reefs. Build more limestone artificial reefs along our metro coast line to encourage fish breeding & to promote sea grasses etc. if a rec fishing license was introduced and ALL the funds raised went on these projects (and not poured into general revenue)how good would that be.*
- *Great ☺*
- *I hope the full plan is restore the oyster beds to there once historic distribution*
- *I like this concept and believe there should be more added within 50-100m of each desired locations*
- *I think it's a great idea and a must*
- *I think this is a brilliant project! I also feel like ALL 3 are deserving. So if it were possible, would you be willing to open a discussion/forum about building 3 in total across all 3 locations! Anything to stimulate sea life will always return a positive agenda!*
- *I think this is a fantastic idea.*
- *I think this is a great concept that if positioned in the correct area can help provide tourism opportunities and growth to a low socio-economic area*
- *I think this is a great Idea but I think all locations should have it done I am a scuba diver and would like to help any way I can*
- *I would actually like reefs in all sites if possible, with a long-term plan to replace all reefs which existed prior to settlement from overseas*
- *I would like to encourage the South Australian government to build many, many more of these natural oyster reefs to help our shorelines stabilise themselves and bring our fish stocks back to where they were in the early days of european colonisation.*
- *I would love a shellfish reef in all 3 locations*
- *If possible, build more*
- *If successful it would be my wish that the other two locations be completed as well. In fact continue along the coast of the peninsula to Cape Jervis over time as a continuing restoration project.*
- *if we have 3 sites suitable for developing thee shellfish reefs why not build them all? the cost does not seem prohibitive when you look at the net return.*
- *I'm all for placing more reefs in both Gulfs*
- *Instead of considering 1 of the 3 options, shouldn't all 3 options be undertaken?*
- *It is a brilliant initiative and the State Government should be commended, and see this as the first step towards restoring all of SA's historic shellfish reefs. A great win-win-win of economic benefits, social benefits, and environmental benefits!*
- *It's a fantastic thing to do. I can't wait to see it completed and dive there!*
- *It's a great project and hopefully the first of many new reefs.*
- *It's is so good to see the environment being improved.*
- *Just establish a team to keep doing more reefs why do we have to agree to one location then no doubt in a few years another. Just start and keep going.*
- *Long overdue restoration. Need more than 1.*
- *More oyster spots*
- *More reef is desperately needed given the large amount of seagrass dieback over the past 20 years!*

- *More reef should be created to save marine life. Also to stop pollution otherwise the reef is of no use. Convert these area into eco tourism areas.*
- *More shellfish reefs needed.*
- *More than one?*
- *Need lots*
- *Need more*
- *Needs to be in a protected zone. But why not complete all 3 locations?*
- *Put it at all 3 locations*
- *Reef is already a good start*
- *Seems a great idea*
- *Shellfish are cool*
- *Should do it in all 3 areas! That would be exciting*
- *Start one and build all three over the next 6 years to provide multi sites with different stages of maturation.*
- *Strongly support the initiative*
- *Thank you for this important project!*
- *Thank you for this valuable research and initiative. Any attempt to conserve our reefs is vital.*
- *Thanks doing something good for the marine environment before it's too late*
- *The attempts to re-establish shellfish to the coastline are to be encouraged. This can only be good for the environment.*
- *The government should build all 3 reefs*
- *There should be many many more of these, restoring over time to original levels*
- *They should really be at all three and we should not have to choose between them*
- *This idea is great & support this fully. But why does it have to be just 1 shellfish reef. Why can't there be 10 artificial reefs made/built in the gulf to help support/boost fish stocks. These can be good for nature, fishing & diving. Thanks*
- *This is a brilliant initiative. I wish you could make the reefs at all 3 locations.*
- *This is a fantastic idea and will be wonderful if public don't abuse it. I love this*
- *This is a fantastic project and we need many more of these reefs on the Gulf St Vincent. Keep up the great work!*
- *This is a great idea, I recall the tyre reefs being placed in the 1960s and 1970s and as a kid thought 'what a sensible idea', and still think the same in relation to fostering marine habitat.*
- *This is an awesome choice*
- *This is the most exciting project we have had in Adelaide for decades. Restoring a small section of seabed to begin to redress the colonial mistakes is such important 'blue infrastructure'. The benefits to all of us in this time of climate stress are immeasurable, knowing we are working with science, local knowledge and government support to begin this healing effort.*
- *This is fantastic! culturally sensitivity does not come into it though, as shellfish would have grown everywhere before man came along. Its about time we respected the earth.*
- *This will have great flow-on effects for our coastal ecosystems! Nice job*
- *This would be exceptional. If o Ly we could have them constructed at all three sites.. and more!*
- *To be honest, I would love all three spots to be used. This is great for SA, please get this done. Great work.*
- *Very welcome proposal*
- *vitally important to maintain the balance of our ecosystem*
- *W need more of them*

- *We desperately need to create new marine habitat to try to recover the declining fish stocks*
- *We need more reefs in South Australia*
- *we need more to fill our offshore reefs*
- *What a fantastic initiative*
- *Why can't all 3 options be developed over a period of time as funds become available?*
- *why just 1 - put in the plan to do all 3 locations*
- *Why not do a shellfish reef in all 3 areas ? To maximise benefits for more people Divide total hectares by 3 if you can't afford 3 the same size as proposed*
- *Wonderful initiative... I support it wherever it may be based... maybe we can eventually do this in all locations listed above. So great to be doing something to 'put back' what we have only taken from for so many years.*
- *wonderful initiative; good luck stopping people from harvesting the oysters though*
- *Wonderful!*
- *WOOOOO! keen*
- *Would be a great environmental opportunity.*

1.5% expressed a concern about shellfish reef restoration

- *I dont believe we should be messing with the wildlife more than we already do. This reef should not be made.*
- *Placing a shellfish reef will change the natural waves at South Port (Port Noarlunga South)*
- *Please do not put it at South Port, it will have a detrimental effect to one of our most beautiful beaches*
- *Please don't build it at South Port, this beach is such a popular area for swimming and surfing. The large wave action during winter storms will wash oyster shells onto our pristine sandy beaches.*
- *Please don't put in along South Port (Noarlunga) beach in the where the surf is*
- *Worried that at Port Noarlunga particularly but also at Christies Beach this will negatively impact on current surfing areas. But the biggest concern is the proposed oil drilling in the Great Australian Bight. I hope that you have voiced concerns to NOPSEMA and Equinor that their proposal puts this great idea at risk.*
- *Will this new reef attract sharks?*

6.6% expressed comments related to recreational fishing opportunities, fishing pressure concerns and fishing management of the reef

- *2 hectares isn't very large for the number of rec fishers in the metro area. The Ardrossan reef is 20 hectares, the planned one here is hectares where a lot more people fish. -why is it taking so long to build. -build low cost artificial reefs right along the metro area using shipping containers, or similar. - why will commercial and Charter boats have access to the reef.*
- *and the general public wont fish them out?? why locate them so close to boat ramps where every fisherman that does not have a boat fishes!*
- *As long as the shellfish reef and other marine parks are protected and not exploited after the fact*
- *Biosecurity S.A. will already be in the loop, obviously. But I am going to repeat my usual bleat:- they are under resourced financially, and with climate change their role becomes even more critical. Also, while I accept the reality that recreational fishers have much political clout, and are an integral part of the shellfish reefs cooperative community effort, we lag behind the eastern states in not having a recreational fishing license system(which are proven effective interstate and might even have prevented the catastrophic decline in snapper biomass thus 3 year closure in this State. By providing*

meaningful data on recreational take, for which the current data gathering system is more guesswork than science.

