

City of Busselton
Coastal Adaptation Research
November 2018

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Background

The City of Busselton is facing significant problems with coastal erosion and is in the process of developing a Coastal Adaptation Strategy to address these issues. The City is keen to have a balanced understanding of the expectations of its residents and ratepayers in relation to coastal adaptation and is keen to engage the silent majority of the community in this discussion.

The Coastal Adaptation Strategy is looking at a 100 year plan during which time the north-facing coastal area of the City will be affected by both erosion and rising sea levels. State government infrastructure, city facilities and private land will all be affected.

The project area is the City's north facing sandy coast from the City's municipal boundary at Forrest Beach, extending from Wonnerup (to the east), to Point Daken, Dunsborough to the west, with the addition of the beaches and settlements at Bunker Bay, Eagle Bay, Yallingup and Smiths Beach. The study area excludes the coastline within the national park and ends at the boundary of Leeuwin Naturalist Park at Smiths Beach.

The City of Busselton commissioned Research Solutions to undertake a representative survey of its community to determine what the community values about its coastline. It was important that this survey produced a random and representative sample of the community, including those members of the community who do not traditionally participate in consultation.

The process

The study proceeded as follows:

The sample was divided into coastal and inland residents/property owners and is similar to the actual distribution of homes.

A profile of the sample is appended.

The data was coded and checked and the results are provided below.

With the City and representatives from the Department of Planning, Lands and Heritage and from the Department of Transport

Telephone survey of 410 residents and ratepayers:

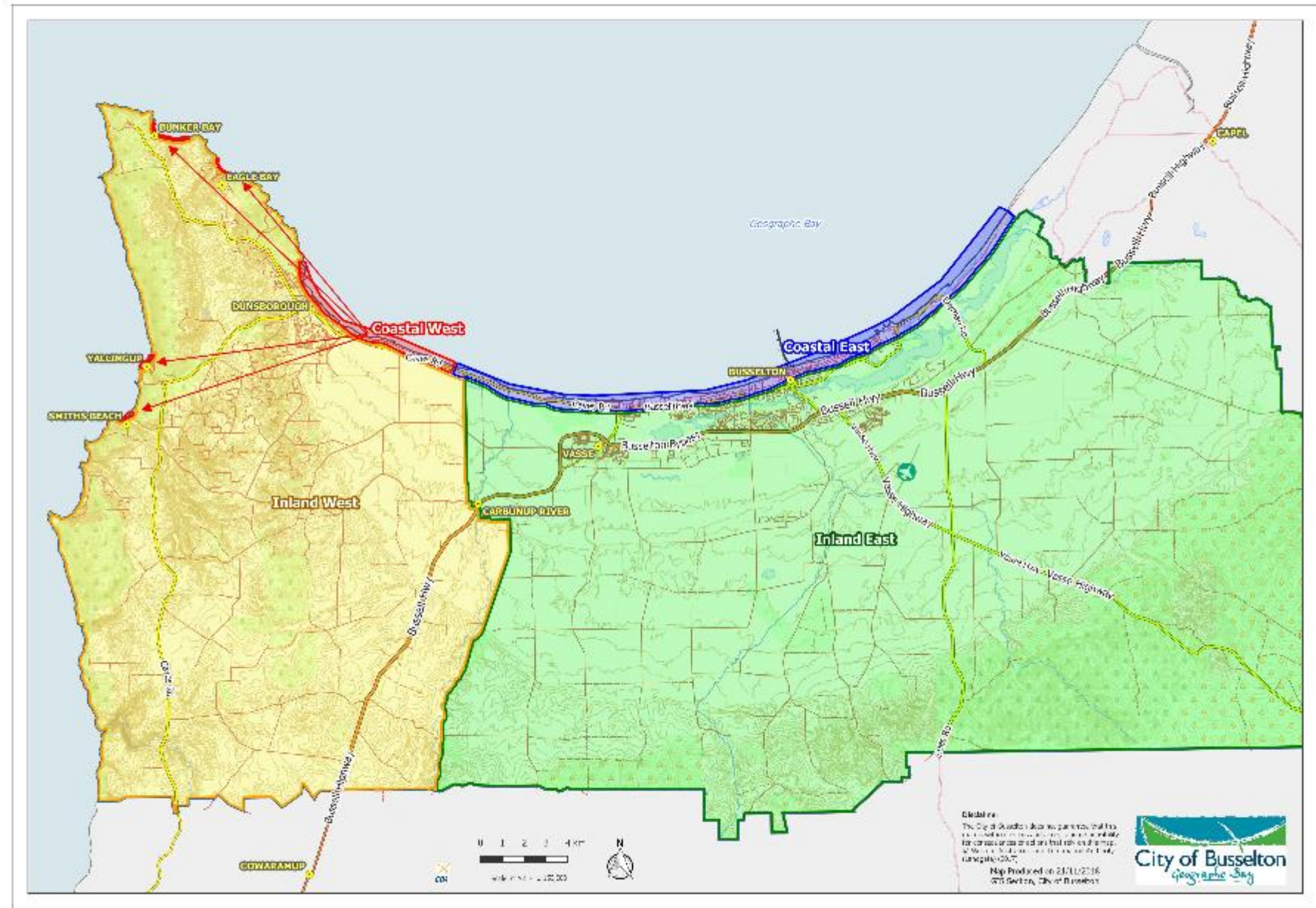
- 100 non resident ratepayers
- 300 residents



Detailed approach in the Technical Appendix

The process cont'd

The City of Busselton was divided into four areas as shown by the coloured regions in the map above. The distribution of the sample between each of the 4 areas is detailed in slide 51, this largely follows the distribution of residences.





Executive summary

Executive summary

The City of Busselton is in the process of developing a Coastal Adaptation Strategy to address the significant coastal erosion problems being experienced on the City's north facing sandy coast from Forrest Beach, Wonnerup (to the east) to Point Daken, Dunsborough to the west with the addition of the settlements at Bunker Bay, Eagle Bay, Yallingup and Smiths Beach. The study area excludes the coastline within the national park and ends at the boundary of the Leeuwin Naturaliste Park at Smiths Beach.

The City of Busselton commissioned Research Solutions to undertake a representative survey of its community to determine what the community values about its coastline. It was important that this survey produced a random and representative sample of the community, including those members of the community who do not traditionally participate in consultation.

A telephone survey was conducted of 410 residents and ratepayers:

- 300 residents
- 100 non resident ratepayers

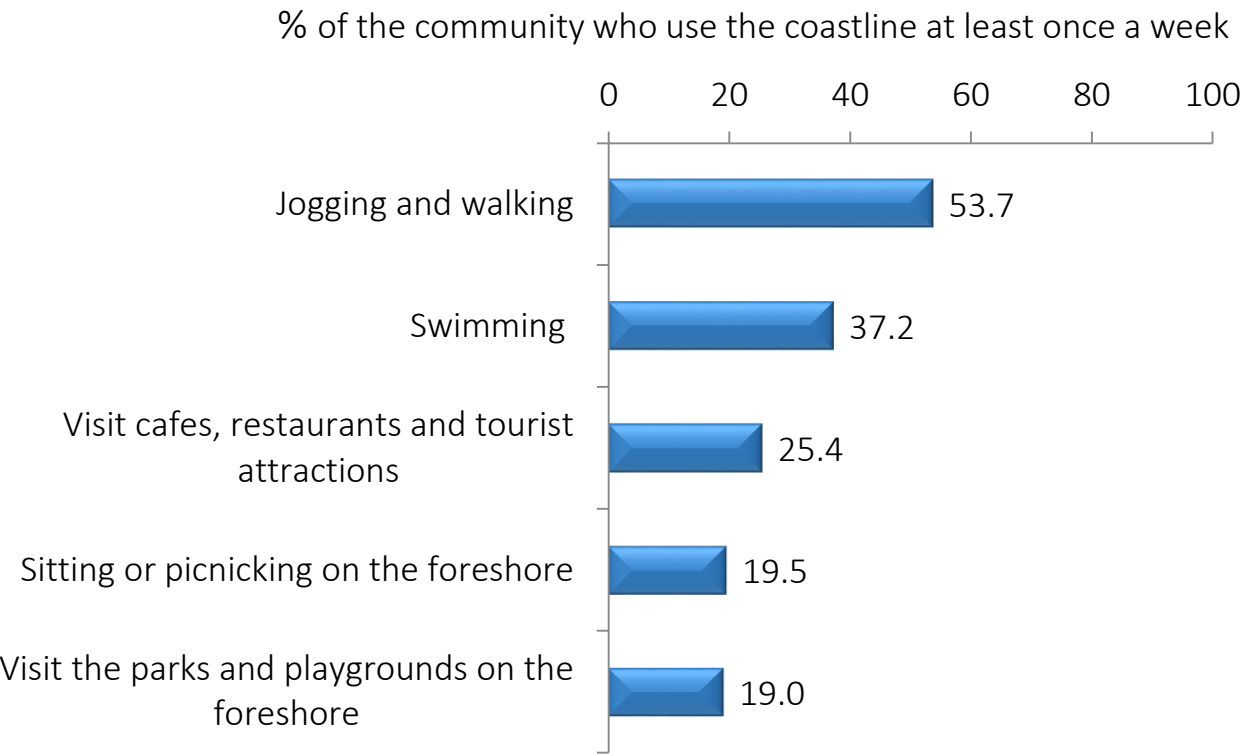
An online survey using the same questionnaire was provided on the City's website which was open to all members of the community. In all 49 people responded of whom 46 lived in the City of Busselton. The results of this survey are compared to the main random survey at each stage of the report.

Executive summary cont'd

The report has been designed to:

- Establish how the coastline is used and compare this with the values which people espouse for the coastline.
- Establish the key values and what people feel should be preserved from future erosion.
- Establish whether the community understands the changes that are occurring on the coastline and awareness of the City's actions to reduce coastal erosion.
- Lastly the research explored who the community felt should pay for the work required to reduce the impact of coastal erosion.

Usage of the coastline



The chart shows that many of the community regularly use the beach and foreshore for jogging, walking and swimming at least once a week on average over the year.

In all 42.4% of residents and ratepayers use the remote part of the beach for their jogging, walking, sitting and picnicking activities (22.9% use both the remote part and the town beach).

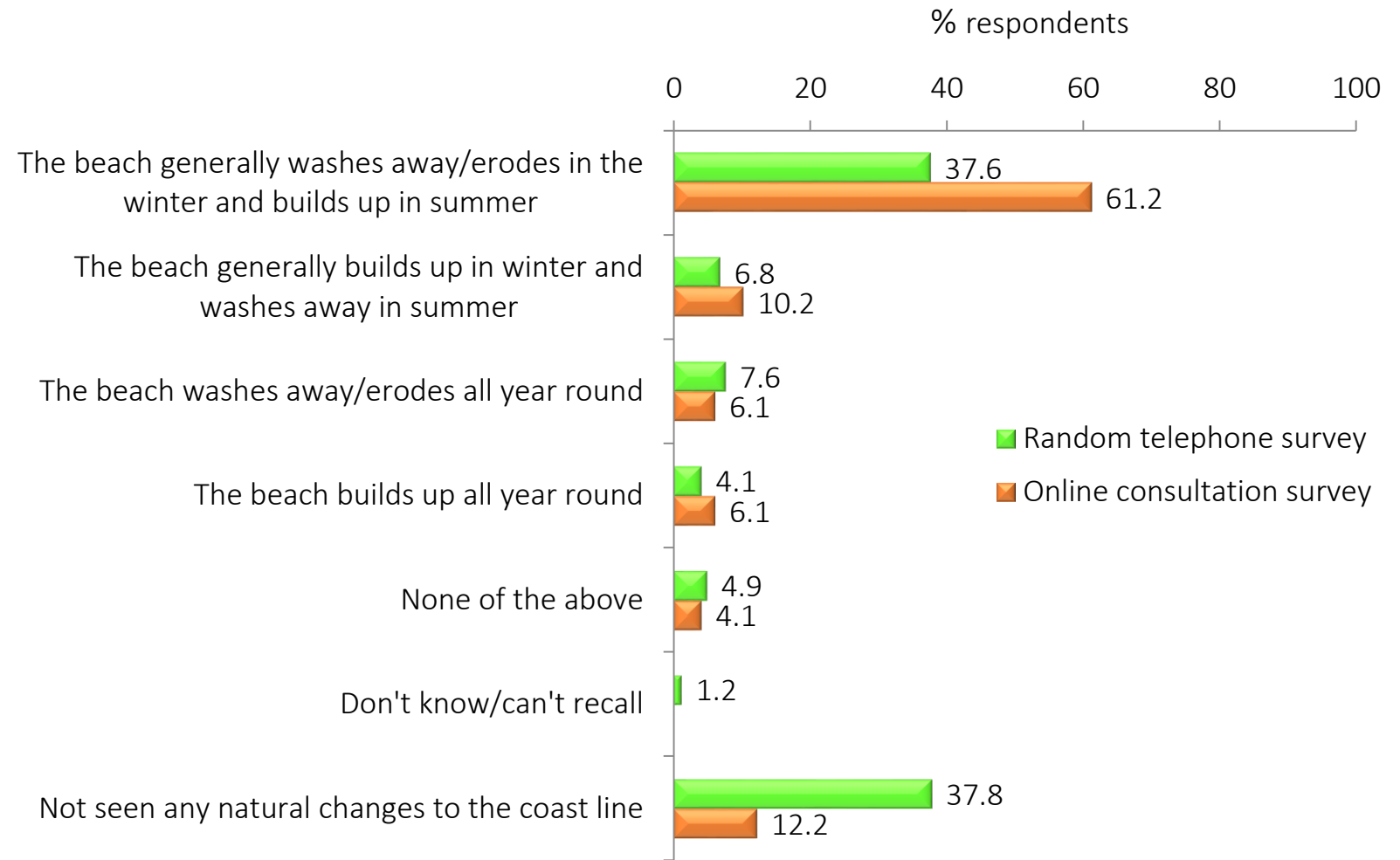
This increases to more than half of respondents (54.2%) likely to use the remote areas for those living in the eastern part of the City of Busselton.

Awareness and understanding of coastal erosion

The majority of residents (62.2%) were aware of natural changes in the coastline, including the beaches, over the past year and 37.6% of residents were aware of and understood the concept of erosion of the beaches in winter and accretion in summer. Participants in the online community consultation survey were significantly more aware and educated about the natural changes occurring to the City of Busselton's beaches:

- 61.0% (almost double the number) were aware of the erosion in winter and accretion in summer.

Across residents and ratepayers 60.0% were aware that the City had taken action to stop or reduce coastal erosion over the past five years, particularly those who lived in inland areas. Actions they were aware of including building groynes, sea walls, beach nourishment and planting vegetation.



Q.5 What is the main change you have seen to the coastline including the beaches? n=410

What the community values in its coastline

Pristine clean beaches and water (33%)

Unspoilt natural coastline/landscape (26%)

Calm, safe swimming beaches (11%)

Accessibility including car, boat and wheelchair (10%)

Sheltered, protected coastline (10%)

Serenity, solitude and peace (9%)

Ideal for boating, fishing and sailing (5%)

Good facilities and activities (6%)

Dog friendly (4%)



The importance of various features

Residents and ratepayers were asked to rate the importance of a range of coastal values derived from discussions with the City of Busselton and previous research undertaken by the City and by Research Solutions. These coastal values included both tangible values such as flora and fauna as well as emotional values. Asking all residents and ratepayers to consider the same set of values ensures that a diverse range of values are considered, not just those that are top of mind when the survey is administered.

The most important emotional and aspirational value of the coastline which was most frequently mentioned as critical to preserve from potential future erosion was:

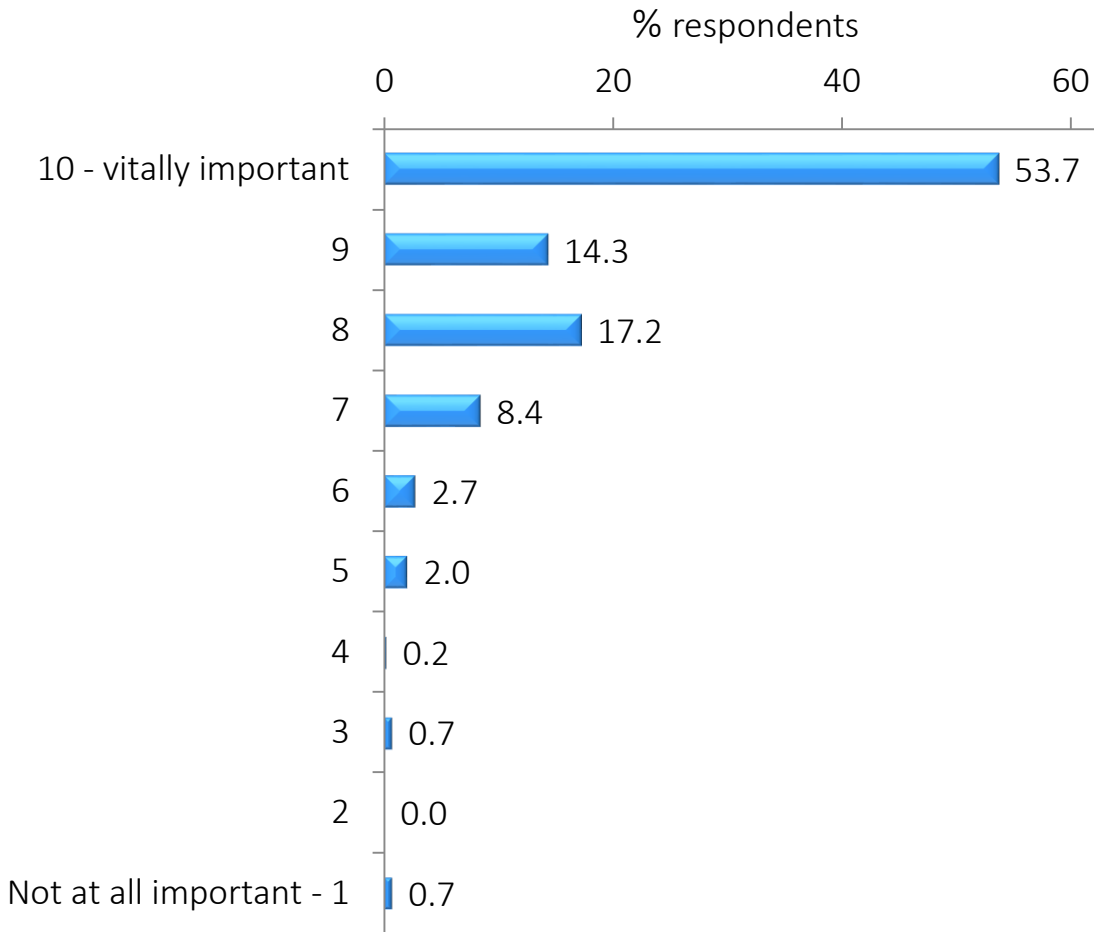
- Handing the coastal area on to our children and grandchildren in the same or a better state (than it is now).