- *building a reef in a metro area is going to take a lot longer than the stated 10 years to become a diverse and abundant natural ecosystem, that is if it ever does stabilize. Every man and his dog will be fishing it, and abusing it. That is why I have selected the location inside a sanctuary zone. I'm against the other 2 options, unless you make a exclusion zone until the reef stabilises*
- *Fishing should not be allowed on the new reef*
- *Given the desire to prove the concept of oyster regeneration projects on the eastern side of Gulf St Vincent, the construction of a reef within a sanctuary zone is recommended. This will allow scientists to better measure the productivity of the reef long term, as it will remain undisturbed by fishing pressure. This will not be the case if the reef is built at the O'Sullivan Beach or Glenelg sites, which will be open to fishing after the 5 year settlement period.*
- *Great initiative. When fishing is allowed it must also NOT exclude spearfishing. Spearfishing is known as the most sustainable method of fishing and should be allowed in areas that other fishing is also allowed.*
- *I believe the reef should be positioned where recreational fishing can be enjoyed*
- *i don't think any fish should be killed and caught at any stage*
- *I feel it needs to be away from raiding free divers and fishermen as much as possible. I am a conservationist scuba diver and see the damage done by raiders not just taking but abandoned fishing lines, pots and plastic lures. Habitats are delicate especially in the early period and have chosen preferences I think with the greater chance of success.*
- *I think that it would be an excellent idea to have a shellfish reef between Glenelg and West Beach. Fishing is a passion of mine and it would encourage the fish to breed and increase the population of fish in the area. It would be hopefully as good as the tyre reef.*
- *I think that placing it as far away from boat ramps as possible to dissuade small boats from 'accidentally' anchoring on the reef and fishing is preferable. The Noarlunga site being within an established conservation area adds to the protection of the reef and would be less confusing than creating a new one.*
- *I think we need to look at more shellfish reefs in SA Number of commercial fishing eg pros and long liners ripping into the fish stocks. Introduce a yearly ton limit for snapper not a daily limit. It has been hit hard for years now and they are suffering! Buy majority of commercial fisherman's out and we would be happier to lower our daily limits for recs and pay higher fish prices at shops. Also prawn boats need to be cut back majorly in SA I'm sure we would not mind paying a bit more for prawns either if there is higher fish stocks in our waters and gulfs. Net boats in the upper Spencer gulf need to be cut back it's a small gulf with to many pros being able to cover to much ground quicker then the fish can move between areas with long nets. More hand lining should be done for both snapper and king George whiting. South Australia Spencer gulf and gulf of saint Vincent are to small boats are getting faster and able to target and find fish alot faster for what the gulfs can produce and its impacting everything. I believe commercial and rec limits both need to be looked at and cut back at ways commercial fishers can target fish allowing more fish to live and fight another day in our waters.*
- *My only concern is that, will these areas be then turned into marine parks and prohibit recreational fisherman from fishing these areas by boat?. I can understand that there should be no anchoring in these areas until it has established itself, but there are many spots in these areas that fisherman already fish and by prohibiting them from fishing these areas will anger many. Please do the right thing so all parties concerned have an equal say.*
- *Needs to be in the area most protected from fishing.*

- *No more no go zones, we already have enough sanctuary zones, marine parks. Nature conservancy in my opinion is about locking up the natural resources and preventing fishing whether recreational or commercial, prove me wrong.*
- *option 3 should be scrapped seeing as the reef is being promoted for fishing*
- *Please don't let people fish it if possible. Or at least inform everyone it may be made a marine park if people keep destroying it through anchor damage and other impacts.*
- *Putting a reef for Recreational Fishers in a Marine Park what a JOKE. How STUPID. WHY even put it forward for discussion.*
- *Rather than just a selected area, how about putting your hands deep into the government/federal governments pockets and create a shellfish reef throughout the entire metropolitan coast line for all species to call home and shelter rather than continuously alter size and bag limits due to fish 'stocks' and 'biomass' being decimated. Our fishery could be the best but the mis management is embarrassing. There has been no new artificial reef structure in metro Adelaide for a VERY long time which boaties then resort to illegal dumping to create their own 'x' spots/reefs. Ps. How about you ban ALL commercial boat licenses in this new zone. They already know where all their target species live.*
- *Should remain a no fishing reserve long term, or until there are many of these with more than half no take zones. Should be designed to allow seagrass regrowth.*
- *The reef should be located inside a current Marine Park if possible to enable the breeding fish to continue to do just that without fear of being caught*
- *These reefs should be inclusive, not exclusive. The government commitment was to include recreational fishing. How a proposed site that sits inside an anti-fishing zone even made it to public consultation is a sad joke.*
- *This is a brilliant idea and should be done in all 3 locations in the future. Fishing should not be allowed on the reefs, these reefs should be considered nurseries.*
- *This needs to be in an area that both Rec divers and fisherman can access*
- *Use them for conservation and education. Allowing fishing will end in doom.*
- *We need to build a healthy system within the Marine Park, and later look at expanding within fishing areas. It is the right thing to do.*
- *What protection from commercial fishers and maintenance is planned*
- *Would like to see it in a marine sanctuary (or one created specifically for it) to ensure its safety*
- *would make more sense to have in a sanctuary zone to avoid fishing issues*

2.4% commented on tourism accessibility for boats and divers, parking and the potential opportunities to coastal communities

- *Accessibility is important, for tourism purposes.*
- *As the reef matures and diving tourism increases, it will be necessary to have easy boat access to the site. The west beach boat ramp is already alot busier than the one at O'sullivan beach and the O'sullivan beach ramp is surely going to give fantastic access to a reef located off shore.*
- *Huge Tourism boost of this actually goes through.*
- *Keep away from heavy parking areas, it would be nice if scuba divers could visit the reefs*
- *Keep it away from Glenelg – tourists*
- *Keep it close so kayak fisherman can also Access's it.*
- *Make it accessible for divers from the shore*
- *Offer tours of the man-made reef (include other sights of the area) and add signage about the reef being there and pictures of the marine species in the area*