The importance of various features cont'd

The values were grouped as follows:

- Group 1 - rated critically important (10/10) by 80% of respondents.
 - Handing the coastline on to our children and grandchildren in the same or a better state
- Group 2 – rated critically important (10/10) to between 50 – 60% of residents and ratepayers
 - Knowing that there are places in the coastal area that feel natural
 - Natural vegetation/ habitat on the foreshore and beach
 - Uninterrupted stretches of sandy beach to walk along
 - Heritage - historical features such as the Pioneer Cemetery or the jetty
 - Safe swimming beaches
- Group 3 –rated critically important to about 40% of residents and ratepayers.
 - Coastal dual use path
 - Beach and foreshore facilities

Importance of uninterrupted stretches of sandy beach to the character of Busselton

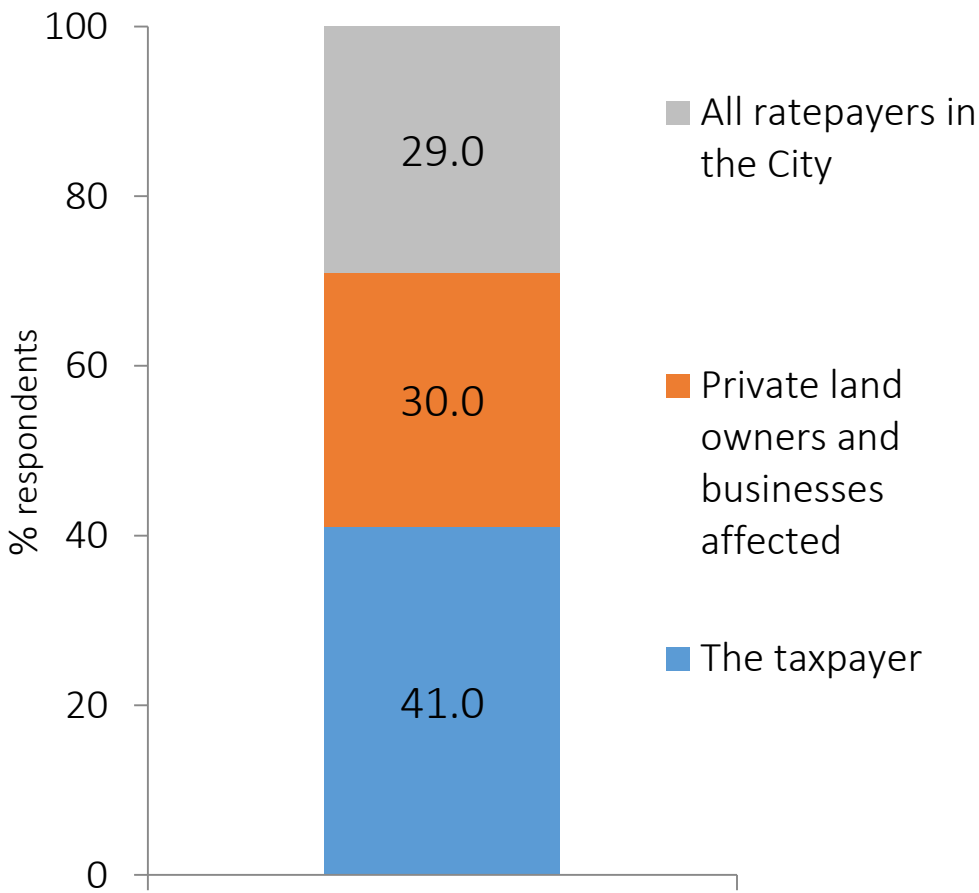


The importance of uninterrupted stretches of sandy beach was considered to be vitally important to the character of Busselton by over half of the City’s residents and ratepayers (see the chart opposite). This is consistent with the fourth of the values statements which had similar wording and in which 54.1% of residents and ratepayers felt that uninterrupted stretches of sandy beach where you can walk along was critical to be preserved from potential erosion.

The results from the online consultation survey are similar.

Q.10 How important do you feel that uninterrupted stretches of sandy beach which you can walk along is to the character of Busselton? N=606, unsure 4

The cost of reducing coastal erosion – who should pay?



Residents and ratepayers felt that the greater cost of reducing coastal erosion should be borne by the tax payer, with the balance borne by all ratepayers in the City and private land owners/ businesses affected in equal part.

The consultation survey was more evenly divided:

- | | |
|--|-----|
| 1. The tax payer | 38% |
| 2. Private landholders and businesses affected | 35% |
| 3. All ratepayers of the City of Busselton | 27% |

Some private land holders felt that they should not make a contribution to reducing coastal erosion:

- 40% of private land holders in the coastal west zone
- 24% of private land holders in the east coast zone.

Q.11 Within the next 100 years the land affected by coastal erosion may stretch for 100-200 metres inland impacting City assets and private homes. Who should pay for the work required to reduce the impact of this coastal erosion. How would you allocate the cost between these three groups? n=410

Issues to be addressed via information sheets or discussed at the public meetings

- How the boat ramps will be maintained
- Dune management
- Maintaining the sea grass
- Construction of retaining walls/ sea walls
- Information on global warming and its impact on the coastline
- Removal of sand and seaweed
- Retention and management of flora and fauna
- Discussion of the sand works
- Planning for the foreshore
- Planning for the Wonnerup inlet
- Planning for the long term withdrawal of private homes from the coast
- The management of new subdivisions and developments on the coast
- Discussion about development and businesses on the foreshore
- Building in potential erosion prone areas
- Evidence that coastal erosion will happen
- Plans for the future of the coastline
- Proposed solutions and options

Conclusions

The research shows that the north facing beaches in the City are strong valued by the community, with over half of the community feeling that uninterrupted stretches of sandy beaches are a vital part of the character of Busselton.

The most important coastal value is:

- Handing the coastal area on to our children and grandchildren in the same or a better state (than it is now).

This is followed by a second group of values:

- Knowing that there are places in the coastal area that feel natural
- Natural vegetation/ habitat on the foreshore and beach
- Uninterrupted stretches of sandy beach to walk along
- Heritage - historical features such as the Pioneer Cemetery or the jetty
- Safe swimming beaches

The research shows that the beaches are used by a significant proportion of the community. In all over 50% of the community say that they jog/ walk on the beach or foreshore at least once a week and about 1 in 4 joggers/ walkers only use the remote part of the beach, particularly those who live in the eastern part of the City, a further 20% use both the busy areas and remote areas.

Conclusions cont'd

There is a high level of awareness of natural changes in the coastline over the past year and a fairly high level of residents and ratepayers aware that the City had taken action to stop or reduce coastal erosion over the past five years, particularly those who lived in inland areas including building groynes, sea walls, beach nourishment and planting vegetation.

Awareness of what actually happens in terms of coastal erosion in winter and accretion in summer is significantly lower. The research shows that there is a significant demand amongst the community for information on coastal erosion and the options for the future of the coastline.

The community feel that a slightly higher proportion of the cost of erosion should be borne by the tax payer, and the balance equally by the private landholders and businesses who benefit, and the ratepayers.

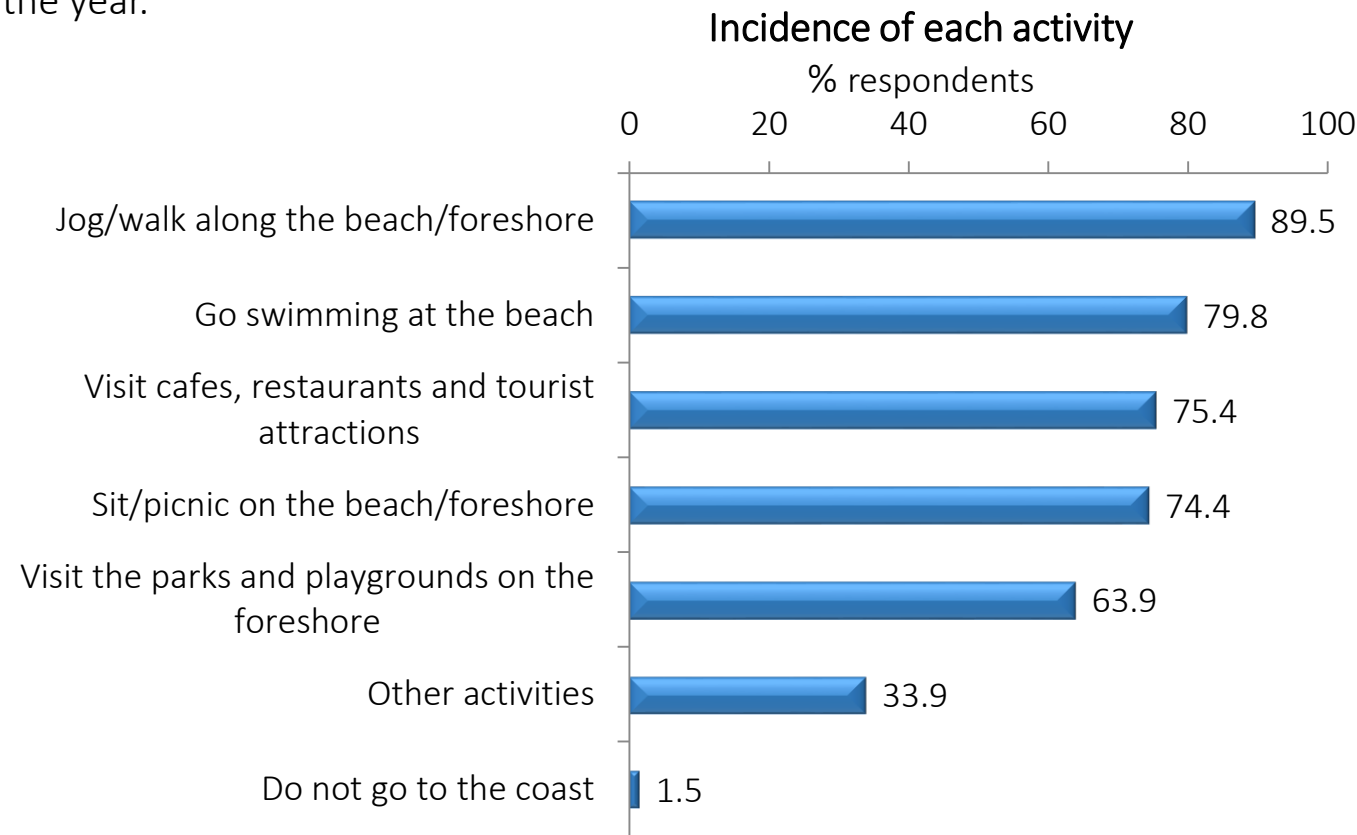
Those who participated in the online consultation survey gave similar results in many respects to the random survey, except they tended to be more aware of the issues and better informed and were also more likely to use the infrastructure and businesses at the beach and to walk/ picnic on the beach. Hence the results are fairly consistent across the two surveys.



Detailed findings

How the coastline is used

The first stage of the research was to establish how the coastline was used by the community, the types of activities undertaken at the coast and the frequency with which these activities were undertaken. Jogging and walking; swimming; visiting cafes, restaurants and tourist attractions; and sitting or picnicking on the foreshore were all popular activities undertaken by at least 3 out of 4 people during the year.



- Other activities included:
- Fishing
 - Boating
 - Cycling
 - Surfing

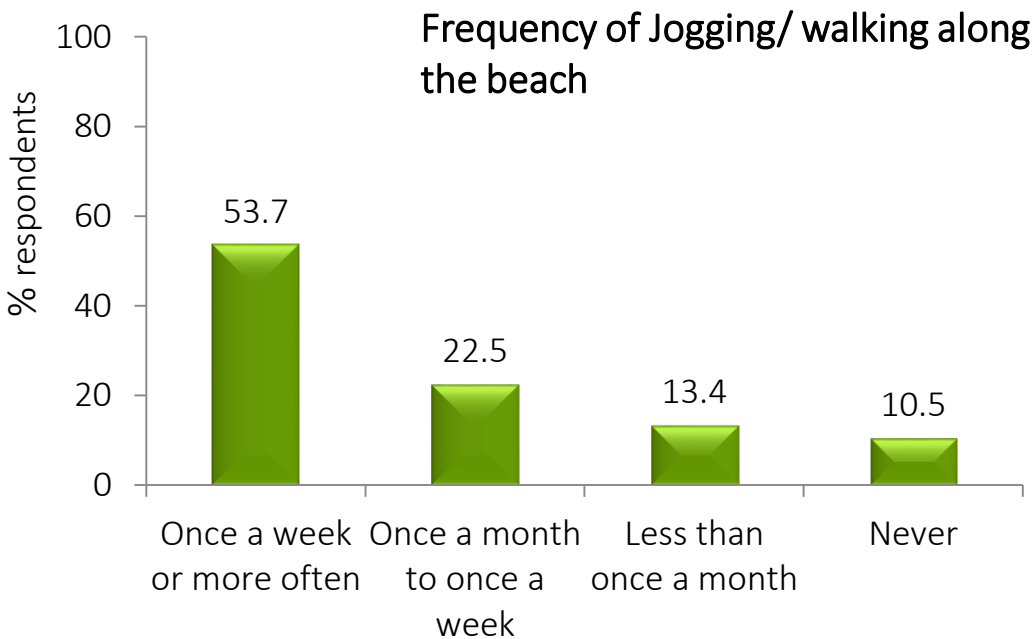
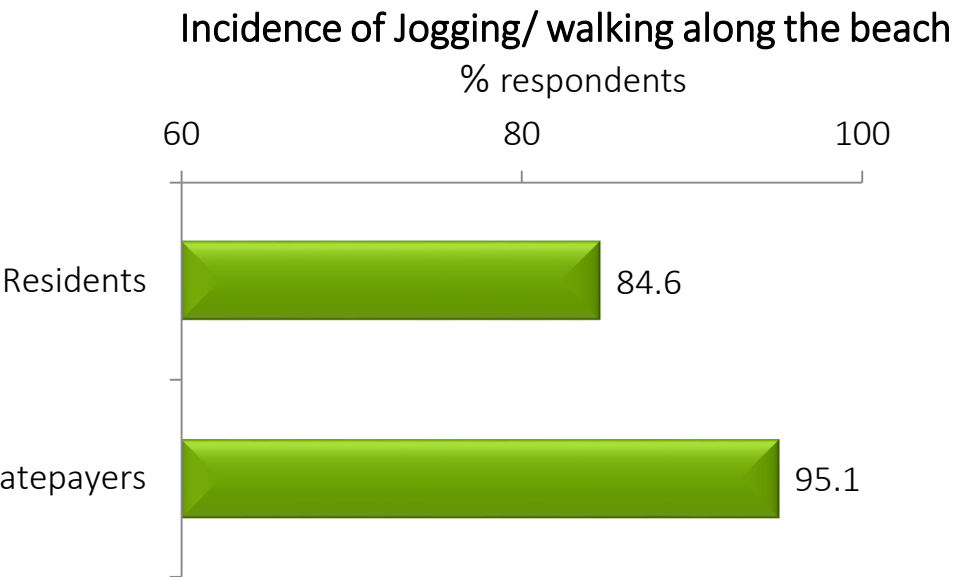
Respondents participating in the online consultation survey reported a similar proportion of people using the coast to those in the random survey. The difference was that generally those reporting usage were more frequent users than amongst the general population.

Q.1 Firstly can you tell me which of these things you usually do when you go to the coast? N=410

Jog/walk along the beach/foreshore

When visiting their Busselton property the number of non residential ratepayers who walk or jog on the beach was high at 95.1% with 40.0% of all non residential ratepayers saying that they walk or jog on the beach on average once a week or more often. By comparison the incidence of residents who say that they walk or jog on the beach once a week or more often is almost 60%. Most respondents (73.6%) walked or jogged close to the town beach or old Dunsborough beach and just under half (42.4%) walked or jogged on the more remote parts of the coast, (some 22.9% jogged in both areas), this increases to more than half of respondents (54.2%) likely to walk/ jog in the remote areas for those living in the eastern part of the City of Busselton.

The results are similar between the random survey and the online consultation



Q.1a Firstly can you tell me which of these things you usually do when you go to the coast? n=410

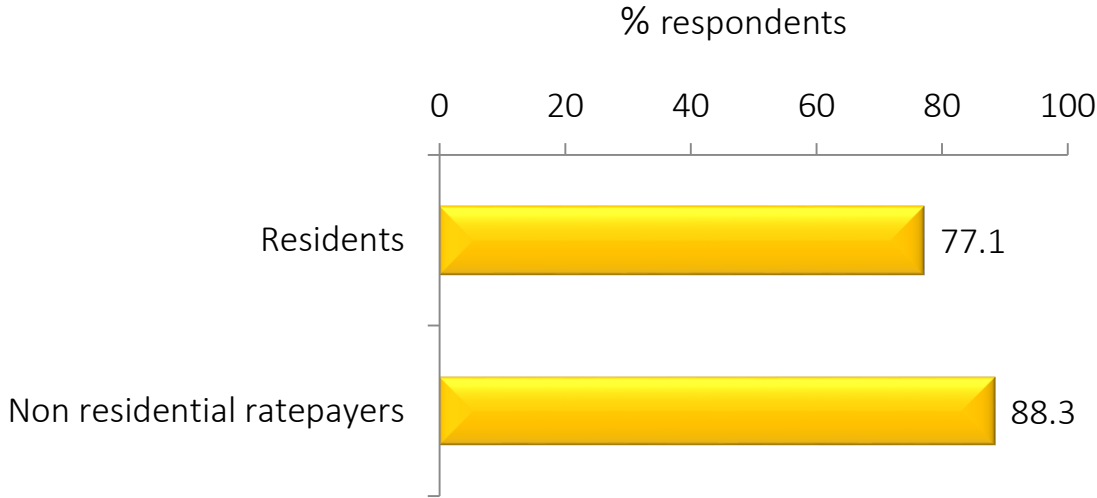
Q.2 How often have you done this activity this year, on average since the 1st January – jogging/walking along the beach/foreshore? n=410, includes those who never do the activity

Swimming at the beach

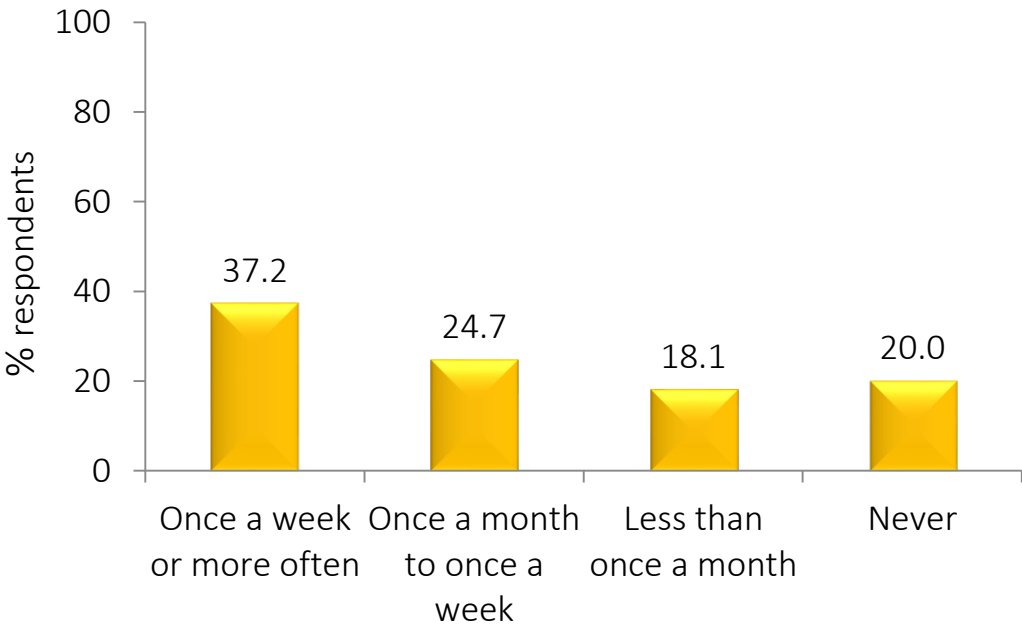
Whilst the incidence of swimming at the beach is higher amongst non residential ratepayers when visiting their Busselton property, residents swam at the beach more often, 40.6% swimming once a week or more often compared to 27.2% of non resident ratepayers swimming once a week or more often.

The results are similar between the random survey and the online consultation

Incidence of swimming at the beach



Frequency of swimming at the beach



Q.1a Firstly can you tell me which of these things you usually do when you go to the coast? n=410

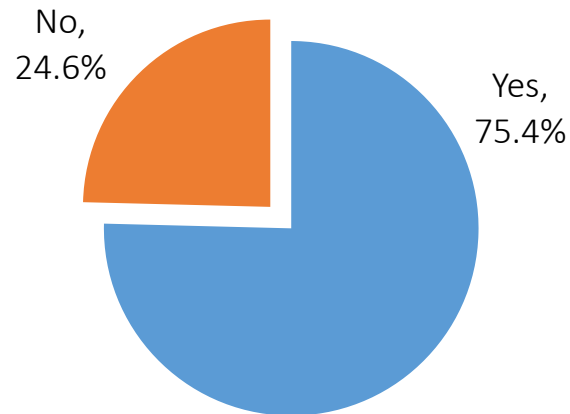
Q.2 How often have you done this activity this year, on average since the 1st January? Swimming n=410

Visit cafes, restaurants and tourist attractions

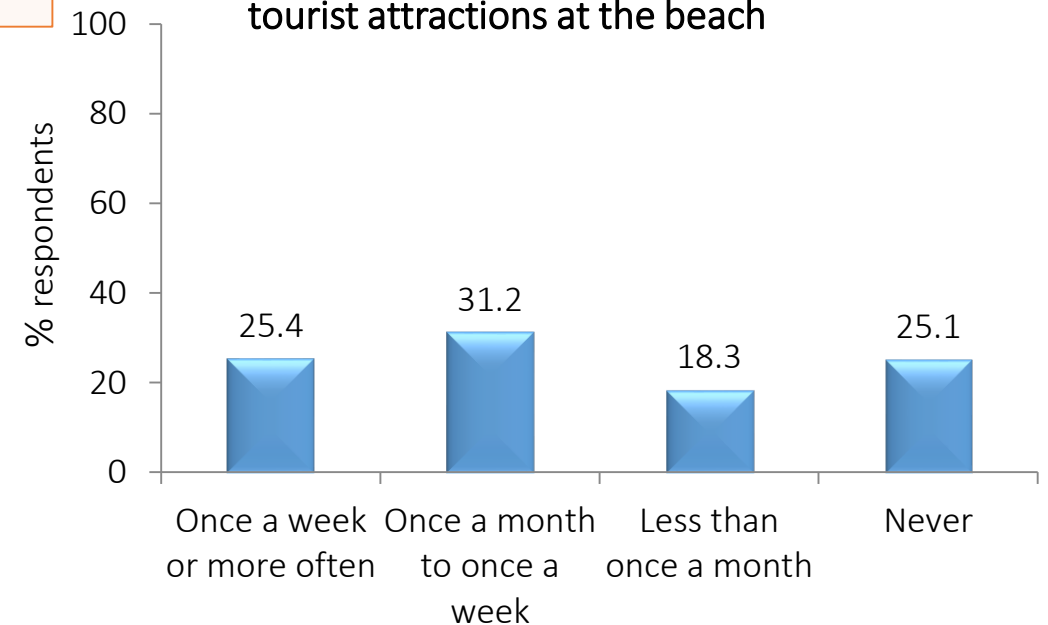
The propensity to visit cafes, restaurants and tourist attractions on the coast was high, but greater amongst Busselton residents and ratepayers who live inland (81.7%) than those who lived on the coast (64.2%). Those who lived inland were 50% more likely to visit cafes, restaurants and tourist attractions at the beach (27.8% visited once a week or more often) compared to those who lived on the coast (20.9%). Residents and non residential ratepayers said that they visited cafes, restaurants and tourist attractions on the coast with equal frequency.