- *Should be developed to become aquarium type structures*
- *Worthy cause. I don't know much about marine ecosystems but ranked Glenelg as my least-favourite preference as I would worry that the tourism Glenelg already receives would damage the reef while immature (eg physically from swimmers, chemically through sunscreens, etc). I think a reef in Glenelg would not thrive as well as a reef established in one of the more southern locations suggested.*
- *Would be nice to be able to dive there and observe any small creatures for photography*

9.2% suggested other location options for shellfish reef restoration

- *A reef out from St Kilda would be a good idea*
- *Additional locations on the southern side of the peninsula should be investigated also.*
- *Aldinga reef/ Pt Willunga also would be a good place*
- *An alternative could be Port Adelaide*
- *between Brighton and Marino would be particularly beneficial*
- *Can you do it in the gulf out from Parham please*
- *Do not agree with any of the locations. Northern areas are barren so should look at these areas.*
- *Don't do it metro, back in the late 1800s a man put a heap of natives out in front of Glenelg, after a storm nothing was left*
- *Hallett cove ??*
- *How about something further north*
- *I believe it would be far more beneficial to be located in a regional area of Yorke peninsula, Stansbury/Edithburgh for example. It may help offset the damage created by the snapper ban.*
- *I believe we should be establishing more shellfish reefs in rural areas and not just metro waters*
- *I don't choose any of those positions due to the water turbulence. North of Pt Adelaide was the area for the oysters, and I don't consider what lived in those zones 10,000 yrs ago to be relevant.*
- *I support none of the above locations as there are already several man made reefs of all 3 options. My suggestion would be north of outer harbour as the sea bed is quite barren with very little reef structure for recreationals*
- *I think we need more reef down south ! Around Victor harbour and around Normy*
- *I would have thought a quieter area like off Brighton between the jetty and Seaclyff boat ramp would have been better and to suit everyone, like divers and recreational fishers, or is this a marine park intentional.?*
- *I would like to see some effort to do some out off ST Kilda area where there is not much but flat ground*
- *It should be further North still.*
- *Largs bay would be better*
- *Maslin beach would be a better location. On ochre point.*
- *Maybe go a bit further out like on Yorke or somewhere else out of the metropolitan*
- *maybe look at establishing something around the mangroves/port river/st kilda?*
- *My option would have included of Hallett cove near the old scallop beds.*
- *North Haven to St Kilda region*
- *North haven would be a great option*
- *Off Bower road semaphore to improve fishing in the local area*
- *Off Moana beach would be great*
- *off semaphore beach, O'Sullivan's beach is too close to desal plant, Pt Noarlunga is too close to outlet*
- *One at semaphore*
- *Other locations should be considered such as Moana North or even Middleton*
- *Please put a reef at semaphore and Port Wakefield*

- Put it north of Outer Harbour, in an area they were traditionally in
- Should be looking into Spencer gulf waters a bit more
- The more habitat the better. I would like to see one at Semaphore.
- We need it in the Somerton park area too. The sea beds there have been devastated over last 30 years. If we can get one there then near west beach it may also help with the sand drifting.
- Why can it not go further north out from pt Gawler where the ocean floor is barren?
- Why can't it be towards northhaven
- Why not off Sema4/Largs? Accessible from both west beach & north Haven. West Beach ramp won't be able to handle the increased traffic ..worst major ramp in SA
- Would like to see the next reef built off wirrina Marina
- Would prefer one closer to Semaphore or Outer Harbour St Kilda blackpole area.
- Why not build near/expand on the one built in ardrossan
- West Beach or Brighton Beach
- West Beach to Grange Beach

40.2% provided additional comments relating to their site preferences

Glenelg

- 1. I think it should be further north especially since they were originally further up the gulf on this side.
- 2. If it is supposed to be part of improving recreational fishing, putting it in a marine park isn't going to do that. Have heard anyone raving about the spill over from marine parks yet.
- A fantastic initiative. Having it at Glenelg would be amazing because of its accessibility by tourists, school children and the general public. That section of the metropolitan coastline has limited diversity and few points of natural interest so this would be a great asset. The southern areas already have reefs and a much more interesting coastline.
- Any option is fine. We seem to have sufficient science and cause to just build the reefs. This exercise seems to be more about a PR event. In which case I thought glenelg might be more exposed to a greater range of people.
- as o'sullivan beach and noarlunga already has reefy areas i think glenelg would be the best option
- Awesome idea, glenelg is very accessible to tourists as opposed to other locations and it's a sure fire winning idea
- Best location Glenelg by far
- Bring more reefs to Henley Beach / West Beach/ Glenelg so we can snorkel like down south. Would be fantastic opportunity for everyone
- (Glenelg because) Christies and Pt Noarlunga already have natural reefs.
- (Glenelg because) Closer and easier access to education and research groups in the future
- (Glenelg because) Closest location to Adelaide is best for research and accessibility for the rural regions of the state
- Fish locally from west beach would be great to bring in marine life
- Glenelg has constant dredging of decaying seaweed as well as sewerage outfall & also during summer stagnant water from Pattawalonga River. No Glenelg
- Glenelg has the water treatment facility nearby and may kill the oyster bed
- Glenelg is a major tourist destination so makes sense to put the park where it will attract the most people
- Glenelg is a tacky retail strip with relatively polluted seawater as compared to the other 2 options. Self-respecting recreational divers rarely dive near Glenelg, only tourists do and not that often.

- *Glenelg is Adelaide's busiest beach and the ideal location as it is central for all residents of the state*
- *Glenelg is closer to main tourist areas for recreational diving and new reef could mitigate wave impact on Holdfast Shores marina.*
- *Glenelg is possibly more easily accessible by more people than the other 2 locations for those interested in viewing and public assisted research etc*
- *Glenelg is too commercial*
- *Glenelg is too over populated. Christie's beach would be the best option as there is no jetty*
- *Glenelg is too population heavy*
- *Glenelg is very central, busy, and easy to get to, so the tourism opportunities will be better.*
- *Glenelg need more tourist attractions*
- *Glenelg/West Beach would be most accessible for people.*
- *(Glenelg because) Good to put it in a place that has no fish yet but could*
- *Great idea, and should do all three eventually. Glenelg area seems most degraded and devoid of historical grasses etc., so best to start there*
- *(Glenelg because) Great to have this close to the city.*
- *Having it at Glenelg would be so lit ☺*
- *(Glenelg because) Hopefully to become a good dive site*
- *I believe the reef should go to the most degraded coastal environment. The seagrass and beach degradation around the middle Adelaide coastline will reflect the biggest gains from a positive project such as this. I know the opening of the Torrens outlet in the early 20th century devastated the seagrass... Hopefully a reef is unaffected by the fresh water runoff, and can help keep sand closer to shore for the beaches.*
- *I do not wish to select any of the reefs. As I have stated in the Discussion section, I believe the reef should be located off west Beach where it can reduce wave action and erosion.*
- *I feel that Glenelg is a very popular beach and having lots of people in and around the water could potentially ruin the shellfish reef over a period of time*
- *I have dived and snorkelled on the Port Noarlunga reef since 1950 - as recently as this month I have snorkelled along the reef - considering the various impacts (rock walling around Witton Bluff and associated colloidal impacts, Mt Bold reservoir, over-growth of the Pt Noarlunga dune, extensive intrusion by divers and spearfishing, foot traffic on the reef, etc., this reef is in excellent condition. I also have longstanding knowledge of the Horseshoe reef and have a similar view during the past 20 years I have snorkelled regularly (at least once a week) along the foreshore between the West Beach boat ramp and The Broadway. I am concerned that the impact of stormwater runoff, Patawalonga and Holdfast shores breakwaters, West Beach boat ramp breakwater, unchecked wave action, sand carting, coastal housing development, rock walling, and the development of the West Beach Trust land (sand dunes) including the Patawalonga golf course have all had a significant adverse impact on the near shore marine environment. I believe a shellfish reef in this location if it takes, could have significant positive benefits and assist in the cleaning up of this environment and hopefully assist in arresting the loss of seagrass and associated marine ecosystem. Given the success near Ardrossan, we need to work on the worst of the environments not the most pristine.*
- *I have put Glenelg as No.1 because I think it has the maximum exposure to people for educational purposes. Such a readily understandable restoration of the natural environment has a spin off for all natural environment restoration throughout our country. As time goes on the other two locations can be developed.*
- *I have some concern about its survival in the sometimes very dirty outflow from the Patawalonga at Glenelg*

- *I think Glenelg and the northern beach areas need more building up. Hello areas have reefs that set for the Protection zones. Hi Mike is even more done around the old ruins of the Glenelg jetty*
- *I think Glenelg would be the best spot as it's closest to the Port river and the dolphin population close to that area and the greater parts of the Adelaide dolphin sanctuary. I've noticed not many dolphins are in the Port river compared to this time last year and think they are traveling beyond the river to seek food which i think has been scarce around places Garden Island, St.Kilda etc. The reef would provide a good food source for the dolphins in years to come.*
- *I think it would be great for the Glenelg area and for all the local shops and tourism*
- *(Glenelg because) I think it would get back some sea grass that's disappeared (Glenelg because) I think it's a great idea to help filter the water and offset impacts from storm water run off which after large rainfall events can be seen for weeks I think off Glenelg shore would provide the most benefit for all South Australians ,including tourism ,studies etc . Also with tidal movements ,could possibly seed more grounds from that central based are a North and South*
- *I think the Glenelg location would be the most beneficial as it has the most to gain*
- *I think the Glenelg site is the best option for various reasons (1) this site is the most degraded of the 3 options (loss of seagrass), (2) native oysters will have the best chance of survival at this site as it is the most sheltered and warmest of the 3 sites (noting that historical shellfish beds were not found in the metro Adelaide area but were found further to the north), (3) the shellfish reef will assist with improving water quality which is an issue at this site, and (4) the site will be accessible to dive charter operators out of Glenelg.*
- *It needs to be away from people and pollution. The river is tainted by dredging. Glenelg is touristy and has a lot of fishers.*
- *It would be great to have a local dive site (close to West beach boat ramp) that can be regularly dives and monitored*
- *Fantastic to have a reef closer to the city.*
- *Its a good idea -- they should stuck sticking many of them in to replace those destroyed decades ago. It would be good to put the initial ones where people can see them easily e.g., via snorkelling as people would get an idea of their benefit.*
- *It's a good initiative for areas that don't currently have a good natural marine habitat and not within existing marine sanctuary zones. To encourage citizen science, it would be good to locate adjacent to existing artificial tyre reef at Glenelg*
- *noarlunga already has a great snorkelling reef, we need one closer to semaphore/glenelg*
- *Noarlunga already has a popular reef, it would be good to see fish nurseries elsewhere, and eventually to replenish as many shellfish reefs as there were to begin with*
- *Only Glenelg is centrally located*
- *Placing it near the west beach boat ramp will provide great access for CBD anglers with a safe proximity to emergency services and boat ramps*
- *Please create a reef closer to Adelaide.*
- *Port Noarlunga already has the marine park. Therefore, it would be sensible to have it in a different spot... hence Glenelg which has lost most of its natural feel.*
- *Should be used for ecological improvement primarily and fish habitat/fishing second. Shouldn't be in a sanctuary zone should be where it can do the most good. Glenelg near Barcoo outlet/patawalonga, helping with stormwater*
- *Should do Glenelg and a southern location at the same time for comparison.*
- *The southern suburban beaches are blessed with rocks. The further north there is just expanses of sand as all the seaweed has been killed off by sewerage outflow and floodwater from road runoff. The draining of the wetlands at both the Patawalonga river and the Torrens outlet and also at West Lakes*

have effectively destroyed the beaches, so restoration of the marine desert is required as far north as possible.

- *There is already excellent protected habitat in the southern areas I.e. port Noarlunga reef, horseshoe reef, aldinga reef etc plus the Hobart wreck further South. About time more was done in the metro area to improve fish stocks trashed by previous lack of management. Therefore Glenelg or preferably north of Large would be a better option. Sea grass has greatly reduced in these areas and therefore habitat needed to support all manner of sea life.*
- *There's already plenty of reef further south so I prefer the Glenelg option and this is more suitable to the fishers of the northern metropolitan area too.*
- *They should all be established, but first one needs to be close to Adelaide and reduce pollutants going out to sea.*
- *Too risky near Glenelg! People treat that beach like trash. Between Glenelg and west beach is absolutely no good for conservation efforts*
- *What a great initiative! Glenelg seems like it needs as much purifying help as it can get.*
- *We need more newer reefs up the gulf, the other 2 sites have a reef area already*
- *Would be great for Glenelg business to attract visitors to this region for tourism. Be great for the Ocean in this area to because of the outlet of the Pay.*
- *Would be nice to have a reef further north than Noarlunga. As long as it's not going to mess with the sand further down the beach and cause problems like at West beach*
- *(Glenelg because) Would Provide medium access while still encouraging access from Adelaide to Wirrina*