Twice as many people participating in the online consultation survey visited cafes, restaurants and tourist attractions (53% once a week or more) compared to those participating in the random survey, results below.

Incidence of visiting cafes, restaurants and tourist attractions at the beach



Frequency of visiting cafes, restaurants and tourist attractions at the beach



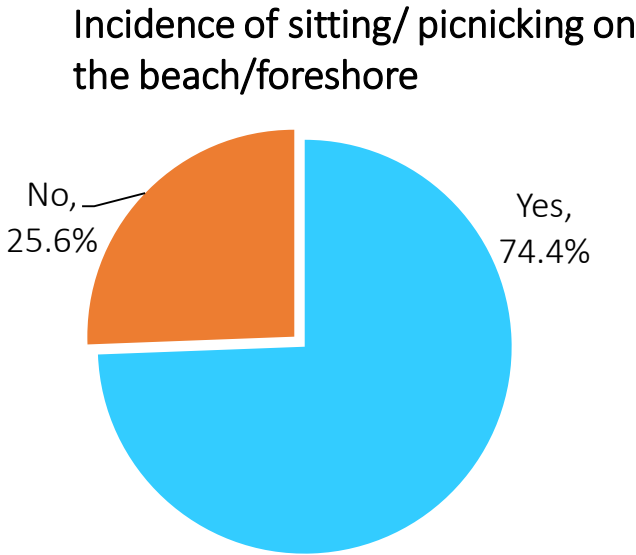
Q.1a Firstly can you tell me which of these things you usually do when you go to the coast? n=410

Q.2 How often have you done this activity this year, on average since the 1st January – visit cafes, restaurants and tourist attractions? n=410

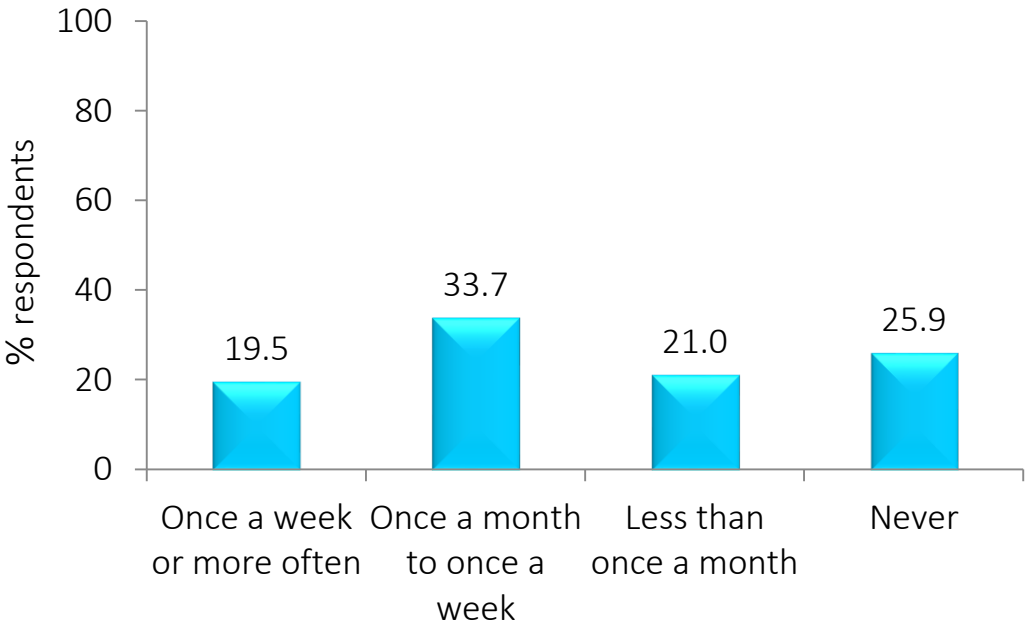
Sit/picnic on the beach/foreshore

Younger residents and rate payers were 50% more likely to sit/ picnic on the beach/foreshore compared to older residents (91.9% residents and ratepayers aged under 35 compared to 61.7% aged 65 and over). The incidence of residents and ratepayers picnicking or sitting on the town beach was highest for those who lived in the west of the survey area. Those who lived in the east of the City were more likely to use the remote parts of the beach (28.5%) compared to residents and ratepayers who lived west of the City (10.8%). There was no difference between residents and non residential ratepayers in their incidence of sitting or picnicking on the beach/foreshore.

Twice as many people sat or picnicked on the beach/ foreshore (55% once a week or more) in the online consultation compared to the random survey below.



Frequency of sitting/ picnicking on the beach/foreshore



Q.1a Firstly can you tell me which of these things you usually do when you go to the coast? n=410

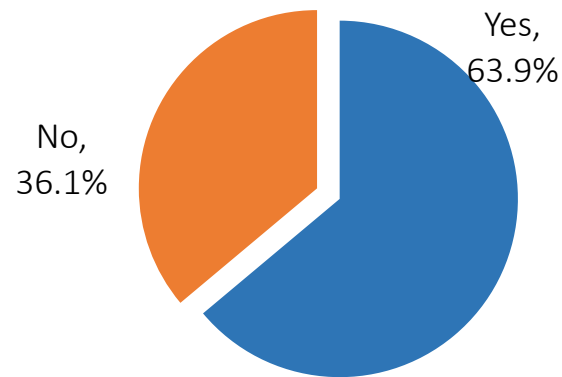
Q.2 How often have you done this activity this year, on average since the 1st January – sit/picnic on the beach/foreshore?

Visit parks and playgrounds on the foreshore

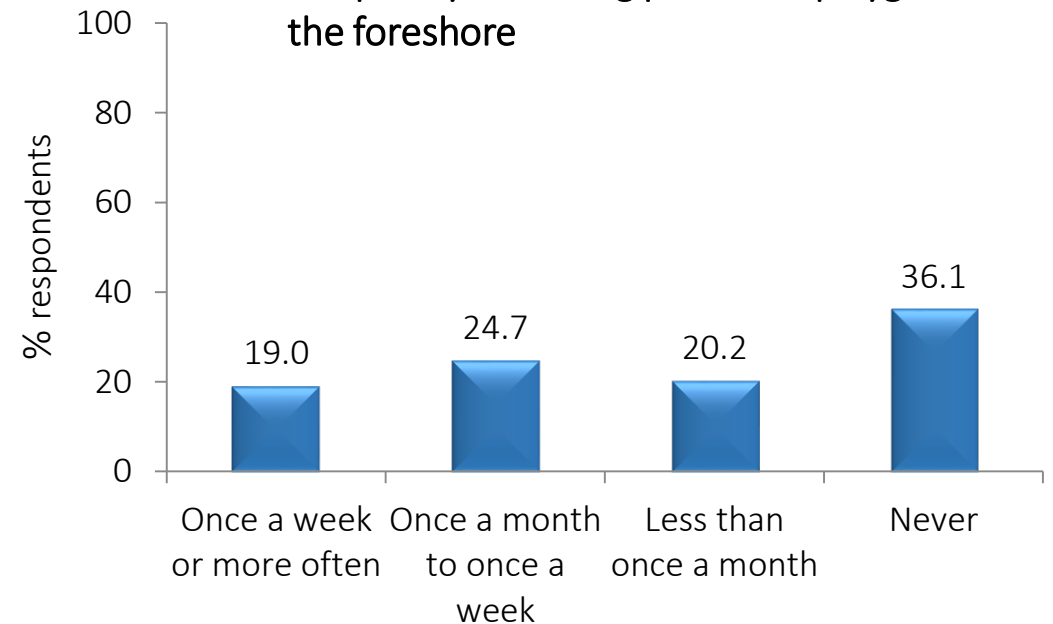
There was no significant difference between residents and non residential ratepayers nor in where the respondent lived. As with sitting or picnicking this activity declined with age – 75.7% of the under 35 age group visited parks and playgrounds on the foreshore compared to 56.8% of the 65 and over age group. Those with children and grandchildren (68.7%) were more likely to undertake this activity than those without (53.2%).

Twice as many people visited parks and playgrounds (43% once a week or more) in the online consultation compared to the random survey below.

Incidence of visiting parks and playgrounds on the foreshore



Frequency of visiting parks and playgrounds on the foreshore

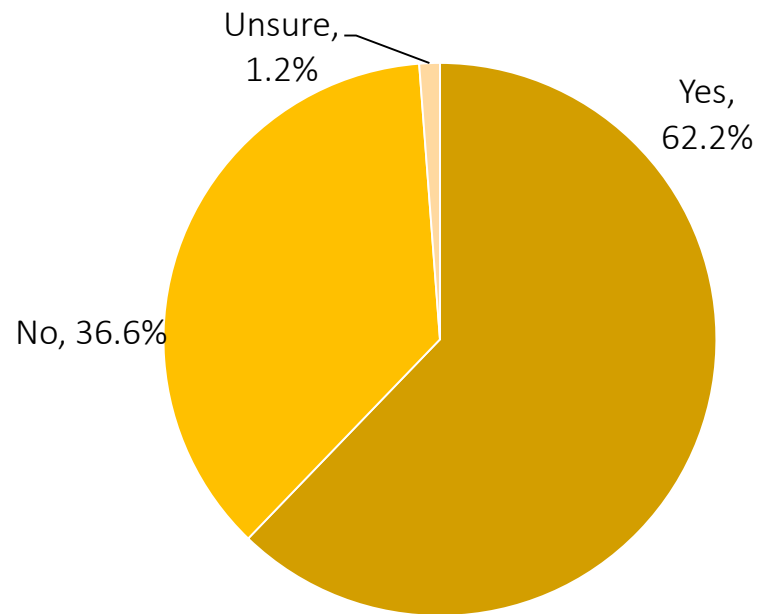


Q.1a Firstly can you tell me which of these things you usually do when you go to the coast? n=410

Q.2 How often have you done this activity this year, on average since the 1st January – visit parks and playgrounds on the foreshore? n=410

Awareness of coastal erosion

Awareness of changes to the coastline



Awareness of natural changes in the coastline, including the beaches amongst the community was measured with two questions:

1. Measuring awareness of changes to the coastline
2. Measuring awareness of the nature of the changes, specifically the erosion of sand in winter and the depositing of sand in the summer.

As shown opposite, almost two-thirds of residents and ratepayers were aware of changes to the coastline. Awareness was similar amongst all residents and ratepayer groups analysed, regardless of if they lived close to the coast or not.

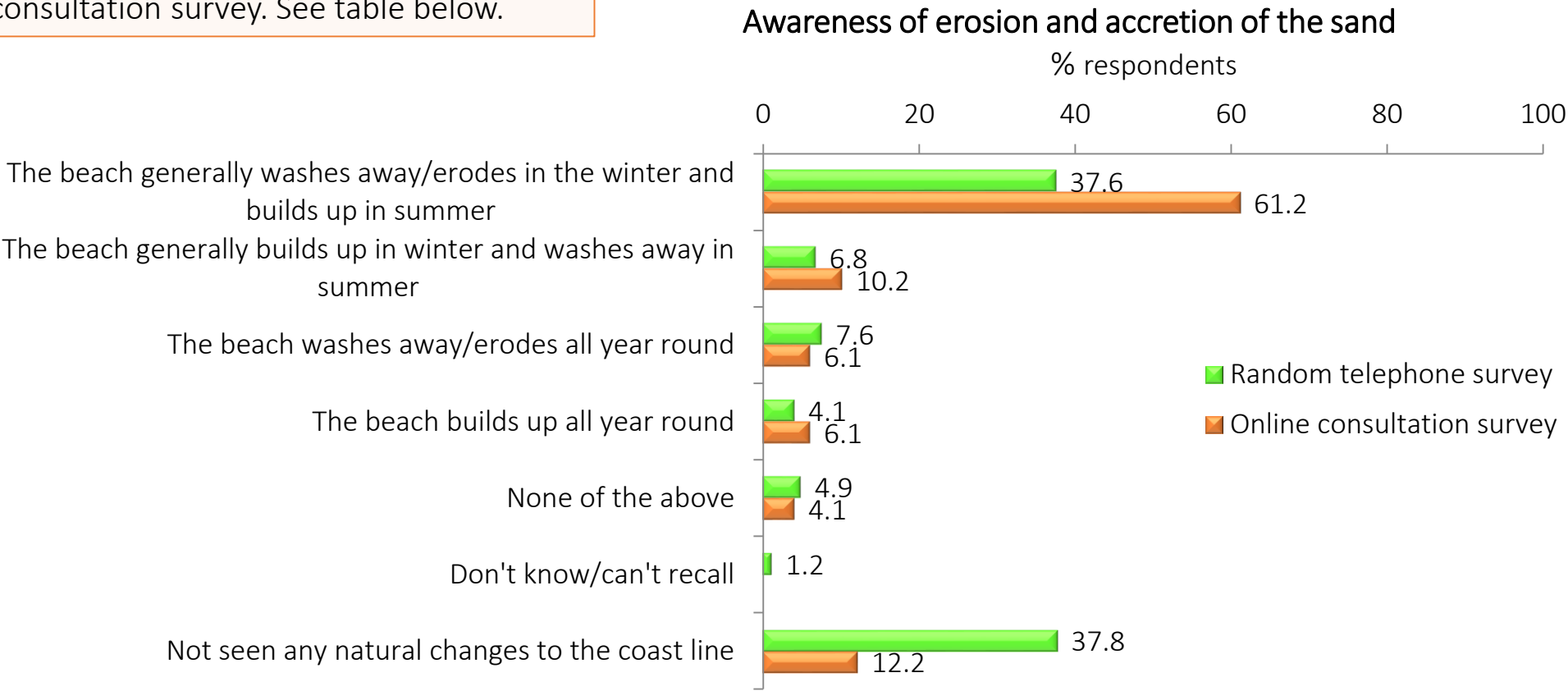
Participants in the online consultation survey were significantly more likely to be aware of coastal erosion (87.8% aware) compared to the 62.2% of the residents and ratepayers in the random community survey opposite.

Q.4 Have you noticed any natural changes in the coastline including the beaches over the past year, not deliberately man made? n=410

Awareness of erosion and accretion of the beaches

With prompting of the possible changes to the City of Busselton’s beaches, 37.6% of residents and ratepayers were aware of and understood the issue which the City was experiencing, that of erosion in winter and accretion in summer. This understanding was similar amongst all groups of the community analysed and did not vary by age, gender, life stage or location.

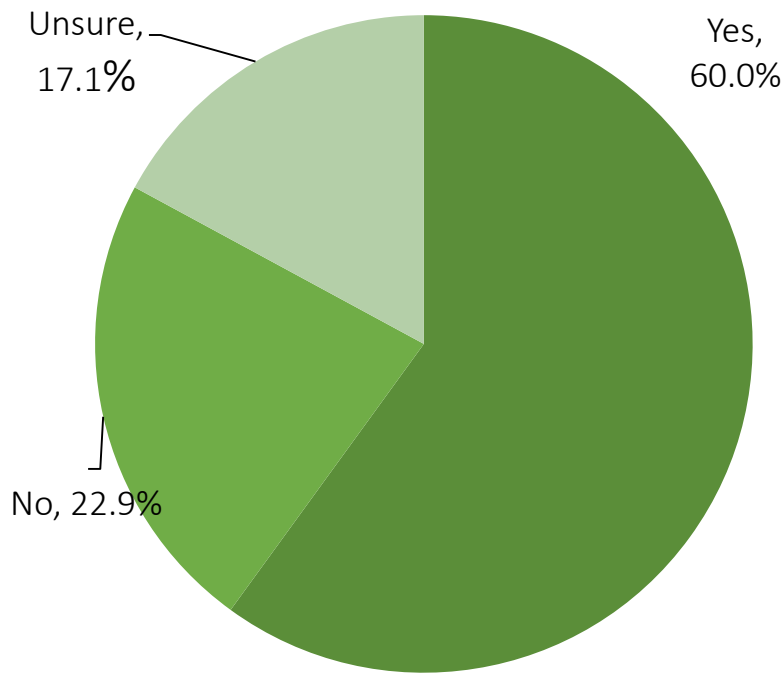
Awareness of the true changes to the coast is greatest amongst the participants in the online consultation survey. See table below.



Q.5 What is the main change you have seen to the coastline including the beaches? n=410

Awareness of the City undertaking action to reduce coastal erosion

Awareness of the City's activity to reduce coastal erosion



Awareness that the City had taken action to stop or reduce coastal erosion over the past 5 years was fairly good as shown opposite, with 60% of residents and ratepayers recalling some action.

Awareness that the City had taken action was highest amongst:

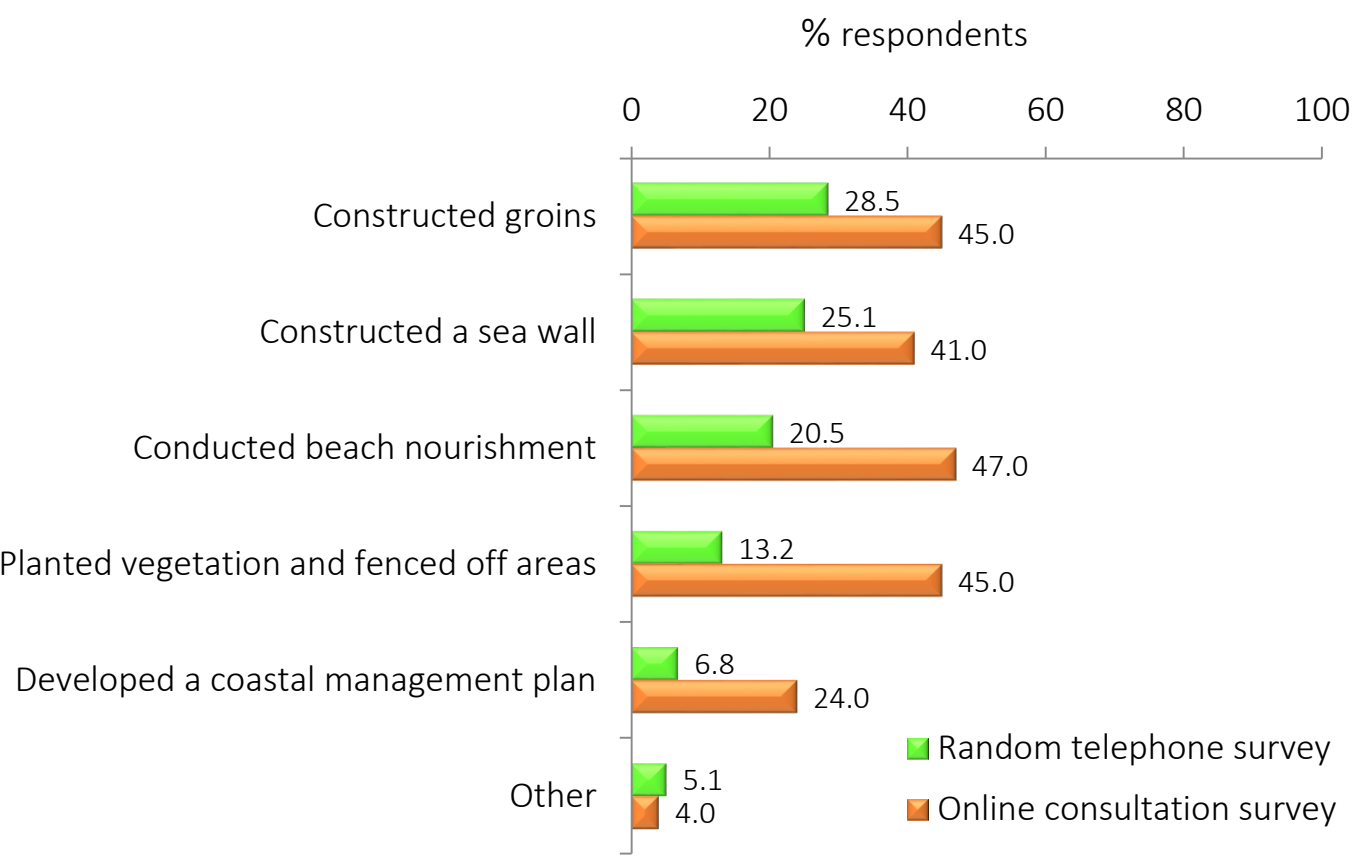
- Inland residents (71.4%) compared to those living on the coast (39.9%)
- Residents of the City (64.8%) compared to non residential ratepayers (45.6%)

Awareness was similar at 60% amongst other groups
There is room to raise awareness across the board and particularly amongst coastal residents and non residential ratepayers, many of whom in this survey owned properties in the coastal area.

Awareness of the City undertaking action is similar between residents and ratepayers in the random survey and in the online consultation survey

Q.6 Has the City undertaken any actions to stop or reduce coastal erosion over the past 5 years? n=410

Actions taken by City done to stop or reduce coastal erosion



Residents and ratepayers were most likely to recall that the City had constructed:

- Coastal groynes 28.5% of all respondents
- Constructed sea walls 25.1% of all respondents

Other actions recalled as undertaken by the City included:

- Rocks on the beach front to protect the dunes
- Repairs and sand removed from boat ramps
- Repairs to carparks
- Signage on the beach
- Work at Toby Inlet and Wonnerup
- Dredging of Port Geographe

Awareness of the actions taken by the City are much higher amongst the online consultation survey participants (see graph opposite)

Q.6 Has the City undertaken any actions to stop or reduce coastal erosion over the past 5 years? If yes....

Q.7 What have they done? n=410

What the community values in its coastline

Pristine clean beaches and water (33%)

Unspoilt natural coastline/landscape (26%)

Calm, safe swimming beaches (11%)

Accessibility including car, boat and wheelchair (10%)

Sheltered, protected coastline (10%)

Serenity, solitude and peace (9%)

Ideal for boating, fishing and sailing (5%)

Good facilities and activities (6%)

Dog friendly (4%)



What the community values near the coastline

"Its natural, untouched beauty."

"The natural environment, unspoilt, not developed."

"It's protected from the sea breeze, good for boating and fishing"

"They are clean and it's safe to swim, for all ages ; very scenic"

"Extremely picturesque and safe for children"

"The natural beauty ; the facilities. it's sheltered from the weather"

"Drives on the beach ; the warm waters ; nice and clean"

"Beauty ; cleanliness ; natural ; being able to take the dog to the beach ; not crowded"

The importance of various features

Residents and ratepayers were asked to rate the importance of a range of coastal values derived from discussions with the City of Busselton and previous research undertaken by the City and by Research Solutions. These coastal values included both tangible values such as flora and fauna and emotional values. Asking all residents and ratepayers to consider the same set of values ensures that a diverse range of values are considered, not just those that are top of mind when the survey is administered.

The two emotional and aspirational features of the coastline were considered the most important features to be preserved from potential future erosion. These included:

1. Handing the coastal area on to our children and grandchildren in the same or a better state (than it is now)
2. Knowing that there are places in the coastal area that feel natural

The importance of various features cont'd

The issues were grouped as follows:

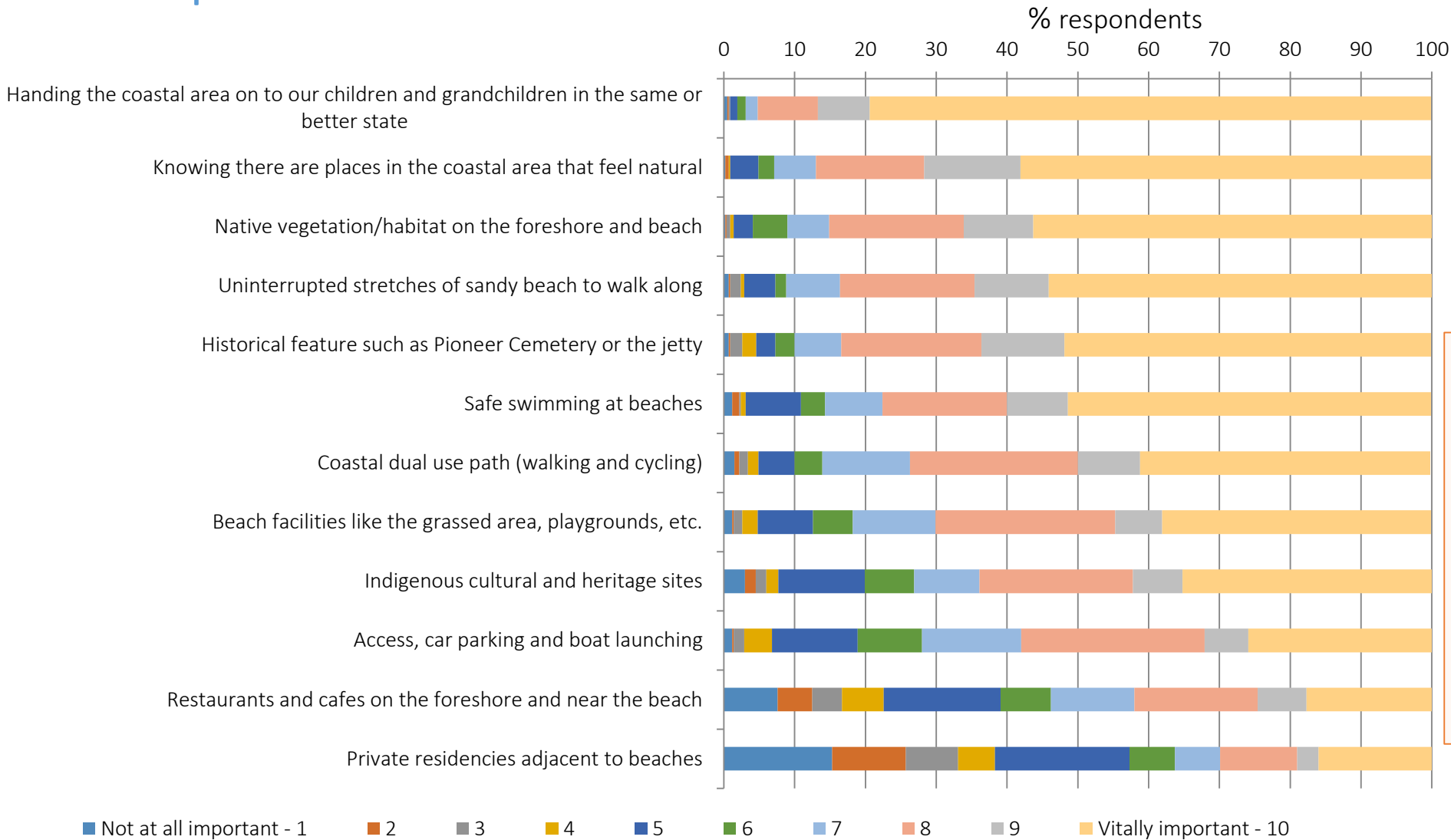
- Group 1 - Handing the coastline on to our children and grandchildren in the same or a better state was rated critically important (10/10) by 80% of respondents.
- Group 2 - Knowing that there are places in the coastal area that feel natural
 - Natural vegetation/ habitat on the foreshore and beach
 - Uninterrupted stretches of sandy beach to walk along
 - Heritage - historical features such as the Pioneer Cemetery or the jetty
 - Safe swimming beaches

These were critically important (10/10) to between 50 – 60% of residents and ratepayers

- Group 3– Coastal dual use path
 - Beach and foreshore facilities

These were critically important to about 40% of residents and ratepayers.

The importance of various features



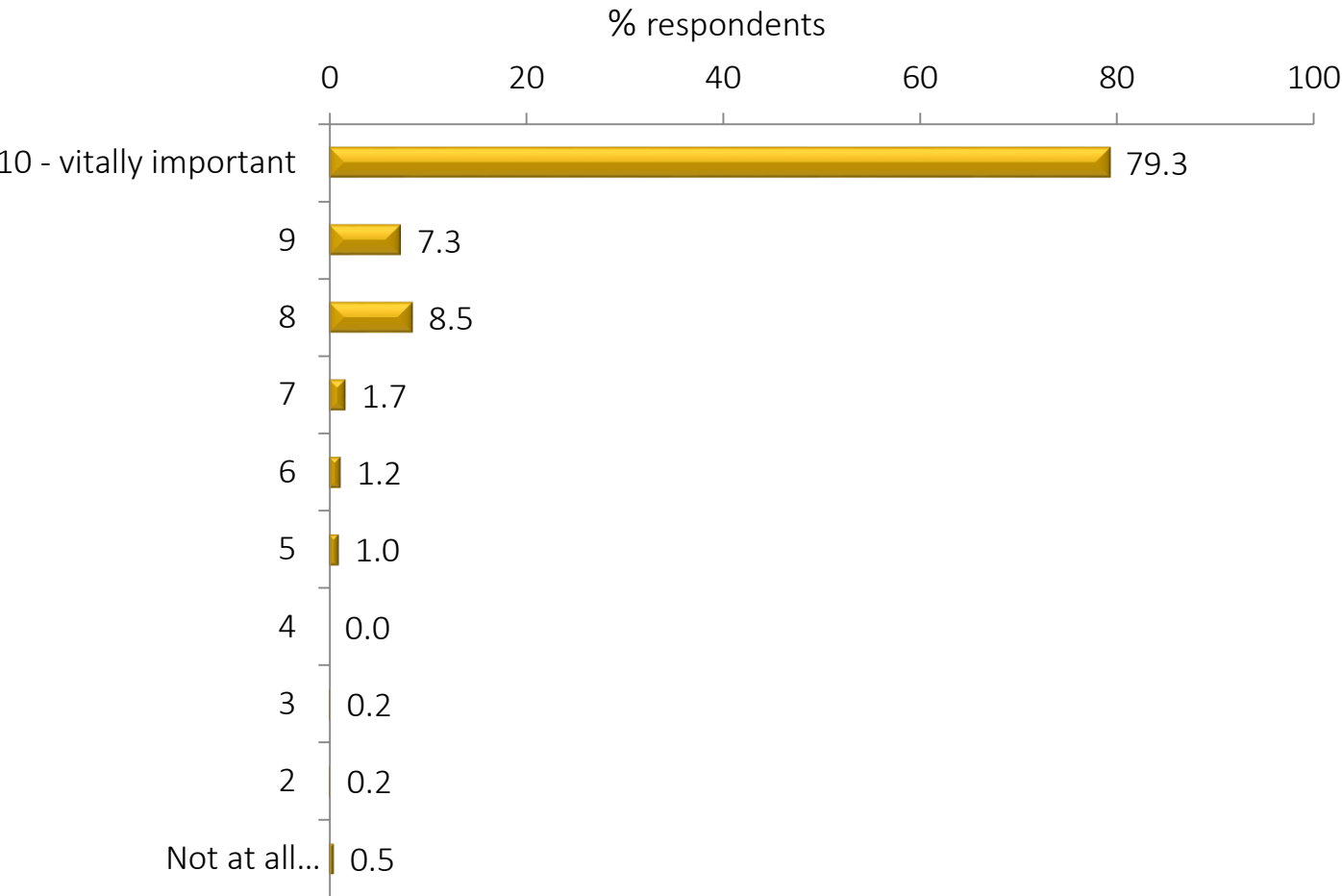
The results opposite go from highest value to lowest value

These results are discussed individually on the following slides

Generally the online consultation survey results follow the results in the chart opposite; though on a few of the less well supported values opposite the online consultation survey results are significantly lower. These are discussed individually in the following slides.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Handing the coastal area on to our children and grandchildren in the same or a better state



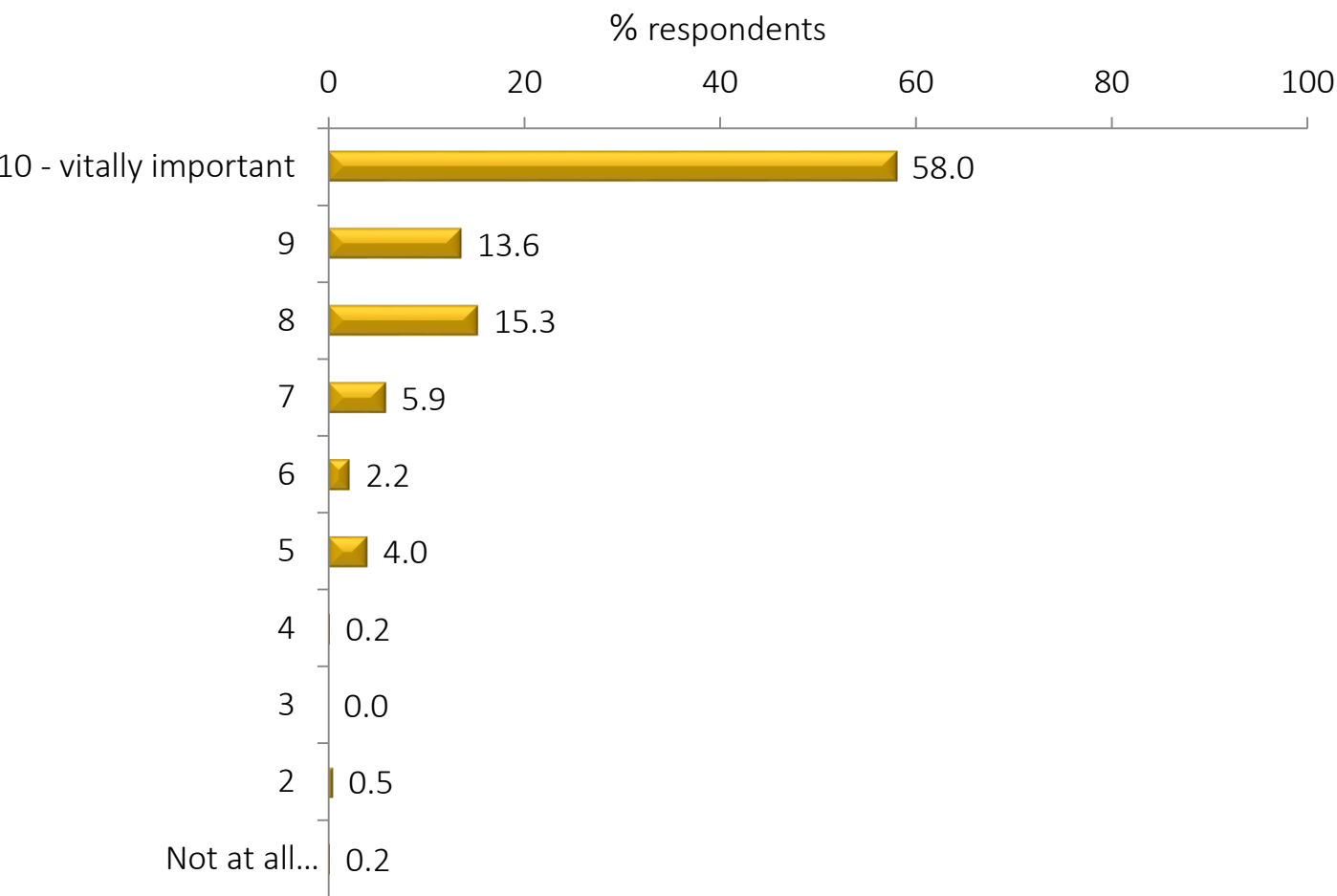
This value was identified as the most critical of all the values tested and articulated residents’ and ratepayers’ guiding value for the future.

The high level of support with 79.3% rating it as vitally important was consistent amongst all groups of people in the survey.

As in this survey handing the coastal area on to future generations in the same or a better state was also the most important value and had a similar level of support in the online consultation survey.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Knowing that there are places in the coastal area that feel natural



Over 50% of the community rated this value as critically important.
Those to whom it was especially important were:

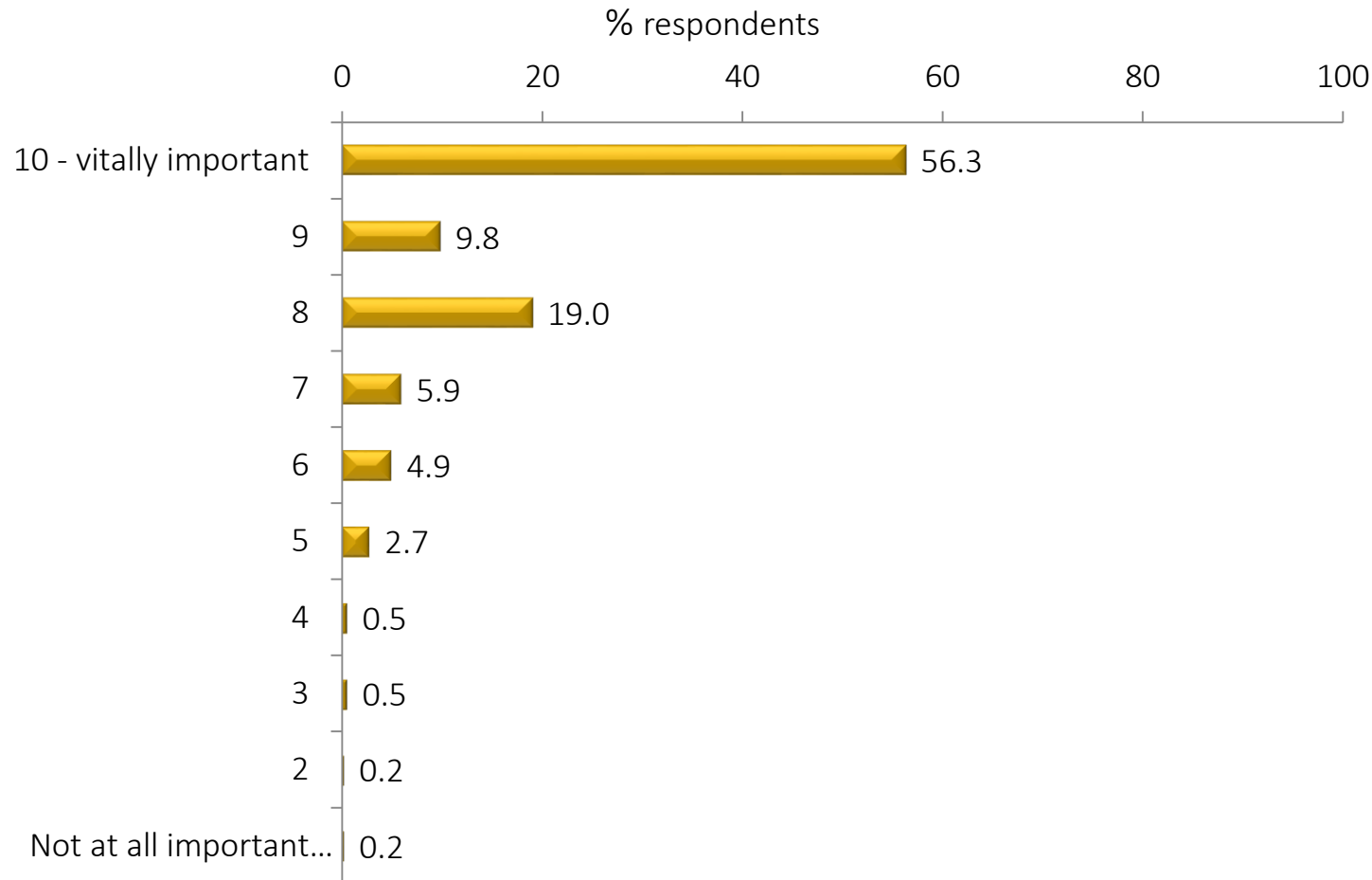
- Women
- Coastal dwellers, particularly those along the eastern portion of the coast and,
- Home owners

However it was still critically important to almost 50% of males, inland dwellers and renters.

As in this survey knowing that there are places in the coastal area that feel natural was the second most important value and had a similar level of support in the online consultation survey as here.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=405, unsure 5

Native vegetation and habitat on the foreshore and beach



Flora and fauna was also highly valued, rated as vitally important by over 50% of residents and ratepayers.