Port Noarlunga

- *As there is already a reef system at Port Noarlunga, it would be sensible thing to add onto that reef.*
- *At Noarlunga would help revitalize the area after not being able to access the jetty when the steps were broken*
- *Because of heavy boat traffic in the O'Sullivan beach area and Glenelg with recreational fishers, Port Noarlunga is a safer option*
- *Building it in the Pt Noarlunga area will have great social, economic and environmental benefits - most of all boost local jobs.*
- *DEW sponsorship of the project and their commitment to the long term benefit of Marine Parks should inherently commit their investment within a Marine Park and within a habitat protection or higher protection management zone. Any choice to invest outside of a management zone that ensures direct protection from inadvertent habitat disturbance could be viewed as the questionable governance of public investment. In re-establishing shellfish reefs in the Gulf of St Vincent it is priority to establish a genetic reserve of the greatest longevity. This should occur in a well-protected sanctuary zone, furthest from the impacts of urbanisation and effluent treatment, while keeping upstream of prevailing longshore drift, and remaining connected to other natural systems namely the Onkaparinga estuary system.*
- *Don't put it in port Noarlunga area. You will ruin the surf spots with the changes to the sand shifting*
- *(Port Noarlunga because) Ensure future protection for the reef*
- *Existing protections at noarlunga make this the more favourable site*
- *Glenelg is too subject to polluted outflows. Port Noarlunga is already a reserve and therefore easier to manage.*
- *Growing up I've always snorkeled the reef at Port Noarlunga. I'd love to be able to introduce my children to new locations to snorkel in the same area.*

- *Having the shellfish reef at noarlunga provides a safe location for snorklers, divers and swimmers to view the reef and already has restrictions in place for fishing.*
- *I am intrigued by the ability of a shellfish reef to filter water, and figure that positioning it near the mouth of a river would be beneficial to the marine regions up-current to the reef. I chose Port Noarlunga over Glenelg, due to its southerly location. I think that such initiatives are a fantastic idea and hope that many more be constructed. I would also love to volunteer, if possible, in any way I can.*
- *I am particularly concerned that you are considering putting the reef in a Marine Sanctuary that has an established reef ecosystem present. By introducing a biased population of oysters on an artificial reef will surely upset the ecological balance of the existing ecosystems. Furthermore there is no evidence of a native oyster reef environment ever being here, except fossil evidence from over 10000 years ago. Why was this area really selected?*
- *I believe it is important to have the reef at Port Noarlunga as the sanctuary status will protect the newly created ecosystem from being damaged by fishing.*
- *I believe Noarlunga is best because it'll boost the reef that is already near there and make it even better and draw more people to it. Additionally, perhaps, the water is cleaner there than say Glenelg and the reef will grow faster there. My second choice is Glenelg because perhaps it'll make snorkelling and marine life interest more accessible.*
- *I believe there is already a large amount of activity at Port Noarlunga and a new marine reef need s to be created to stop over use.*
- *I don't have any except after reading the background - it seems more sensible to start where there is already a protected location *
- *I feel it would compliment the area of Port Noarlunga very well, the large existing reef and aquatics area will be perfect to be near to.*
- *I feel that placing the reef within an existing marine reserve may assist in limiting damage from activities like anchoring.*
- *I pick all 3, however Pt Noarlunga makes the most sense for top priority.*
- *I think it is a good idea to have reef in Port NOARLUNGA where Onkaparinga river is nearby. The South is very popular and maybe into the future the jetty could be extended further out or with widened area at end for viewing the reef.*
- *I think the port Noarlunga location would be a fantastic complement to the exiting marine park and the work done over the last 50 years to clean up the Onkaparinga River to what it is today. This is an area of outstanding natural beauty where the new shellfish reef would be included and protected.*
- *I think the south is the natural place near the reef. It's already considered a great sanctuary area.*
- *Inside an existing sanctuary zone*
- *It would be a wonderful addition to the amazing Port Noarlunga Reef area that is so popular with locals and visitors alike.*
- *(Port Noarlunga because) It would be good for this area to have more job opportunities*
- *(Port Noarlunga because) It would be great as it would be in a secure location*
- *It would be great to have the shellfish reef Port Noarlunga in the Marine Park to build up fish habitat and fish populations that would be preserved in a no take by boat zone and also be a big draw card for divers and snorkellers as well as a resource for educational and monitoring opportunities for the Port Noarlunga N Aquatics program who put 1000 of kids in the water snorkelling ...The only problem I can see with the location map it shows areas shaded in purple very close to the shore adjacent to the Southern end of the Port Noarlunga Reef which would alter sand flow and could well destroy arguable one of the best surfbreaks on the whole Mid Coast when the swell is up at Southport known as the Hump which would devastate the Surfing Community ...Therefore in my opinion it would be unwise to*

come that close to shore along Southport Beach ie any closer than 300m to shore could be a disaster for the Surfing Community I hope this project gets off the ground ...

- *Makes sense to place the Reef in what is already a protected marine sanctuary*
- *My concern for Glenelg and O'Sullivan beach is tides moving sand and possibly ruining these two areas. Also the desalination plant discharging high salinity water into that O'Sullivan beach area is also a concern as the shell fish may not like a high salinity area. So port Noarlunga seems to be a reasonable choice*
- *My second choice would be pt Noarlunga and the onkaparinga mouth*
- *Noarlunga is already a protected area, it would be perfect.*
- *Noarlunga is already a reserve*
- *Noarlunga jetty is a good sanctuary now, this reef will improve it even more.*
- *Noarlunga is a popular location for schools and social clubs across the Adelaide region to jump in and sustainably co-exist with ocean life. I went shopping there through school, and continue to dive there and would be very excited to see it continue to thrive*
- *On a regular basis the intertidal reef system adjacent to the bluff, north side, just outside the sanctuary zone gets absolutely "raped" by members of our major trading partner. So another shellfish reef would be good as long as there is an education and monitoring program. Plus some severe penalties for those that transgress!*
- *Onkaparinga reef is an extraordinary asset with an established dive culture.... adding the shellfish reef will further fortify this renewed ecology and increase the draw for visitation*
- *onkaparinga river will provide safer nutrients to the reef than patawalonga at glenelg*
- *Port Noarlunga already attracts divers to the reef. To have an additional Shellfish Reef would compliment the Sanctuary Zone.*
- *Port Noarlunga already has a good reputation for diving and snorkelling. Another attraction would add to this prestige. The dune structure at Glenelg is poor and there is too much rubbish. Marinas have messed with the long shore drift.*
- *Port Noarlunga already has a great reef - build upon that - reinstate the stairs but create a more metro Adelaide reef so that Port Noarlunga doesn't get ruined*
- *Port Noarlunga already has a reef*
- *Port Noarlunga already has a reef that should be rejuvenated, it is a marine sanctuary that has degenerated a lot over the past 20 years. Port Noarlunga also has an Aquatic Centre for schoolchildren and would benefit their education. It would also be a great tourist attraction for the area.*
- *Port Noarlunga and Onkaparinga Mouth are pristine beaches and are regularly visited by tourists and locals alike. All people are proud of their beautiful coastline and this reef will encourage more visitors and help the Southern economy*
- *Port Noarlunga is the perfect biological location. Many people come to the Port Noarlunga reef, it makes sense to have the full range of diving experiences in this region.*
- *Port Noarlunga seems a good choice, in view of the marine sanctuary's location.*
- *Port Noarlunga will give best results and chances of success due to existing reef and bio diversity already present.*
- *Port Noarlunga would be an ideal situation and has already been voted the best beach for visitors to see in South Australia*
- *Preferred location is Port Noarlunga. An attractive reef at P.N. is already a great attraction.*
- *Pt Noarlunga already has the facilities for scuba diving and snorkelling on a reef.. adding to this and promoting it as a tourism drawcard for southern Adelaide right at South Port Beach which was named in top ten beaches in Australia is a no brainer.*