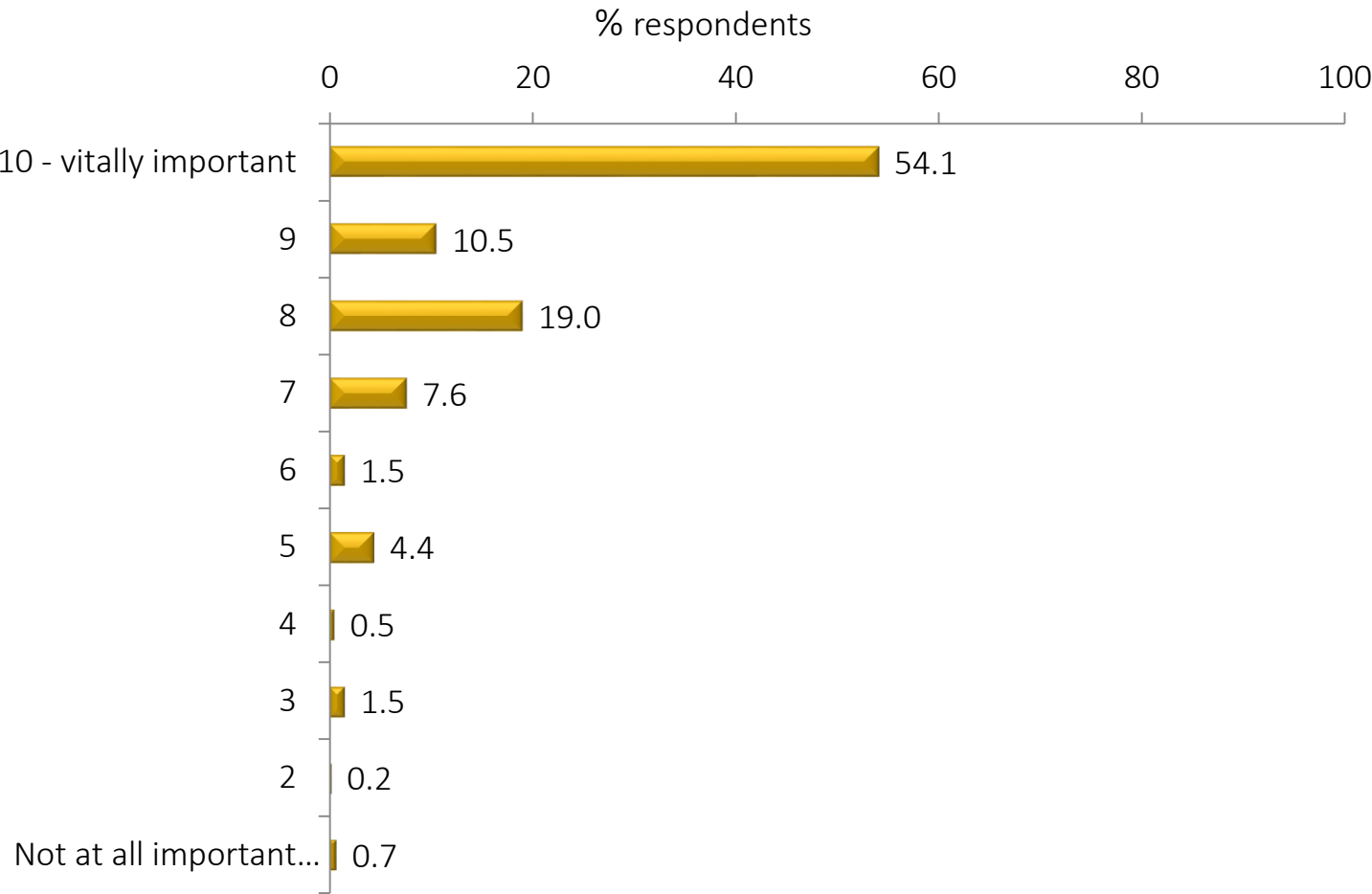
It was slightly more important to:

- Females
- Those living in the coastal east area
- Those living in the inland west area

Again native vegetation and habitat on the foreshore and beach was equally important and had a similar level of support in the online consultation survey as here.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Uninterrupted stretches of sandy beach where you can walk along



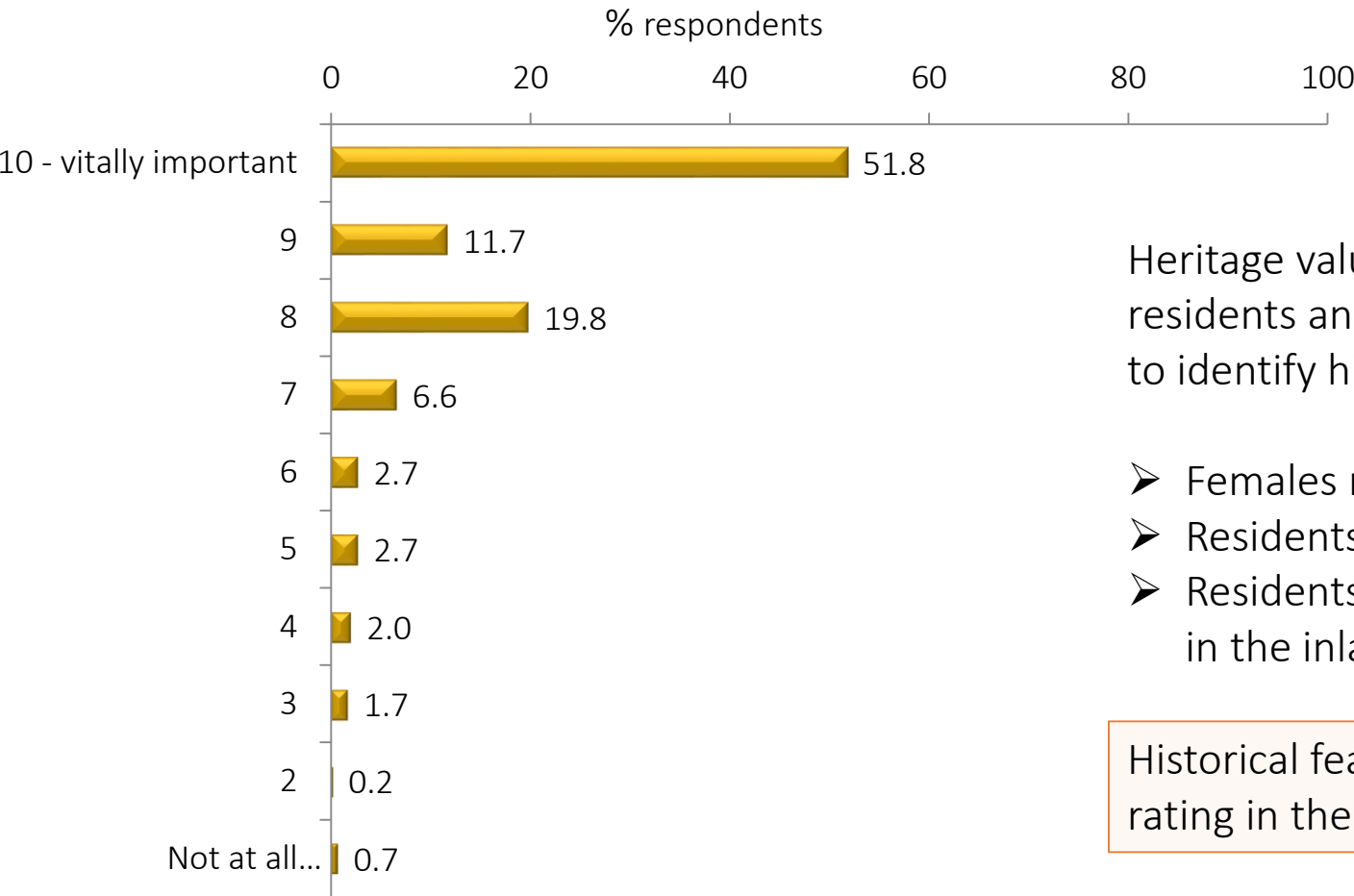
Another critically important value and something which residents and rate payers felt was integral to the character of the City of Busselton.

- A little less important to people living in the inland east area but as one would expect, critically important to a higher than average portion of people living on the coast.

As above, uninterrupted stretches of sandy beach to walk along had a similar levels of support in the online consultation survey and the random survey.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Historical features such as Pioneer Cemetery or the jetty



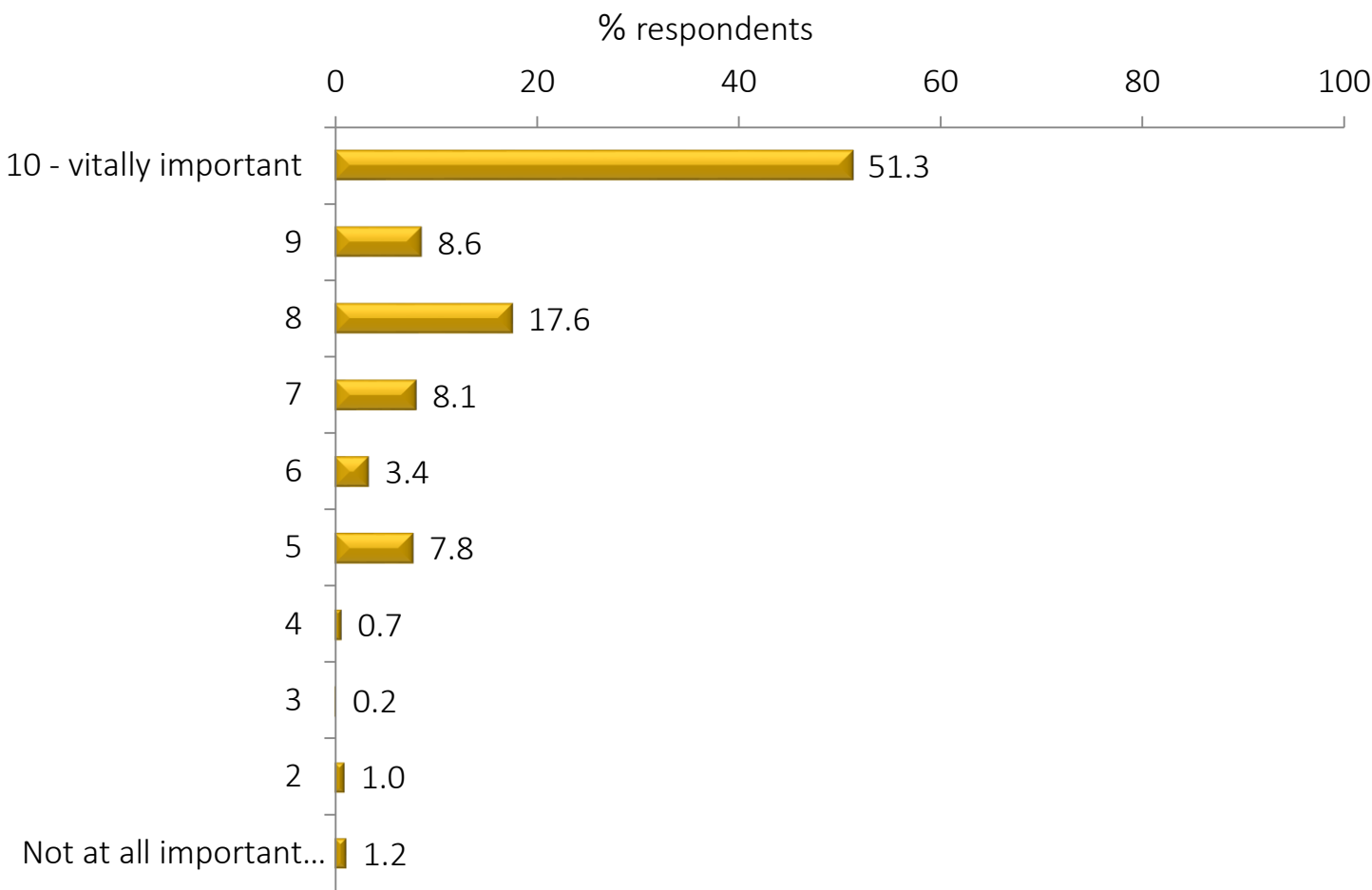
Heritage values were critically important to over 50% of residents and rate payers. Groups who were more likely to identify historical features as a critical value were:

- Females rather than males
- Residents compared to non residents
- Residents living in the inland area, particularly those in the inland west area.

Historical features on the coast also received a similar values rating in the online consultation to the telephone survey.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=409, unsure 1

Safe swimming beaches

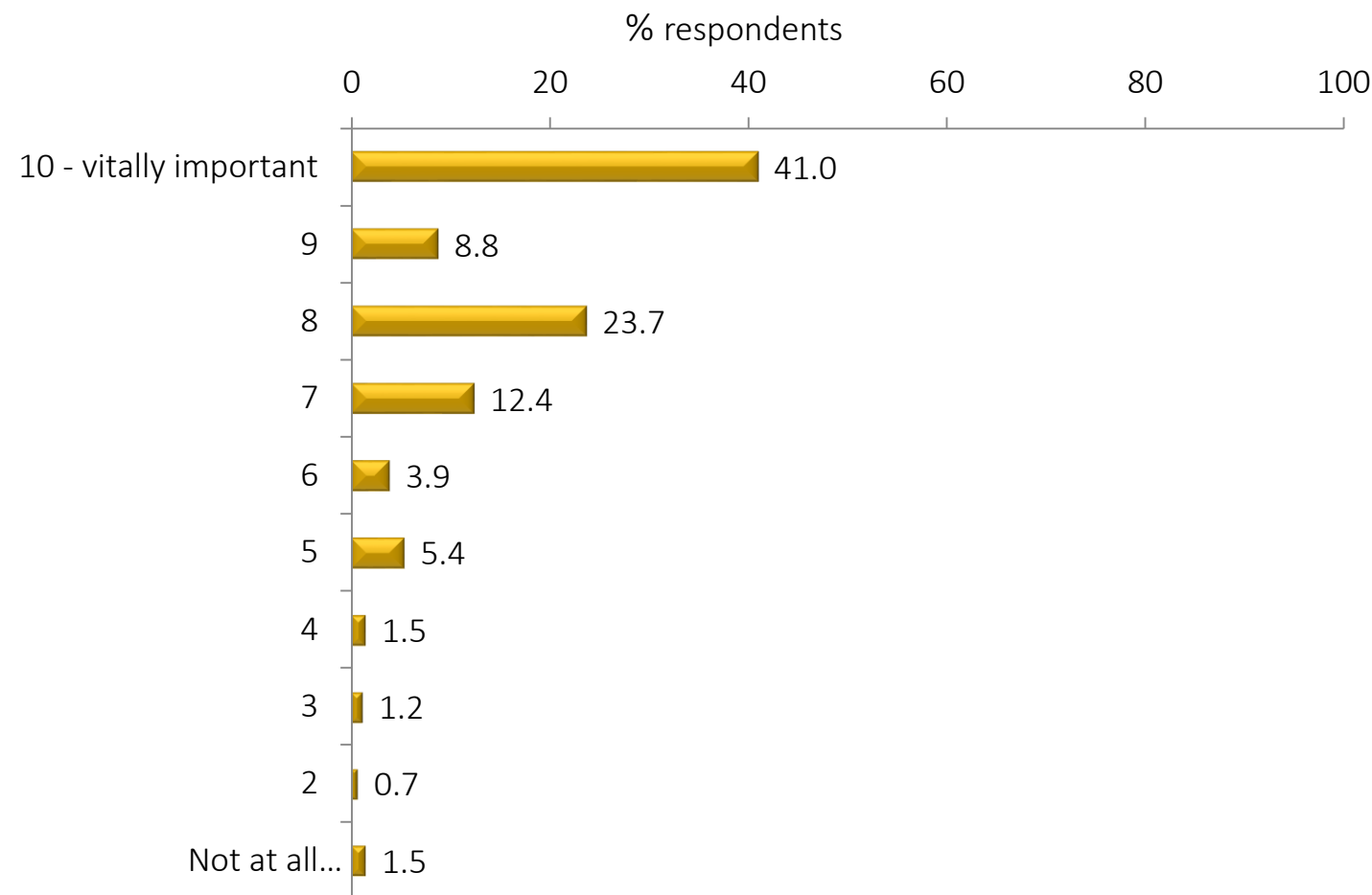


Critically important to over half of the residents and ratepayers and equally important to everyone in the survey regardless of how frequently they swam from the beach or whether they had children or grandchildren or not.

Safe swimming beaches were significantly less likely to be of critical importance to participants in the online consultation survey, only 31% identified them as a critical issue.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=409, unsure 1

Coastal dual use path (walking and cycling)

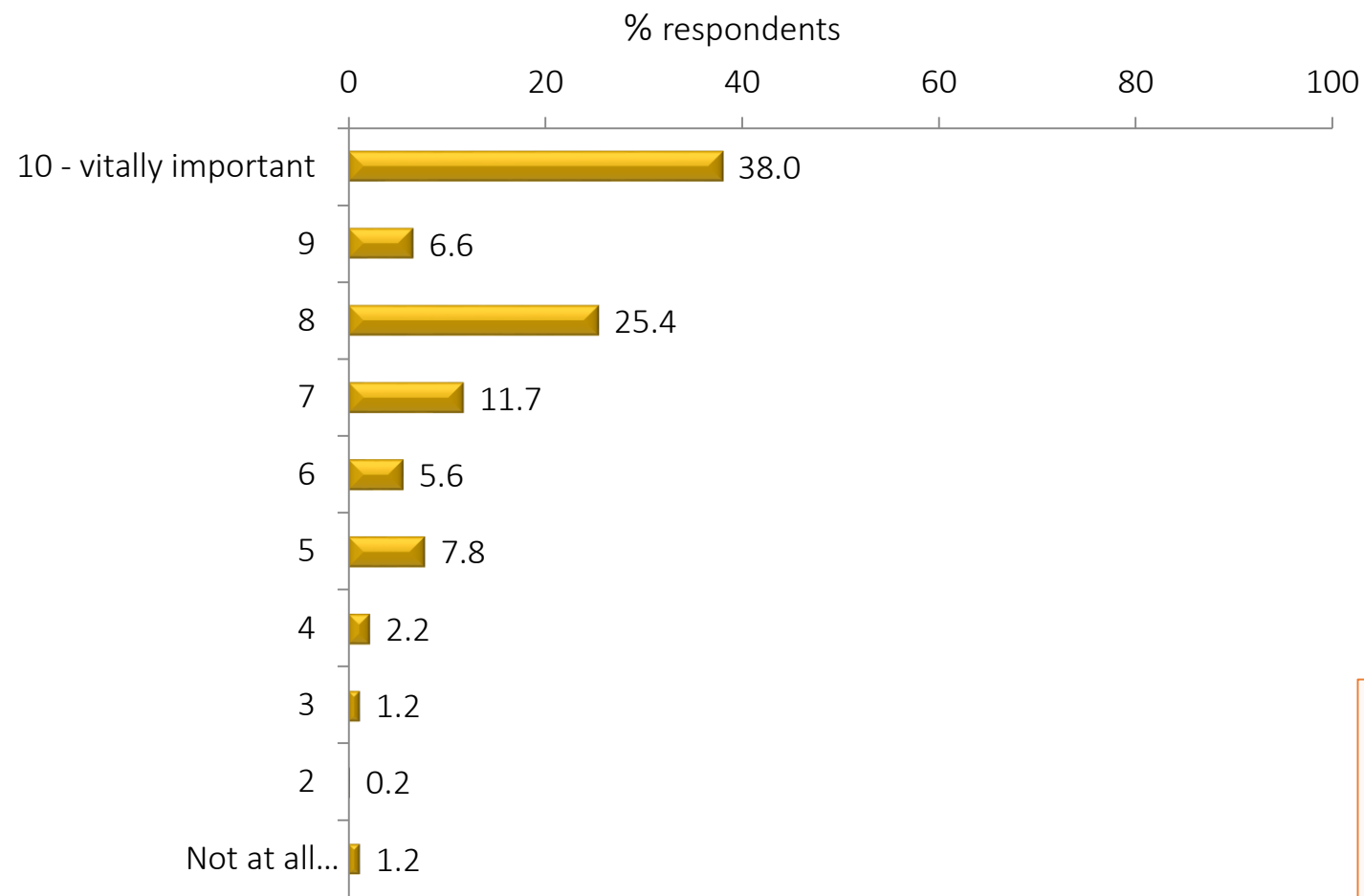


The coastal dual use path was critically important to 41% of residents and ratepayers. This value did not differ between the different groups of residents and ratepayers, including those who walked or jogged on the beach or foreshore.

The coastal dual use path was valued in a similar manner by participants in the online consultation survey.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Beach facilities like the grassed areas, playgrounds, BBQ and toilets on the foreshore



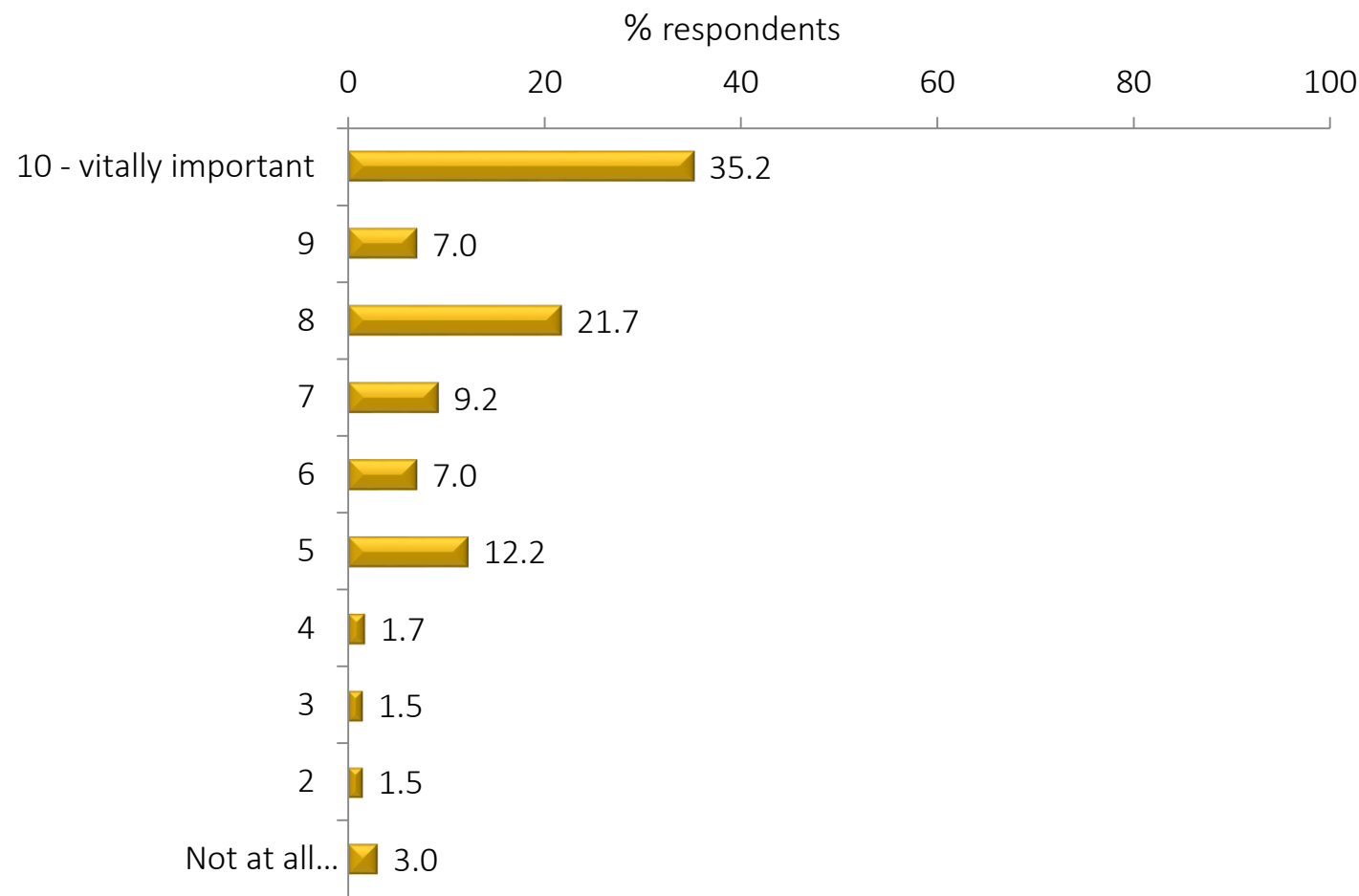
Beach facilities were critically important to 38% of residents and ratepayers as shown in the chart opposite.

Beach facilities like grassed areas, playgrounds, BBQ and toilets were more important to residents and ratepayers who lived inland from the coast (43.9%) than those who lived on the coast (27.7%).

Beach facilities were significantly less likely to be considered of critical importance to those who participated in the online consultation with only 16% nominating them to be of critical importance.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=410

Indigenous cultural and heritage sites

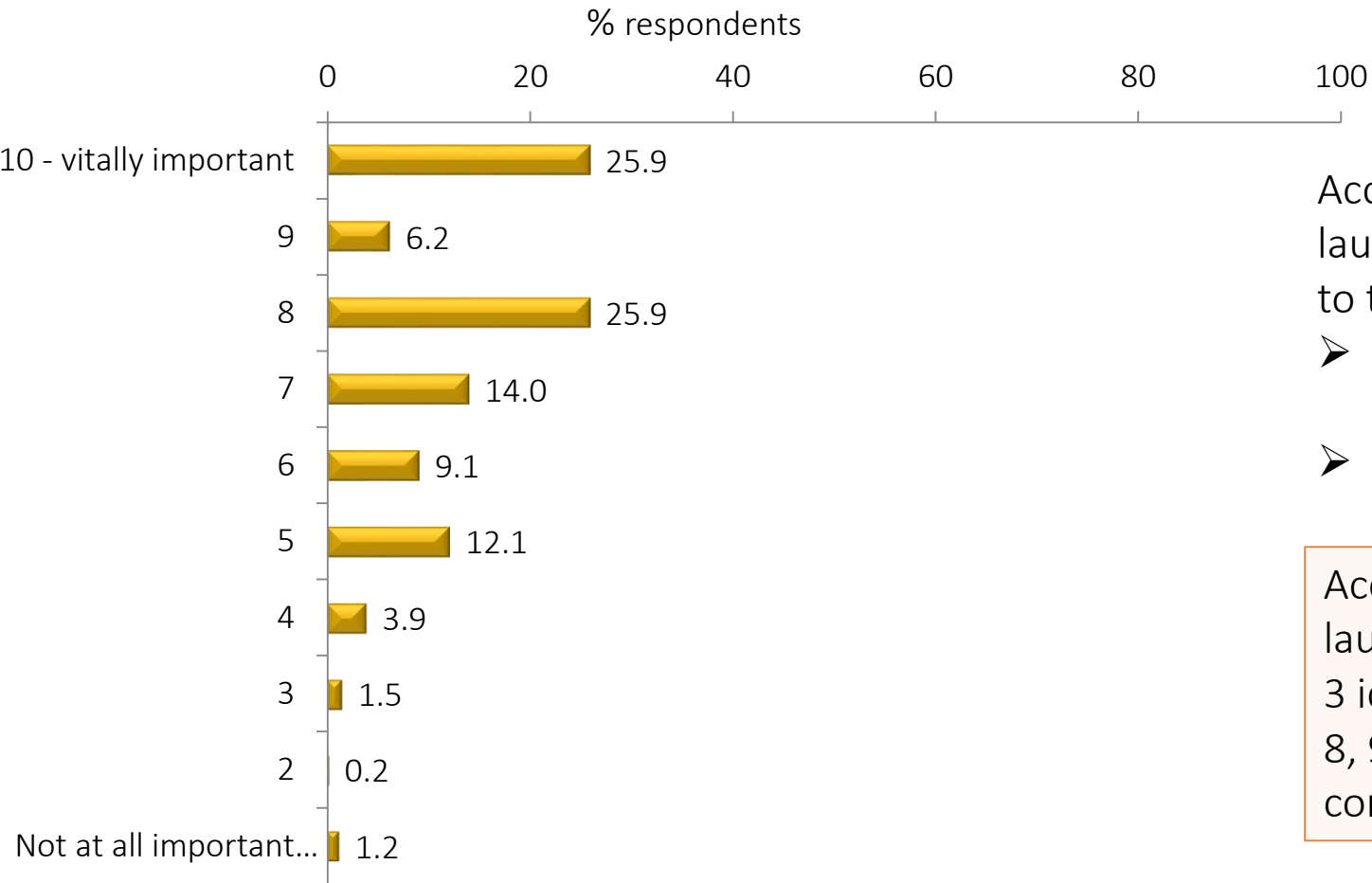


Indigenous cultural and heritage sites were critically important to 35.2% of residents and ratepayers. A fairly wide range of values was given for this rating but these did not differ between the different groups of residents and ratepayers. The average rating was 8/10.

Indigenous cultural and heritage sites were considered a critical value by 20% of respondents to the online consultation survey, this is lower than the general public survey.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=401, unsure 9

Access to the coast including car parking and boat launching



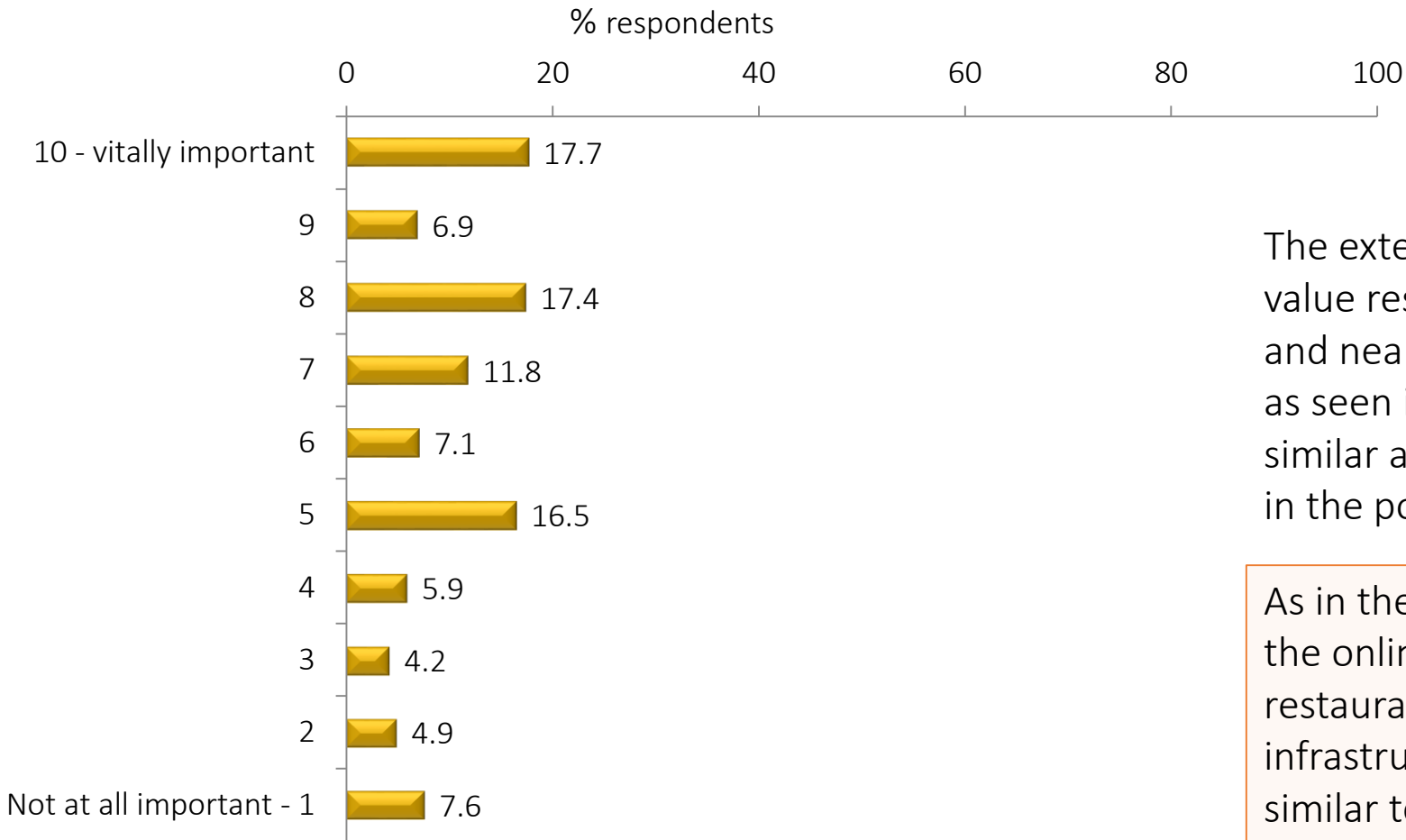
Access to the coast including car parking and boat launching was more likely to be critically important to the:

- Under 35 age group and the 55 and over age group and
- To those who lived inland from the coast

Access to the coast including car parking and boat launching was a less important value with only 1 in 3 identifying it as an important value (i.e. scoring it 8, 9 or 10/10) in the online consultation survey compared to 58% in the chart opposite.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=406, unsure 4

Restaurants and cafes on the foreshore and near the beach

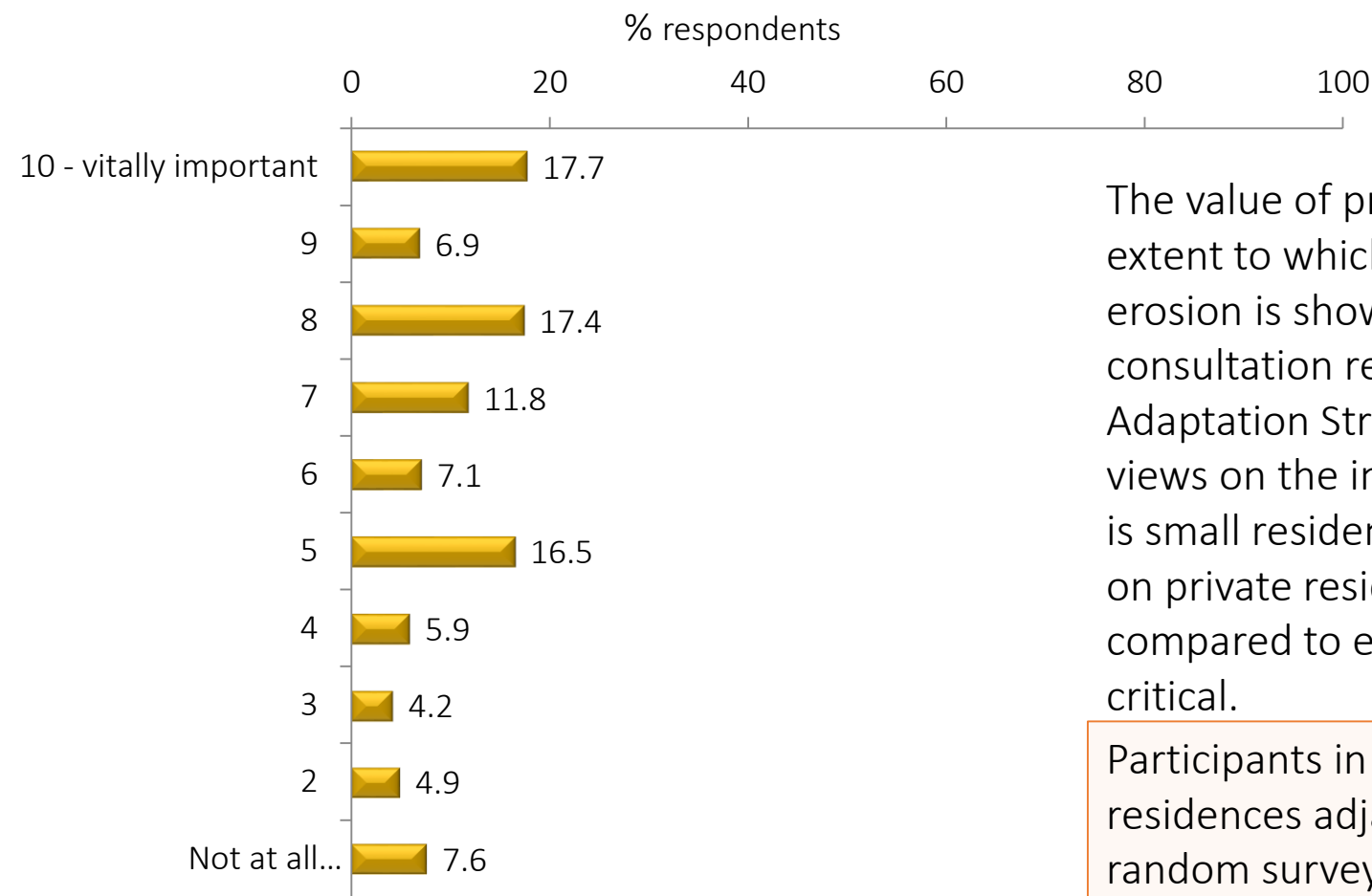


The extent to which residents and ratepayers value restaurants and cafes on the foreshore and near the beach shows a variable response, as seen in the chart opposite. This response is similar across the various segments and groups in the population.

As in the previous slide 1 in 3 participants in the online consultation survey identified restaurants and cafes as very important infrastructure (i.e. scoring it 8, 9 or 10/10) similar to the random survey results in the chart opposite.

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=407, unsure 3

Private residences adjacent to beaches

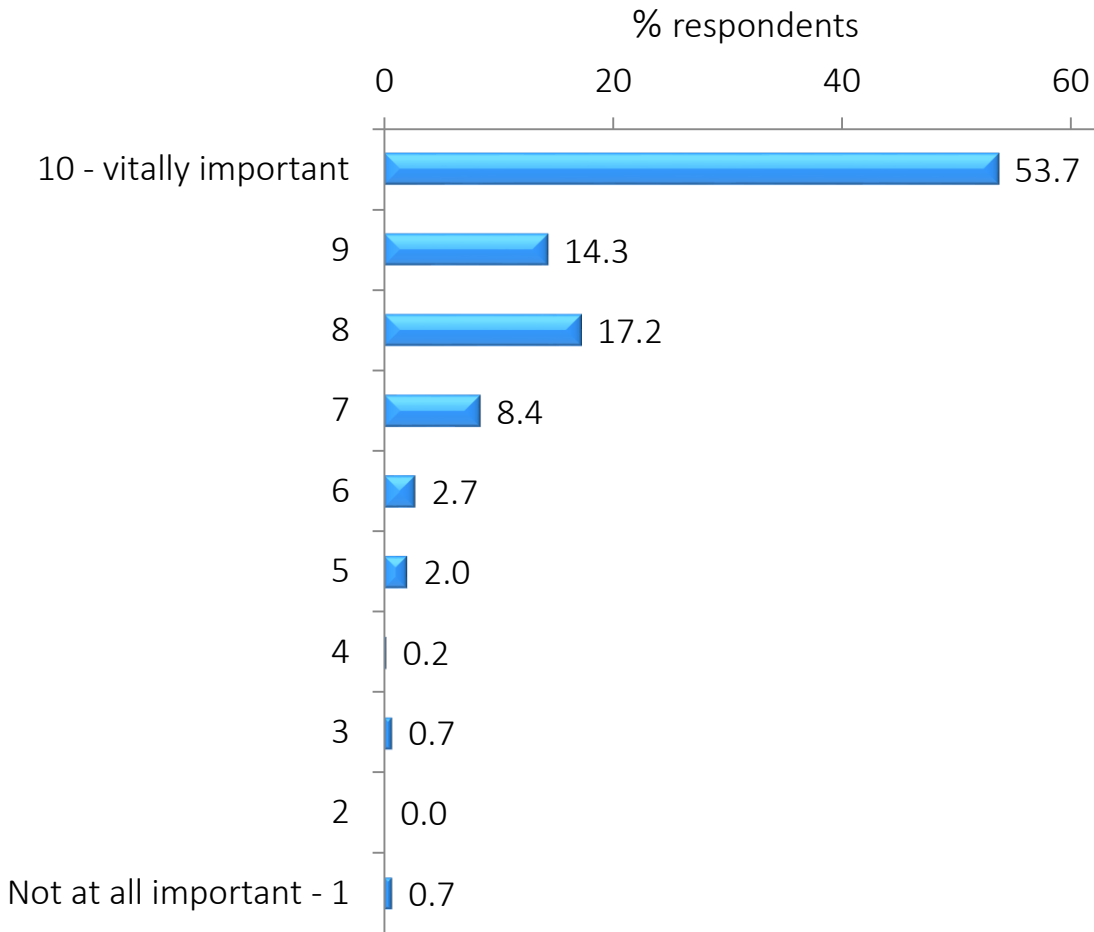


The value of private residences adjacent to the coast and the extent to which they should be preserved from potential future erosion is shown in the chart opposite. In a similar way to other consultation research undertaken as part of the Coastal Adaptation Strategy residents and ratepayers expressed mixed views on the importance of these residences. Whilst the sample is small residents on the west side of the coast place more value on private residents on the beach at 33.3% rating as critical compared to east coast residents of whom 9.4% rate this as critical.