- *Pt Noarlunga ideal location adjacent to marine reserve and popular diving destination*
- *Pt Noarlunga is already a sanctuary and the fish population has increased so a shellfish reef is a very exciting project to add to the already amazing sanctuary that is there*
- *Pt Noarlunga is already a well known diving area and this will add to what a great area it already is*
- *Pt Noarlunga is in a marine park. My only worry is if the river floods will the fresh water kill the shellfish*
- *Site best if in a sanctuary zone*
- *Southport/ Noarlunga is the best site, protection for the estuarine nursery, help sand retention and possibly an add on recreational usage for surfing, scuba etc Also an extension of habitat from the existing reef system.*
- *The area of sand dunes next to the proposed Port Noarlunga shellfish reef was an indigenous site where indigenous people lived on shell & other types of seafood*
- *The decline of shellfish on Port Noarlunga reef in the last few years has been huge. I have snorkelled this reef regularly working at Port Noarlunga Aquatics for 29 years and would love to see the results of a new shellfish reef close by.*
- *The existing reef at apt Noarlunga would be enhanced by another artificial reef to support the local ecosystems, as well as provide tourist attractions.*
- *The Port Noarlunga area already has a lot of this type of activity and is a fabulous base to build upon.*
- *The Port Noarlunga option is in the protected conservation zone making it easier to protect*
- *The Port Noarlunga sanctuary zone should not exist! The evidence for them at the time of creation was underwhelming at best. My preference is actually port Noarlunga, however with the removal of all sanctuary zones .*
- *The Port Noarlunga site I suggest is the least appropriate site of the 3 suggested. This is in an area that forms part of the important nationally-recognised Mid Coast Surfing Reserve. It is famous for it's sandy beach surf breaks from the southern tip of the Port Noarlunga reef, known as 'The Hump', all the way south to the rivermouth that contains sandy beach surf breaks that are ideal for particularly learner surfers. This is a very active surf beach at times with numerous rips in place and the proposed reef may add to that dangerous and potentially life threatening situation.*
- *The Port Noarlunga site is preferred being in a marine sanctuary zone where there is greater protection for this project to continue as an Eastern Gulf St Vincent control site. The environment appears better suited to establish and fuse the reef with biological activity. There may be opportunities in mid Adelaide metro beaches, but such locations should be properly described and integrated with the planning for seagrass recovery in the shallower water. A site protected from fishing is the obvious control site and this does not prevent subsequent efforts further north.*
- *The project sound amazing, and the reef should be located where it can have the most benefit and also the most protection*
- *The proposed locations at Glenelg and O'Sullivans Beach are very close to the SA Water wastewater treatment plant gulf outfall pipes - there would be a risk of contamination to the oysters in these locations - the Port Noarlunga would seem to have been water quality*
- *The reef being placed in Port Noarlunga would really compliment the reef near the jetty*
- *The Reef sanctuary zone is the perfect safe place for the oysters to establish*
- *Within a sanctuary zone provides the best protection for a reef such as this, as well as a good filtering for the silt that's pumped in from the Murray river.*
- *The shellfish reef would complement everything around Port Noarlunga & add even more value for tourism.*

O'Sullivan's Beach

- *A complete day of diving, between the Noarlunga Reef and the new Shellfish Reef, perfect.*
- *At Christies Beach*
- *Believe that O'Sullivan's Beach is preferred site as this is currently a rather non descript area with few attractions. A reef here would bring the area into line with the other 2 suggested areas in respect of "draw cards"*
- *O'Sullivan's Beach best location reef already thriving*
- *Best place is O'Sullivan beach we have the sea grasses better fish migration*
- *Choice is because once O'Sullivan's Beach reef is established, Port Noarlunga will be naturally seeded and is already protected.*
- *choosing this area (O'Sullivan's Beach) would stretch the amount of marine life from the port noarlunga reef across to Christies*
- *Draw attraction to ALL of SA coastlines, support growth in all areas. Please don't concentrate the sights and amenities in one spot, O'Sullivan Beach and Christies Beach deserve this attraction*
- *(O'Sullivan's because) I believe the least visited and quietest area should be ranked highest to enable visitor and facilities balanced*
- *I feel the O'Sullivan's beach option the best ,glenelg is well known for filthy water from the patowillunga flowing into the ocean and making it unsafe to swim ,that can't be good for a shellfish reef the beaches around christies and port Noarlunga are never affected to such a degree from the onkaparinga river or the christies creek and the southern districts need more attractions to help the local economy glenelg has many attractions already it's always very busy and gets a more than it's fair share of the tourists dollars , as most of this type of thing goes to the town where the wealthy live and have a greater influence on decision makers ,I expect it'll go to glenelg regardless of what we want , I hate to be cynical but in the past it's what has happened, I wonder why they bother asking*
- *I have a life long association with Christies Beach Surf Life Saving Club and believe the reef will help the area recover from previous dredging that occurred and also with the removal of the Port Stanvac Jetty also provides another opportunity to re-establish eco-systems in the Christies/O'Sullivan Beach area*
- *I think that Christies Beach would be the ideal location. There are already substantial reef structures at Glenelg and Port Noarlunga and this would spread the benefits of these environments further.*
- *I think this is a fantastic idea! Starting the reef at O'Sullivan's would be a great way to help repair the damage done from the old oil refinery.*
- *It is a fantastic idea. I believe locating it within a close vicinity to port Noarlunga will increase the tourism, and health of the ecosystem around. However, building on a already existing ecosystem (i.e building it in Port Noarlunga) will imply that you get half of the desired effect for the same amount of money you would use to build an entirely separate reef all together. Build it in o'sullivan beach.*
- *LOVE the idea about increasing shellfish reefs. Think O'Sullivan's Beach could increase tourism to the area. Noarlunga already has a reef. Glenelg is difficult to get a park without trying to get more people there.*
- *More locations of reefs are need in the southern area to provide corridors and habitat between sanctuary zones.*
- *O Sullivan Beach is less we'll known therefore safer*
- *O'Sullivan Beach preferred, due to the need to increase water-filtering potential in the nearshore area (adjacent to the boat harbour) and reduce silt. there is very little public, environmental or scientific interest in O'Sullivan Beach reef and surrounds, and a new shellfish reef in the area may help to generate more interest in that ecosystem. On a minor scale, a shellfish reef may also help to offset the recent loss of hard substrate (refinery jetty, which provided a hard surface for sessile invertebrates), and an aggregation area for fishes.*