Participants in the online consultation survey valued private residences adjacent to the beach significantly lower than in the random survey, only 8% rated them as very important and 65% rated private residents adjacent to the beach as not important (1-4/10).

Q.9 When thinking about what should be preserved from potential future erosion, how important are the following...n=407, unsure 3

Importance of uninterrupted stretches of sandy beach to the character of Busselton



The importance of uninterrupted stretches of sandy beach was considered to be vitally important to the character of Busselton by over half of the City’s residents and ratepayers (see the chart opposite). This is consistent with the fourth of the values statements which had similar wording and in which 54.1% of residents and ratepayers felt that uninterrupted stretches of sandy beach where you can walk along was critical to be preserved from potential erosion.

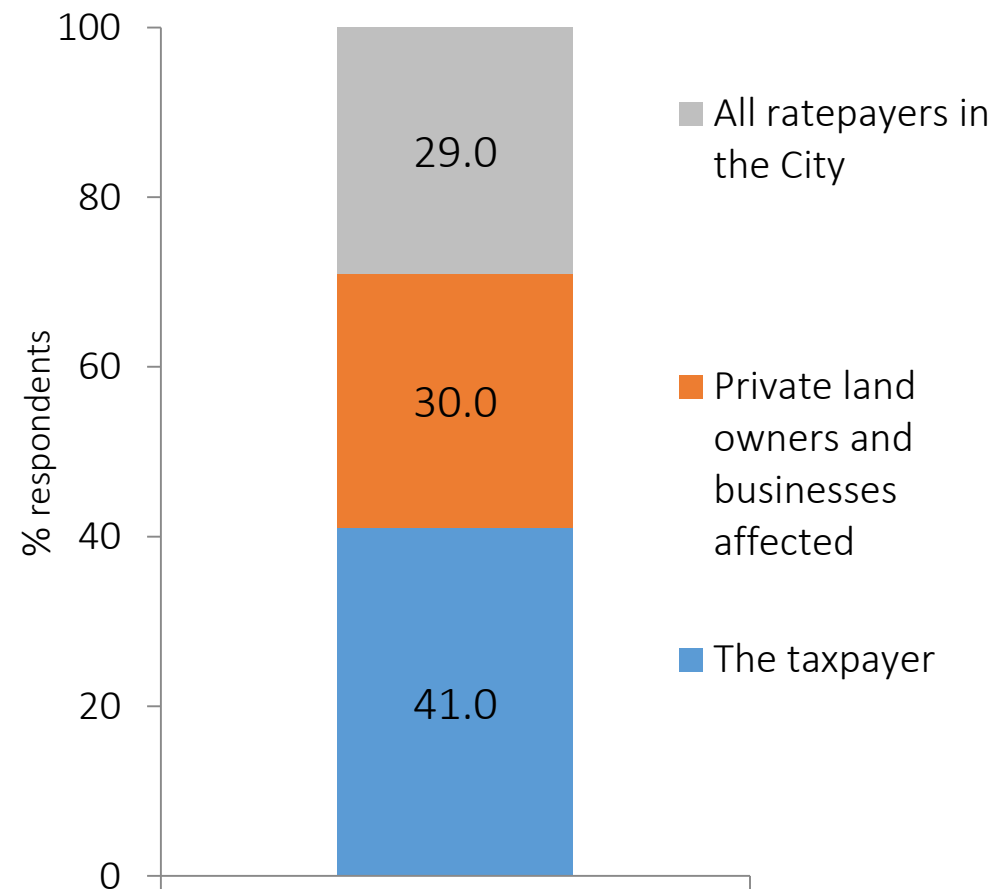
Uninterrupted stretches of sandy beach were most likely to be vitally important to:

- Females 61.4%
- People with no children or grand children

The results from the online consultation survey are similar

Q.10 How important do you feel that uninterrupted stretches of sandy beach which you can walk along is to the character of Busselton? N=606, unsure 4

The cost of reducing coastal erosion – who should pay?



As can be seen in the chart opposite residents and ratepayers felt that the greater cost of reducing coastal erosion should be borne by the tax payer, with the balance borne by all ratepayers in the City and private land owners/ businesses affected in equal part.

There was no statistically significant difference by any of the groups, even private landholders in the coastal zone generally agreed that they should make a contribution. The exception was those who felt that they should not make a contribution to reducing coastal erosion:

- The 40% of private landholders with land in the coastal west zone
- The 24% of private landholders with land in the east coastal zone
- Across all residents and ratepayers 25.5% of ratepayers

The consultation survey was more evenly divided:

- | | |
|--|-----|
| 1. The tax payer | 38% |
| 2. Private landholders and businesses affected | 35% |
| 3. All ratepayers of the City of Busselton | 27% |

Q.11 Within the next 100 years the land affected by coastal erosion may stretch for 100-200 metres inland impacting City assets and private homes. Who should pay for the work required to reduce the impact of this coastal erosion. How would you allocate the cost between these three groups? n=410

Issues to be addressed via information sheets or discussed at the public meetings

- How the boat ramps will be maintained
- Dune management
- Maintaining the sea grass
- Construction of retaining walls/ sea walls
- Information on global warming and its impact on the coastline
- Removal of sand and seaweed
- Retention and management of flora and fauna
- Discussion of the sand works
- Planning for the foreshore
- Planning for the Wonnerup Inlet
- Planning for the long term withdrawal of private homes from the coast
- The management of new subdivisions and developments on the coast
- Discussion about development and businesses on the foreshore
- Building in potential erosion prone areas
- Evidence that coastal erosion will happen
- Plans for the future of the coastline
- Proposed solutions and options

Profile of the sample

Gender	Random telephone survey %	Online consultation survey %	ABS data 2016 census %
Male	48.8	41.0	48.8
Female	51.2	55.0	51.2
Do not wish to disclose	-	4.0	-
Total	100.0	100.0	100.0
Age			
Under 18	-	2.0	-
18-24	1.5	-	8.3
25-34	7.6	10.2	13.5
35-44	20.7	22.4	17.7
45-54	31.7	18.4	17.7
55-64	18.8	32.7	16.9
65+	19.8	12.2	25.9
Do not wish to disclose	-	2.0	-
Total	100.0	100.0	100.0

Profile of the sample cont'd

Residents and ratepayers	Random telephone survey %	Online consultation survey %	ABS data 2016 census %
Residents	74.9	-	-
Non residential ratepayer	25.1	-	-
Total	100.0		
Family composition			
Young child, oldest primary age or younger	28.8	24.0	-
Teenage children	25.6	12.0	-
Have grandchildren	25.1	31.0	-
No children	30.7	35.0	-
Total			
Property ownership			
Own the property	92.0	90.0	-
Rent the property	55.6	4.0	-
Other	2.4	-	-
Live outside the City of Busselton	-	6.0	-
Total	100.0		

Profile of the sample cont'd

Location of the property	Random telephone survey %	% of properties on the rates data base
Coastal West	6.6	3.5
Coastal East	29.5	27.1
Inland East	29.8	23.6
Inland West	<u>34.1</u>	<u>45.8</u>
	100.0	100.0

Technical Appendix

Sampling and Data Collection Specifics

Component	Details
Project Management Team	
Research Solutions Contact	Nicky Munro
Client Contact	Louise Koroveshi
Field Company	Ask Australia
Field Company Credentials	ISO 20252
Other Contractors	None
Research Methodology	
Data collection method	Telephone with an online survey for all residents and ratepayers to use

Component	Details
Sampling Methodology	
Target population for survey	Residents and ratepayers
Description of sampling frame	Sample drawn from coastal strip and in land
Source of sampling frame	Purchased list with mobile numbers
Sampling Technique	Telephone survey - Random sample; online survey self selecting sample
Sample Size e.g. if sample size achieved was different from planned sample, note this and reason why	Random telephone survey 400; online consultation survey 49 respondents, 46 lived in Busselton
Was sample quota'd? (note below or NA):	
<ul style="list-style-type: none"> Brief description of quota procedure 	Quota'd by coastal verses inland, east and west close to population distribution, Residents sample = 300; non residential ratepayers =100
<ul style="list-style-type: none"> Information source of quotas drawn from 	Actual number of residents in each area, actual number of non resident ratepayers

Component	Details
Fieldwork	
Briefing Method	In person, with written briefing notes provided
Pilot study date(s)	26 th September 2018
Changes made as result of pilot	None
Survey dates	1 st October – 8 th October 2018
Questionnaire length / administration time	13.4 minutes
Incentives provided for respondents e.g. No / yes & description of incentive	None
Survey Procedure for CATI	
• Number of interviewers used	24 interviews
• Times of day interviews took place	Evenings during the week and during the day on Saturday and Sunday
• No of call backs before number replaced	Up to 6, at least 3-4 hours apart and at different shift days

Component	Details
Data Collection Outcomes:	
Response Rate or Participation rate (non-probability samples) <i>delete as required</i>	7%
Research participant contact outcomes (note below):	
• Interviews	410
• Not available / away for duration of study/ answering machine (after call backs)	15%
• Answering machine (after call backs)	50%
• Refusals	27%
• Language/Behavioural Barrier	1%
Overall sampling error	±5 %
Validation procedures	At least 10% of all completed interviews validated by Field Company OR Not required as survey was self-completion

Component	Details
Data Coding, Analysis and Data File Treatment	
Validity and Reliability Issues	
Data coding	<p>Procedure involves:</p> <ul style="list-style-type: none"> • Review of first 50 questionnaires (or similar) to develop coding sheets based on common responses • Additional codes created when more than 2% of the sample record common response • Approval of coding sheet by Research Solutions Project Manager
Consistency checks	<ul style="list-style-type: none"> • Preliminary data file checked by Project Manager using SPSS: <ul style="list-style-type: none"> ○ Frequency counts ○ Relevant cross tabulations • Data outside the range/duplicates or abnormalities investigated with Field Company prior to coding and analysis
Treatment of missing data	<ul style="list-style-type: none"> • Excluded from analysis and/or noted where relevant • Individual cases with excessive missing data excluded from sample
Was sample weighted? (note below or NA):	
<ul style="list-style-type: none"> • Brief description of weighting procedure 	N/A
<ul style="list-style-type: none"> • Information source weights drawn from 	N/A
Statistical tests used	<i>See Survey Research Appendix: Statistical Tests</i>
Data file provided to client	On request
De-identified data files retained	For five years
This project has been undertaken in compliance with ISO 20252.	

Test:	Z-Test
Use:	To determine if the proportions of a variable in two independent samples are significantly different.
Data Assumptions:	<ul style="list-style-type: none"> • Measure being tested is normally distributed with the two samples. • Data must be interval or ratio. • Sample size is large enough to form a normal curve ($n > 30$) • Variance of measure being tested is roughly similar (homogeneity of variance).
Test Measure / Cut-off Criterion:	$p \leq 0.5$
Issues to be aware of:	<p>The result should be both statistically significant and clinically or tactically or strategically significant. Be mindful of statistically significant differences where:</p> <ol style="list-style-type: none"> 1. The sample sizes are very large 2. Scores within the groups are very similar (i.e. the groups have small standard deviations)

Test:	Chi Square (Pearson's chi-square)
Use:	To determine if two variables are related by more than chance alone.
Data Assumptions:	<ul style="list-style-type: none"> • Data is from a random sample. • Data must be nominal, ordinal or interval. • Sufficiently large sample (absolute minimum $n=30$) & adequate cell sizes ($n=10+$) • Observations must be independent. • Observations must have the same underlying distribution. • Data is unweighted
Test Measure / Cut-off Criterion:	$p \leq 0.5$

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Clean beach and the tracks are well looked after.
- Lovely beaches.
- Natural landscape ; lookout points ; marked short walks.
- The lack of sea breezes and the lack of afternoon sun.
- Very quiet and peaceful area, around Bunker Bay.
- Natural beauty and they haven't been built up yet.
- Plenty of room for all ; it's free.
- How clean and fresh the water is ; foreshore is in great condition ; unspoilt.
- The beauty of the coastline.
- Beauty and accessibility.
- Nice for the kids, shallow and safe.
- Nice to go for a drive.
- Safe.
- Forrest beach and Wonnerup, you can drive your car along the beach.
- Close to residence.
- The relaxed atmosphere.
- The natural environment ; unspoilt ; not developed.
- It's untouched beauty.
- It's gold, you are protected from the south westerly wind, which is very rare.
- No high rise ; beaches are beautiful to walk along ; very peaceful area.
- Sheltered bay ; lots of sun.
- The solitude at Yallingup Beach.
- It's protected from the sea breeze, good for boating and fishing.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Walking ; whales.
- The natural environment.
- The beauty of the area.
- They are clean and it's safe to swim, for all ages ; very scenic.
- Natural beauty ; accessible to everyone ; wheelchair access.
- The outlook, white sand, blue water and solitude.
- The pristine beaches.
- It's clean open coastline and there is never a crowd.
- A wonderful natural resource, easily accessible.
- Water access.
- They are clean and easy to access.
- The near pristine condition.
- Access to the beaches.
- Peaceful and quiet.
- Clean, easy access and family friendly.
- The swimming.
- The coast line.
- Nice sandy beach, lovely sailing area.
- Everything.
- Not crowded and easy access by boat and car.
- Natural beauty.
- Clear water and the sand has not been littered with rubbish.
- Sun comes shining onto the beaches, very well protected from the south west breeze.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- All are very nice places.
- It's beauty, very natural.
- Protected beaches.
- They are clean.
- Clear water and the rock coastline.
- Nice sand, clean water, calm bays and good waves for surfing.
- It's natural and untouched beauty.
- Nice and safe for my grandchildren to swim.
- Good surf, easily accessible.
- A lovely place and our kelpie loves to go there.
- Everything, the water quality, the lack of crowds.
- A facility for people to use.
- How beautiful it is in the summer, going fishing.
- The scenery.
- Extremely picturesque and safe for children.
- The beautiful paradise.
- Environment.
- Cleanliness of the water, clean sandy beaches, easy access.
- Unique and natural environment.
- They are clean and safe for swimming.
- Serenity.
- They are accessible pristine and very family orientated.
- Clean beaches.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Beautiful, I appreciate the lack of rocks and small waves.
- The clean sand and waters.
- Sheltered waters of Geographe Bay and surfing.
- Tranquillity and accessibility.
- Quiet in winter ; whale watching ; clean beaches.
- You miss out on the winds, it blows off shore.
- Scenery ; close to where I live ; clean water.
- Broadwater is calm and flat, better for the children.
- Unspoiled natural environment.
- The natural look of the beaches have not been changed much.
- Natural beaches ; proximity to home ; clean.
- The view and clear beaches
- They are accessible, clean/
- The natural beauty ; the facilities. it's sheltered from the weather.
- The scenery.
- Natural beauty ; accessible to everyone ; facilities.
- Uncrowded and unspoilt.
- The coastal lifestyle.
- Safe beaches to go for a swim.
- Very easy to access the beaches.
- Drives on the beach ; the warm waters ; nice and clean.
- The natural environment.
- Clean ; peace and quiet.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- The rugged terrain, good for walking.
- It's natural beauty.
- The view and tranquillity.
- Dunsborough is beautiful.
- Their beauty and accessibility.
- The natural beauty.
- Clean and calm waters.
- Very pleasant place to live.
- Family friendly beaches.
- unspoiled, beautiful coastline.
- Lovely and clean surrounds.
- Nice sunsets.
- It is natural ; no pollution.
- Sheltered from strong winds.
- Beautiful and not crowded.
- Great beaches and clean water.
- Attractive natural looking beaches.
- Everything.
- It's clear water and it's nice and protected.
- Their natural beauty, unspoiled and accessible.
- The calm waters for children to play.
- Open area ; the beauty ; access for animals and vehicles ; fishing.
- The calmness.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Natural beauty.
- Clean Beaches ; boat ramps.
- Where I live it is very good and very quiet.
- They are pristine and not too busy.
- It's clean and uncrowded.
- Cleanliness of the area and the natural beauty.
- The flora and fauna.
- Safe beach for the family.
- Walking area is scenic.
- Good sheltered place for children to swim.
- Clean white beaches.
- The scenery.
- It is protected and the beaches are clean.
- Unique coastline.
- The most natural, beautiful beaches I've ever seen.
- Able to use it for recreation.
- Beautiful white beaches ; grandchild safe ; fishing ; swimming is good ; crime free.
- Beauty ; cleanliness ; natural ; being able to take the dog to the beach ; not crowded.
- Pristine nature ; calm waters ; clean ; dog walking areas ; BBQ facilities.
- Pristine beauty.
- Calm in a south westerly ; good for kids.
- The beauty, not too crowded, clean and peaceful.
- Clean and unspoiled.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Untouched natural beauty.
- How good it is to swim and walk.
- Due to being in the bay it is safer than some beaches.
- Good tourist attraction.
- It is calm.
- The vegetation that surrounds it and all the natural habitats and fauna.
- Safe for kids, no swell and pristine.
- Very peaceful coastline.
- Sheltered from the wind and you get to see the sun and moon rise out of the ocean.
- Accessibility, not built up and clean.
- Accessibility.
- Accessibility and natural beauty.
- Natural beauty of the area.
- Pristine beaches, accessibility and activities.
- The area is beautiful and absolutely pristine.
- Protection from south west winds and boat access.
- The accessibility to the beach and cleanliness.
- A beautiful and clean bay.
- The natural beauty.
- Pristine beach.
- Calm water.
- Value the coastline very much.
- Recreation, but, they shut it up all the time.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Easy to go to and safe.
- Clean and beautiful ; not crowded ; natural scenery.
- Accessibility, clean and not crowded.
- Go fishing and also a nice view.
- How clean they are.
- Beautiful clean water and space to walk the dog.
- Not too crowded and calm waters.
- Ease of access ; it hasn't been destroyed with high rise buildings ; we have bush walking right up to the water's edge.
- The clean water ; it's pristine ; dolphins ; whales ; sheltered bay.
- It is very protected.
- The sunset ; looking out at the beach.
- You can have a full day of activities.
- Clean, still remote and easily accessible.
- Clean and open spaces.
- Not too busy.
- A safe swimming place.
- Nice beach, everything is good.
- Beautiful and it offers lots of places for walks and picnics.
- No development on the foreshore.
- Nice environment.
- Remained untouched ; user friendly ; dog friendly.
- Their accessibility, without charge, and they are not overcrowded.
- Natural beauty, it's a playground.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Clean beaches, peace and quiet ; good opportunities to go fishing and snorkelling.
- Their beauty.
- Beautiful to look at.
- They are sheltered from the sea breeze ; safe for little kids to go swimming ; good for sailing and no rocks in the water.
- The natural environment ; clean ; I feel safe.
- Beautiful and relaxing.
- Sun rises over the water.
- Mostly natural and untouched.
- These are amazing beaches.
- Clean beaches.
- The whole bay is sheltered in summer, I value the Wonnerup inlet and the estuaries.
- Not too many people.
- Natural areas ; parks ; caves ; avoid the crowds.
- Nice looking beach ; clean white sand ; wind is really calm ; peaceful.
- Views and the quiet.
- Pretty beaches and the water is calm, a great place to fish and swim ; clean apart from the seaweed at Geographe Bay.
- Pristine.
- The clarity of the water and the contrast of colours between the ocean and beach.
- These beaches are often deserted, so I have them to myself.
- Natural environment, clean and safe for children ; uncrowded.
- Pristine environment.
- Clean and tidy.
- Amenities on the beach ; clean ; recreation.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Natural beauty.
- The white sandy beaches.
- Wide expanses and it's beauty.
- Natural environment, fantastic.
- Protected from the weather.
- It's beauty ; clean ; option to be near restaurants and people or alone.
- Calm and sheltered bay.
- It's a beautiful place and protected from the winds.
- Clean, tidy and quiet beaches.
- The peacefulness of the area.
- Absolutely beautiful, pristine beaches ; plenty of facilities and grassed areas.
- Fishing.
- The sheltered bay in Busselton.
- Calm and quiet, can enjoy the afternoon sun.
- Grassy and shaded.
- The sheltered bays, not too much swell ; exceptionally clean and no development on the Dunsborough foreshore.
- The native flora and fauna and the tasteful and informative signage. It is beautiful and very accessible.
- Sheltered for kids.
- They're not over used and we use the horse beach.
- Access to walk dogs.
- Protected coves, quiet picnic areas, good fishing off the rocks and very pristine.
- Overall quality, amazing beaches.
- Love the water quality, the shallow water line, like seeing other peoples' dogs.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Easy access to get to the beaches, the Busselton foreshore is great.
- The clean beaches and safe swimming.
- Great beaches and vehicle accessibility.
- Calm water for all ages and beautiful beaches.
- Cleanliness ; lake of people ; safe ; north facing ; accessible.
- They are not full of people, most of the year and they are free to use.
- The beautiful white sands and clear calm water.
- The facilities ; surfing ; fishing.
- It's beautiful and calm.
- Beautiful natural environment.
- Unspoilt natural coastline.
- Calm and safe.
- Accessibility.
- Difficult to say since the shark attacks.
- Pristine ; access ; dog beaches.
- Calm, clean and not too busy.
- Unbroken beach, no rocky outcrops.
- Natural environment.
- The parts where we can four wheel drive and fish.
- Calm settling bay.
- It's beautiful, I love it, it's paradise.
- Lovely water to swim and beaches to walk along.
- The outlook ; fishing ; swimming.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- The peace and quiet.
- Safe swimming zone for the children ; the facilities ; areas for families.
- Not over populated.
- Natural environment with not much development ; surfing.
- They're clean, well looked ; it's calm ; shark net in Dunsborough and Busselton ; love the jetty and all that goes on around there.
- That is mostly untouched.
- The visual amenity.
- Accessibility and cleanliness.
- How pristine they are and the National Park.
- The landscape and the mixture of activities.
- The ability to use the beach to walk my dogs and the natural surroundings.
- Protected ; natural ; the wind and waves.
- Protected from winds ; safe ; diversity of the coastline.
- Pristine coastline and people enjoying the beach.
- Clean and calm waters for swimming ; it's sheltered from the westerly wind ; it's very scenic ; watching the movement of the tide.
- Sandy beaches.
- It's unique to Western Australia.
- Sheltered from the southerlies.
- Useable regardless of wind direction.
- Really nice beaches.
- It's protected, pristine and a nice place to live.
- Easily accessible, you can visit whenever you like.
- Nice beaches for families ; access for four wheel drives ; walk dogs ; good surfing beaches.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- The protected bay ; calm waters ; safe for children ; being a long coastline, you have the choice of privacy.
- The calm, clear blue water.
- The peaceful bay.
- Big open areas to take animals, family and cars.
- Recreation ; full access to beaches.
- Pristine and lots of activities to do.
- It's natural beauty.
- Clean waters.
- Untouched natural beauty and the bike path with beautiful scenery.
- Marine life ; pristine sand and water.
- Good for fishing and swimming.
- How easy it is to get around and access to playgrounds.
- The calming effect.
- Grew up on that beach and it's nice and quiet ; plenty to do and plenty of space.
- Untouched, clean and beautiful.
- Good family beach ; surfing.
- How beautiful the beaches are.
- Stretches of coast that are undeveloped.
- The diversity.
- Natural and clean.
- Beautiful grassy areas, protected from sea breeze.
- The natural beauty and playgrounds for children.
- Clean beaches ; safe.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Nice safe beaches and the cafes.
- The isolation and the natural, pristine environment.
- Nice view and pleasant, safe beaches.
- Variety of waves and calm water ; protection from the sea breeze.
- Protected bay, calm and peaceful environment.
- Nice clean beaches.
- Open spaces.
- The light in winter and the shelter from the south west wind.
- For us to enjoy the beauty and remoteness.
- The cleanliness and the natural state.
- Natural clean beaches.
- The beaches are natural and not polluted.
- Very calm and natural.
- Pristine beaches.
- Protected areas and the beauty.
- It's natural and not commercialised.
- Protected from the sea breeze, not many buildings and good dunes.
- Good fishing and well sheltered from the sea breeze.
- Pristine beauty and the facilities.
- Natural beauty and good access to the beach.
- Beautiful white sands.
- Pristine area ; not crowded.
- Family friendly.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- The green lawns ; the atmosphere ; playground is great for our grandchild.
- Good bike paths ; swimming ; cafes.
- The solitude ; cycle paths ; taking part in the iron man ; activities close to the beach ; walking the dog.
- Clean beaches, the quality of the sand.
- The ability to have a swim.
- The usability and choice of beaches.
- One of the most magnificent areas in the world ; restaurants ; playgrounds ; jetty bay ; train ; under water aquarium.
- The easy visibility from the roads and paths for cycling and walking.
- The water and how pristine and beautiful it is.
- The southern beaches are pristine.
- That you can take your dogs and good for surfing.
- How sheltered they are, especially from the westerly winds.
- Nice for kids to play, fishing and crabbing.
- Nice blue water ; good for kids to swim ; good fishing.
- Beautiful, easy to access beaches.
- Natural habitat, clear water and bush walks available.
- Clean area.
- A safe place for children.
- Sand and water is nice and clean.
- Ease of access ; not over populated ; very clean.
- The natural beauty and the clear crystal water.
- Less people ; north facing ; degree of isolation and privacy.
- The natural beauty.

Q8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- Clean ; natural ; uncrowded ; pristine.
- Quiet and peaceful.
- Swimming, it's calm and clean.
- Natural beauty ; child free beaches ; quiet beaches.
- White sand ; clear water ; protected area of the strip.
- A lot of the areas we visit there are pristine and not heavily populated.
- Good spot to take the dog and it's sheltered.
- The peacefulness.
- Clear clean water ; calm for the children ; the jetty ; pristine area.
- Pristine beaches.
- Pristine bay and calm weather.
- Natural beauty ; all very clean.
- Natural surroundings and ease of access.
- Love the conditions and the fact it's natural and pristine.
- Good beaches.
- Picturesque place ; great fishing areas ; great whale watching.
- Clean beautiful beaches.
- You cannot beat the sunset. The beaches are sheltered and you have the choice of either a surf beach or a safe beach for children. Free parking and shark patrols.
- Everything its fantastic.
- Calm waters ; pristine beach.
- The cleanliness and the views.
- The pristine waters of Geographe Bay ; My ashes will be put there.
- Calm ; quick access from where we live.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- They are great beaches ; fishing is great.
- Quiet ; gentle swell ; plenty of places to sit ; good cycleways and walkways.
- White sands ; natural bush ; wild life ; clear water.
- It's own micro climate ; calm for kids ; dogs ; paddling.
- It is very clean and beautiful.
- Lifestyle.
- Relatively quite ; not many waves ; good for relaxing.
- Access to the beaches and facilities.
- It's natural.
- The cleanliness and easy access to walk through to the beach.
- Four wheel drive on some of the beaches ; dogs are allowed on some beaches ; fishing ; boat ramps.
- Accessible.
- Calm ; easy access ; north facing.
- Quiet location.
- Calm waters.
- Cleanliness ; the rules on dogs ; natural environment.
- It's a safe heaven, calm for boats and clean.
- Sheltered from the elements, great for swimming.
- Beautiful protected beaches and calm water.
- Cleanliness ; accessibility ; sense of social safety ; life guards ; shark net.
- Peaceful ; tranquil ; family environment ; safe swimming.
- The cleanliness of the beaches ; the accessibility to the beaches.
- Natural ; quiet ; relaxing ; the landscape.

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Random telephone survey

- In its natural state.
- Clean ; calm ; remote ; restricted dog access during holiday periods.
- Nothing specific.
- The cleanliness and nice water.
- Clean beach and water.
- The shallow waters and safe beaches ; sandy beaches ; fishing ; playgrounds for the kids ; the markets on a Sunday are good.

Q8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? [Online consultation survey](#)

- Relatively clean land and water. Minimal degradation to date.
- I value the ability to sit with the whole family (dog included) and enjoy the peace that nature brings:
- The ease of access to enjoy everything the beach offers. Good cycling and walking paths make it possible to enjoy the beautiful views while exercising.
- I love this part of the coastline because it is natural and you can view the natural flora and fauna in situ.
- I value the beauty of our coast, the varied character of the beaches (safe, gentle Geographe Bay vs the more rugged setting of the Capes beaches), lovely clean beaches to walk along and choice between the busier 'town' beaches and less crowded beaches
- Protected bays out of the wind, ease of access
- Sandy beach on which to lay on a beach towel, provides a safe area behind the shark barrier to exercise and allows my partners grandchildren to swim and snorkel
- calm water, white sand, fringing woodland and dune systems, accessibility, beach paths and coastal scene from local roads
- The clean open spaces; visiting whales; fishing; crabbing; walking; sunsets/sunrises; pristine clear water; meeting people; sitting and relaxing with no interference or man-made structures. Not every space has to have a man-made structure on it.
- the lack of development on the beach and the ability to walk my dog at these locations
- Natural looking, not too commercially built up
- it is a rare orientation along the Western Australian coastline and is to be valued as such. The management of the beach should reflect the difference in tides, currents and weather to be flexible in the future.
- It is such a safe beach for small children to swim at, the waves aren't big. It makes it a more enjoyable experience as a young family as I know the kids will be safe to paddle along in the water.
- The ability to spend time at the beach as a family with our dog
- they are better looked after than the beach at Port Geographe
- the natural resource of open beaches with public access

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Online consultation survey

- They are naturally beautiful and should not be marred by human intervention in the name of tourism. The town beach development is an exception and has been well done.
- It is all a precious natural environment which is in danger from many fronts
- I live in Dunsborough and love the bay. It is a sheltered area through winter and when the breeze is in. Dunsborough as a Town needs to be more focussed on the beach. Build a restaurant. Please. Also the Boat ramps in Dunsborough NEED improving ASAP
- the s of the beach clean open space
- Their natural appearance and lack of manmade sculpture, buildings etc. This is very relaxing and health enhancing.
- Abbey beach because it is quiet and not busy even in tourist season. Value being able to walk along the beach. I would love it if there were more chairs
- We like to be able to walk, fish, kayak and not be bothered by dogs. Far too many Dog access Beaches for dogs.
- Protected calm swimming and walking area
- Pristine, wilderness
- More remote, less people, less paths and man made changes
- Clean beaches, low population on beach
- Sunset
- The natural beauty. The lack of crowds.
- the view of the beautiful bay, the boats and the sunsets
- There beauty and access
- out of wind and quieter

Q.8 What do you value about the north facing coastline from Forrest Beach, Wonnerup to Point Daken, Dunsborough and the beaches of Bunker Bay, Eagle Bay, Yallingup and Smiths Beach? Online consultation survey

- The natural environment, walking paths, dog beaches, bench seats,
- It's a beautiful, comfortable coastline to enjoy with family and friends, to walk dogs, to enjoy swimming and water sports. There doesn't seem to be enough protection of coastal vegetation (from alien species) or native birds that breed and feed onshore
- The clean and often empty space beside turquoise Geographe bay that in winter is alive with whales.
- Their changing beauty in all weather.
- Unspoiled, generally pristine
- Quiet, though getting busier. Not too built up.
- Great walking and swimming area for young families
- the Pristine water. clean beaches, the 4WD beach access. Meelup is fantastic. Bunker Bay is absolutely beautiful. The Boat Ramps Need attention especially the abbey one Dolphin Rd needs to be concreted.
- Clean water. Calm water (mostly). Not too crowded.
- The wide open spaces. Easy beach access. Being able to find areas all to ourselves. To be able to drive along and up to some beaches and appreciate their beauty,
- Uninterrupted views and beaches, Beach Access for recreation, beautiful Bays, Natural and Cultural Values- colour of water, coastal vegetation, seasonal change, shady peppy trees, biodiversity hotspot
- Natural beauty, more remote (quieter), excellent snorkelling.
- Sand, clear water
- The natural environment
- The north facing beaches are generally protected from the prevailing winds particularly in summer making them very useable for young children
- Natural beauty. Kid-friendly swimming spots.
- It seems untouched and naturally beautiful

- Zoning, no short stay residential.
- Would groynes help the beach.
- What can be done to fix the problem.
- Utilise the bay for international events, build high rise apartments, bars and cafes to increase tourism.
- Usage of the coastline.
- This whole topic needs to be discussed.
- There should be no more development close to the beach and foreshore.
- The status of the shark enclosures.
- The seawall at Siesta Park needs to be discussed.
- The restaurant on the Dunsborough foreshore.
- The ramp in Dunsborough, near the jetty.
- The public should be consulted before any decisions are made.
- The public needs to be made aware.
- The problem of seaweed.
- The plans, what are the options and what is the cost.
- The placement of a key asset in the flood ways of Busselton. The risks of coastal erosion should be better managed.
- The parking on the foreshore in Dunsborough, for tourists, caravans and RV's.
- The parking issues in the coastal areas is a problem in the tourist season.
- The ongoing issues with seaweed.
- The new area on the Busselton foreshore that is being dug, what is going to be there.
- The erosion of the vegetation.
- The erosion is a concern and what they are going to do about it.
- The boat ramps in Dunsborough.

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Random telephone survey

- Sustainable funding options such as tourism.
- Signage at the beaches.
- Sharks in the region.
- Sharks.
- Shark security.
- Seaweed problem.
- Seaweed near the Marina.
- Seaweed at Port Geographe, extra rate levy at Port Geographe.
- Seaweed and erosion.
- Seaweed.
- Sea grass.
- Safety on the beach is put in place, for families with children.
- Safety at Canal Rocks boat ramp needs to be talked about
- Safety and security at the play ground and skate park, on the foreshore.
- Rubbish bins.
- Roadways and car parks on the foreshore.
- Rising sea levels.
- Review the sea wall, it should be as seamless as possible.
- Retaining walls.
- Restaurants on the beachfront in both Dunsborough and Busselton.
- Research information on global warming and its impact on the coastline.
- Removal of sand and seaweed which has built up on the steps in front of the Equinox.
- re holiday home owners - do not necessarily reside in the city and therefore cannot attend meetings however their opinion is still important as ratepayers - more effort is required to reach out and collaborate

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Random telephone survey

- Rangers on the beaches.
- Put all options on the table for discussion and not just have an agenda for business owners and the Council.
- Public consultation on sand works.
- Protection for birds.
- Proper access to the beaches with good parking facilities.
- Preventing erosion.
- Preservation of wildlife and vegetation.
- Population growth.
- Plans for the Wonnerup inlet in the future.
- Planning on the foreshore.
- Plan long term withdrawal of homes from the coast.
- Parking at the beaches.
- Overpopulation in the area ; more consultation with ratepayers.
- Non profit groups in the City of Busselton currently have to pay \$48,000.00 over twelve years, to contribute to beach erosion prevention. This needs to be discussed.
- No subdivision or development should be allowed on the coastline.
- More parking.
- More information on the erosion and sea weed build up.
- More dog free beaches.
- More discussion regarding the development of cafes and businesses around the foreshore.
- More access to dog beaches all year round.
- Local boat ramps need to be improved.
- Keeping the beaches clean so they're safe to use.
- Iron man events.

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Random telephone survey

- Information on any potential climate change issues.
- Information about what's going, potential policies.
- Improve road access to the coastal beaches within the national parks.
- I am sceptical that the erosion they are talking about, will actually happen.
- Hotel development on the beaches ; keeping the beaches open.
- Height restrictions with buildings along the coast.
- Have they got a management plan for the future.
- Growing trees on the foreshore, there are enough already.
- General information, using email, about what they are going to do.
- Future planning.
- Future development of any canal residents.
- Forward predictions and plans for the future.
- Foreshore development.
- Facilities.
- Evidence of erosion prediction.
- Erosion.
- Environmental impact.
- Elected representatives should be proactive in developing a strategy.
- Dunsborough.
- Dune management.
- Drainage into the estuary and the algae.
- Dogs on the beaches.
- Dog friendly beaches.

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Random telephone survey

- Disability access.
- Developments planned for the foreshore and any potential restrictions of access because of these.
- Development plans.
- Development on the foreshore.
- Development on the Dunsborough foreshore.
- Development and facilities on the foreshore.
- Development .
- Development on wet lands.
- Cycle tracks.
- Cost versus outcome.
- Continuing dog access.
- Constructing seawalls, rock barriers.
- Consider a marina development in Dunsborough.
- Conserve the nature of the area and minimise the amount of lawns, gardens and developments.
- Commercial fishing and sharks in the area.
- Commercial boating.
- Coastal erosion is not going to happen, it is part of the normal geological history of all areas. Move the buildings if there is erosion.
- Coastal erosion is a priority, we need policies and a budget.
- Coastal development.
- Closure of the Canal Rocks Boat ramp.
- Clean needle exchange at the beach and more doggy bags.
- City of Busselton and the residents should monitor the erosion.
- Car parking.

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Random telephone survey

- Canal development in Port Geographe.
- Busselton Jetty safety.
- Building on the foreshore.
- Building in potential erosion prone areas.
- Boat use safety.
- Boat ramps in the western part of the bay.
- Boat ramp maintenance and more of them.
- Beaches should be more user friendly.
- Banned areas for dogs.
- Awareness about invasive plants.
- As a person inside that 200 metre zone, they should be letting us know as soon as possible.
- Are pollutants being monitored from the drainage system and channels.
- Any solutions to the erosion.
- Any proposed development along the foreshore.
- Any private development should be made public, with plenty of notice.
- Any major development which may impact the coastline.
- Amenities on the Dunsborough foreshore.
- All the issues should be discussed.
- All plans should be discussed in public meetings.
- All meetings should be open to the public.
- Addressing the fear about sharks.
- Access to the beaches.
- A donation box for Busselton jetty.
- A decent boat ramp in Dunsborough.

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Online consultation survey

- An overall plan to mitigate the threat of rising sea levels
- Dunsborough to become its own shire - it gets sidelined to the “need” of Busselton township
- The contribution of climate change to rising sea levels and local efforts to reduce the impact of climate change.
- The building of more seal walls or proper dune rehabilitation.
- there should be sufficient information/facts provided to help people understand real costs to address erosion and what coastal values they might be prepared to sacrifice to save what they value the most
- Loss of fauna habitat (possums and quendas etc.) from coastal reserve due to erosion
- awareness of the seriousness of these threats and making sure that when developments go ahead they are made aware and are responsible for their decision to go ahead and develop/build anyways
- Landowners should bear most cost as they have enjoyed the benefits of coastal locations, other costs should be apportioned based on levels of climate change limiting behaviour exhibited by any party, which include actions to reduce sea level rise impact.
- Port geo beach is a debacle, need attention, sick of not having a beach at the start of summer
- The present state of the Vasse River between Strelley Street bridge and the Bypass Road bridge. It's disgusting. The finger jetties at Geographe Marina. They're Dangerous!
- future planning should take account of the huge risk of coastal inundation due to climate change. This is not a new concern and council has continued to approve coastal developments such as Port Géographe in disregard of the science
- Dunsborough NEEDS better boating facilities, neither of the boat ramps are deep enough. Dunsborough needs to focus on the beach and build a restaurant like the goose. Busselton Airport - It will boost tourism and help local businesses through winter
- when action will be taken to stop erosion. Especially around the Hospital foreshore
- please stop using rate payers money to put sculptures in inappropriate natural places on our foreshores.
- When making decisions that do not suit everyone, why not get a vote on line.
- Each year since the Port Geographe was constructed there has been a seaweed wrack problem on the Geographe fore shore. What is expected to happen over the coming years and what is planned over the next 5 years?

Q.12 Are there any issues or concerns that you would like information on or feel should be discussed in the public meetings? Online consultation survey

- protection of all houses along the foreshores from coastal erosion and encroaching seas
- Like more information updates on costal erosion and long term predictions
- Protecting natural vegetation and native bird breeding habitats, responsible dog walking and keeping beaches as natural as possible.
- Advise the clueless people that the weed comes in and the weed goes out every year, and doesn't
- Erosion is a natural process and is the price you pay for building too close to the sea. Leave the beaches alone. Don't build manmade structures to try and prevent it
- Limit development! Especially private housing, car parks.
- The beach is sometimes ruined by dog owners who don't pick up especially in winter. At the Geographe end. Perhaps dog access should be reduced.
- The Boat Launching Facility's are in need of upgrading. Abbey boat Ramp Vehicles are constantly getting bogged a winching point would be helpful if you can't fix the sand problem.
- Future development elevations to allow for sea level rise.
- Who owns land down to the water's edge? Who pays for land erosion solutions in other parts of Australia? What businesses have lease agreements where they have to pay for the preservation of the coast line?
- Costs should be shared, all Australians to pay for maintaining public access to the coast, although cases where private benefits outweigh public benefit from protection works should 'chip in', pay and share the cost
- Sea weed removal from Geographe area
- Yes more concern shown for the Possum habitat please - plant more trees and generally have more shade available in town. I.e. shade sails over parking areas
- The build up of seaweed is a natural occurrence during winter. This usually disperses during spring but often certain areas remain effected. The city should develop a policy to clean up these area before summer so they are useable to all residents.

research|solutions

24/60 Royal Street EAST PERTH
p: 08 9225 7772
e: market@researchsolutions.com.au