- *O'Sullivan beach would be a location that would impact the public the lease. The nearby Bird Sanctuary would cause less human impact and allow the reef to be protected.*
- *outstanding idea & i believe O'Sullivan Beach option to greatly outweigh others as Glenelg & Port Noarlunga already have substantial features that draw people to the areas.*
- *Placing the reef at O'Sullivan Beach will see not 1 but 2 beaches (Christies beach) gain the benefits from the reef.*
- *Really excited for this to go ahead. O'Sullivan Beach is the perfect location - heaps of recreational anglers looking for new fishing grounds, wastewater to clear up thanks to the outflows and SA Water, plus it's an overlooked suburb that could use a project.*
- *(O'Sullivan's Beach) seems to be the safest option in terms of public beach use*
- *Significant advantage at O'Sullivan Beach - with 2 other diving opportunities (shipwrecks) could be utilized for such an undeveloped area*
- *(O'Sullivan's Beach because) Support the excellent beach, improve economy in surrounding area.*
- *The reef would be great for the Southern area and putting it at the beautiful O'Sullivan Beach & Christies would benefit 2 beaches.*
- *Would be great. Would add to O'Sullivan beach as it's less visited at present. Might be better protected at Port Noarlunga*
- *Think it's great idea Christies and port noar great locations Port noarlunga already crowded with divers Need jetty steps fixing*

General

- *1 Port Noarlunga already within a Marine park, slightly sheltered and a great extension to the current reef. 2 O'Sullivan's Beach will help clean waters coming from Desal and water treatment plants, quite stretch of water and limited public access. 3 Glenelg, very popular swimming beach, would be harder for illegal activity with someone always watching from high rise ect, would help with discharge from the patawolonga filtering the water.*
- *An outstanding opportunity to promote South Australia. A must. But it needs to be south of Adelaide to spread tourism away from the core beach area.*
- *Areas like the Fleurieu Region are sometimes overlooked for significant opportunities like this because they sit on the fringe of the metropolitan area. However, the Fleurieu is an area still in its infancy regarding serious tourism growth. It needs and deserves projects like this to benefit from the social, economic and environmental benefits that will flow from it.*
- *Glenelg too busy. O Sullivan's too near the boat ramp. Port Noarlunga perfect*
- *I feel outer suburban reefs will have a higher chance of success with less pollution, less disturbance from humans*
- *I feel they should be where natural reefs were prolific but have been damaged by man*
- *I highly favour a number of small (50 to 3000sqm) artificial reefs being built along the metro coastline from 40 to 400m from the low tide mark within areas where the bottom consists of mud or silts or silty sands. These will provide habitats and cover for weeds, grasses, shellfish, planktons, fish etc,. I have witnessed the degradation of sea grass habitat along the metro beach line occurring particularly in the last few years where sand pumping occurs coinciding with this and more notably the shadow of the effluent plume of the desalinization plant at Lonsdale (you will note the current directions in the gulf). Every "man made" initiative should compliment the environment its built within, if it doesnt it is going to have a negative impact. To build a artificial reef within locations of existing reefs will have a impact to that may compete with the existing balance, which is why I have nominated the northernmost area. I do not at all favour Pt Norlunga as the very small nomination area is within a diverse environment that I see would cause particular species to potentially suffer. I would hope the existing reefs are taken*

into account and the protection they also provide along beach sand erosion/long shore drift transportation of sands.

- *I think a perfect location for this new Oyster reef would be next to the "Lumb" sunken Barge and the tyre reefs off Port Noarlunga Jetty, in a section of the existing Encounter Marine Sanctuary, that was sectioned off from the Marine Sanctuary for recreational Diving and fishing. I feel that this would benefit all and that the North/South Tidal flows would spread the oyster spats both into the Marine Sanctuary, the existing Christies beach "horsehoe reef" Sanctuary and would be a massive benefit all around for all Community share-holders. I would also have serious misgivings about the Port Stanvac options as you have "grey-water" emissions from the Christies Waste water plant and further up the Coast high Salinity emissions from the De-salination plant which could lead to the very same pollution that killed off the original oyster reefs over 100 years ago! Glenelg has the Patawalonga storm-water basin which has quite horrendous "black-water" events during Winter and these emissions already have claimed an awful lot of the ribbon weed beds in near Coastal waters which were once quite pristine.*
- *I think it should be somewhere secluded, where there won't be hoards of people to ruin the reef over time like there would be at Glenelg or even port Noarlunga*
- *I think it would be more beneficial to have the reef in outer southern metro to help promote our beautiful coastline and support local businesses in the fleurieu.*
- *I think its a great idea that would benefit the Onkaparinga and compliment the mclaren vale wine region*
- *I think it's a great initiative but maybe it needs to be in an area where it won't get targeted as much as it will in a metro area.*
- *O'Sullivan Beach & Pt Noarlunga preferred locations. Glenelg is too high density population & visitor centre*
- *Shellfish have been abolished in metropolitan areas. Rocky shores and intertidal areas are more common the further south you go so these areas were more likely to be habitat of shellfish in the past. These areas warrant intervention more so than Glenelg as it would have originally been less common to find shellfish here I believe.*
- *South needs more and more tourism.*
- *The City of Onkaparinga is well equipped to promote both sites that will benefit to the entire Southern region for tourism*
- *The locations of both 1 & 2 are excellent but the third, Glenelg, has the advantage of more tourist numbers (I should imagine) so I hope that the Powers to Be that are deciding this DO NOT LET THAT FACTOR BE AN INFLUENCE!*
- *The more opportunities we have down south at Christie's and port Noarlunga the more tourist opportunities we will get*
- *The Onkaparinga area needs help with tourism so this would be beneficial for creating growth in the area. The Glenelg area already is well established as a tourist location.*
- *This will be a great drawcard to the Southern beaches and local businesses*
- *This would be great to add to the Fleurieu region as we already have local infrastructure to support this kind of project and interested people head to that area already*
- *Whilst the Glenelg option is close to me - I think with the constant emptying of the Patawalonga the shellfish will fare better further south ~*
- *With whatever location the reef is built, consideration needs to be given to the launching facilities available. West beach ramp is quite often full but the location of the reef here will give more opportunity for observers to monitor the reef for illegal activity (which was a problem at Ardrossan - particularly illegal anchoring). O'Sullivan is good as second option but again, launching facilities here*

are not ideal (but there is talk of an upgrade). I'm not sure where a lot of people would be able to launch from for close access to port Noarlunga, unless a new ramp is built.

11% provided other general comments

- *A key consideration for these reefs should be how they can benefit surfers. By shaping the reef in a certain way and creating correct depth the shape of waves can be influenced. Surfers require waves of a certain shape. Could be a win win has been well researched and is being implemented in other states*
- *Are these proposed for designated marine reserves?*
- *As a child I enjoyed swimming over what we called 'the blue-line' - fields of waving seagrass with seahorses, skates, leafy seadragons and fish aplenty. We need more reef areas but the loss of the shore dunes due to human greed (and permitting housing development where the dunes once were) caused loss of sea-grass. This needs to be addressed as a matter of urgency. All our coasts are now undercut and the water is deep close to shore and there is no sea grass to hold the intertidal ocean floor together so it is constantly dragged northward by littoral drift. But humans caused the problem! Humans must fix it!*
- *as long as they are using clean local oyster shells that are not going to bring disease into our ocean*
- *Biggest issue is still polluted stormwater runoff. This needs fixing to ensure rejuvenation of general gulf environment.*
- *Currently jet skis are allowed in Port Noarlunga Marine Sanctuary, creating disturbances in the water and for marine life. This must be stopped to give the reef the best chance to flourish.*
- *fishing is very popular from the Pt Noarlunga Jetty, but it needs to be a distance from swimmers. The local reefs have been impacted by stormwater over the years of urban encroachment and subsequent loss of grasses (fish food) plus the sand removal impacts from Christies reefs as the sand was taken to supply sand for Brighton Beach and due north*
- *have a no plastic rule and only allowed to use reef safe sunscreen*
- *Have noticed an increase in marine life at dusk at west beach since the path has been reconstructed with the bits of metal.*
- *How much will the reef change the sea bed and will this impact on the surf breaks in the Seafood to Noarlunga area?*
- *I feel like the metropolitan shoreline could damage the reef perhaps? I feel like there are smarter people out there would have a better understanding about how it works though. I just think areas such as the Fleurieu or the Yorke peninsulas May be more sustainable. But like I said I'm not an expert. I love the idea of creating more environments for marine animals however*
- *I remember that the Posidonia sea grass extended to within 2m depth at low tide, at North Glenelg (1970s).*
- *I wonder how much or how long the research went on for this. Is this the most important way to spend the money, could we be putting something back into the rivers to make them better with filtration, like the native cockle shells that once existed. I think the wave action along our coast will destroy it in it's early stages any way. Definitely not wanting it near any surfing areas. Not sure it's necessary, definitely not if it's more for a commercial point of view.*
- *I would prefer our taxes to be spent on eliminating stormwater runoff other than the Torrens natural flows and harnessing that water for re-use for parks and gardens watering as as much storms water flowed out to Port Vincent golf as is used by metro Adelaide. This stormwater is killing or seas grasses and causing sand drift up the golf Hence I'd see this shellfish reef as a nice thing to do but not at the expense of addressing the main problem of stormwater runoff into the gulf.*

- *I would prefer the money spent on the same amount of oyster reef that is planned, but many, many smaller reefs created instead of just one of three. The reefs will grow! Isn't it better for many small reefs to grow, than one larger one to grow? Especially if the idea is to have oyster reefs, and *not* "one" to have commercial benefits from. (What I mean is that having "One" would be better in this case, since it is easier to harvest one large reef, than many smaller ones!) I endorse the idea of NOT harvesting them. The locations should be at each place along the SA coastline where there is a road called "Limeburner"!*
- *i would suggest that the reef locations are identified by research and best outcome for the environment. not sure the community should have input into the priority locations. would also suggest that maybe the reefs have an exclusions zone and/or time to enable them to establish*
- *If it's done in the Glenelg west beach area please let it be away from the desalination plant that is pumped out along west beach*
- *Integrate shellfish reef with sea grass recovery*
- *It might affect the surf break at onkaparinga rivermouth!*
- *It will provide more snapper*
- *Make sure your final decision is in the best interests of all concerned*
- *Needs more advertising, more people need to know!*
- *Needs to be able to be monitored & progress easily reported to public & local community- particularly school kids. Needs council, environmental & boating support*
- *Needs to be configured to avoid navigation impact on Patawaalonga entrance and also West Beach boat ramp.*
- *Not near any currents*
- *Only 20% should be consumed by humans the rest to restore sea life*
- *past shell fish resource between Moana & Seaford was a popular location for adults and teenagers.*
- *Our school (Flaxmill Primary) has strong environmental focus and would definitely utilise it as a learning resource.*
- *Please assess utility for reducing need for sand carting at west beach, and length of time polluted stormwater, torrens and pat outflow, stays near the shoreline. Perhaps by using reef design to redirect north/south currents, using a combination of oyster and hard reef interventions.*
- *Please don't let this be another Torrens Linear Park where existing natural habitat was destroyed out of sheer ignorance*
- *Port Noarlunga is installing better access to the water from the jetty*
- *See facebook comment*
- *Seen plenty of these oysters at Glenelg south of the tyre reef, instead of building a reef, save your money and seed the areas of the major intermittent reef systems that run from Glenelg to Grange approx 2km offshore, fishing areas such as Shag patch, Kemps etc which have heavy reef.*
- *Sharks !!!!???*
- *Should be placed where natural filter feeders can find bedding to help siphon dirty water*
- *Should put a few razor fish beds through the gulf in shallow waters as well*
- *So, save the shellfish YET DRILL THE BIGHT – appalling*
- *The financial beneficiaries of any reef should meet the full costs of constructing and maintaining the reef. That is, the general taxpayer should not be liable.*
- *The great barrier reef is the world's largest coral reef. The range has more than 2,900 individual coral reefs. The great barrier reef stretches along the North-Eastern coast of Australia for 2,500 km and covers an area of about 344,400 square kilometres. The great barrier reef is the largest natural object on Earth formed by living organisms — it can be seen from space.*

- *The whole area should be a marine park*
- *This should be based on science not public opinion*
- *We need a healthy environment for our wildlife including marine life to thrive. We need to radically reduce our carbon emissions and ensure that there is no chance of large industrial air or water pollution*
- *We need to stop dumping storm water in the beach's along the coast line*
- *why build it in a marine reserve? ridiculous*
- *Why have it metro, asians are only going to over fish it*
- *Will the Barcoo outlet be too close to the shore and impact this?*
- *Will this reef also help to retain sand at West Beach by interrupting the currents?*
- *Will we be able to dive on the reef? Will it create a surf break?*
- *Why don't we develop more artificial reefs instead of shellfish reefs.*
- *Why would you have another reef at Port .Noarlunga o'sullivan's beach would be fished out.*
- *Wondering if the ex HMAS Hobart off Lady Bay was considered, and whether it offers any benefits as a reef in the gulf.*