NSW Beach Values Estimation Tool (beta version)

User manual for coastal management options cost-benefit analysis

Department of Climate Change, Energy, the Environment and Water

NSW GOVERNMENT

Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

Artist and designer Nikita Ridgeway from Aboriginal design agency Boss Lady Creative Designs created the People and Community symbol.

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Contents

List of tables

List of figures

1. Introduction

The NSW Beach Values Estimation Tool (BVET) provides beach values estimates for use in coastal management cost-benefit analysis (CBA) calculations and other analysis. Note, the tool does not calculate option costs and benefits.

The tool provides 2 quantified socio-economic values for more than 900 sandy beaches (rock or pebble beaches are excluded) in 29 local government areas (LGAs) along the NSW coastline as follows:

- Ballina
- Bayside
- Bega Valley
- Bellingen
- Byron
- Canada Bay
- Central Coast
- Clarence Valley
- Coffs Harbour
- Eurobodalla
- Kempsey
- Kiama
- Lake Macquarie
- Mid-Coast
- Mosman
- Nambucca Valley
- Newcastle
- Northern Beaches
- Port Macquarie-Hastings
- Port Stephens
- Randwick
- Richmond Valley
- Shellharbour
- Shoalhaven
- Sutherland Shire
- Tweed
- Waverley
- Wollongong
- Woollahra.

Values are provided for:

- annual consumer surplus (CS) – value of benefits to beach users
- annual existence, bequest and option-to-use (EBO) values – natural feature value to the wider community (not related to use).

The tool also provides a standardised and transparent means of estimating the annual producer surplus (PS) – the benefit of beach visits to tourism-related businesses.

These 3 values are provided as current-day values (underlying data is adjusted for inflation annually).Using the tool, you can change 2 key attributes that influence visitation (see Section 5.1.4 A) Understanding visitor preferences), beach width and patrol status (by paid lifeguards or surf lifesaving club volunteers), to estimate the impact of alternative scenarios or options as a first-pass assessment of coastal management impacts. You can also close a beach (to public access or use) to estimate the impacts of short-term beach closures.

Importantly, the tool's underlying visitation model takes account of beach substitution behaviour and will redistribute visitation when you change beach width or patrol status of one or more beaches. The net effect on LGA beach values is measurable and can therefore be included in CBA calculations.

Underlying data and assumptions are provided so you can:

- include relevant details in a CBA report
- test the sensitivity of outcomes to key variables
- build and test scenarios offline where, for example, recent site-specific visitation data is available.

1.1 Conditions of use

The Department of Climate Change, Energy, the Environment and Water (the department) has compiled this tool in good faith, exercising all due care and attention. All values contained in the BVET are estimates only. No representation is made about the accuracy, completeness or suitability of the information (including methodologies) in the BVET for any particular purpose. DCCEEW shall not be liable for any damage which may occur to any person or organisation taking action or not on the basis of this tool. Users should seek appropriate advice when applying the information to their specific needs.

1.2 Accessing the tool

A beta version of the tool has been released for user testing and is available online. It can be accessed from https://beachvaluesestimationtool.shinyapps.io/NSW_Beach_Values_Estimation_Tool/.

Please send feedback on the beta version of the tool via email to beachvaluesestimationtool@dcceew.nsw.gov.au.

2. Navigation and functionality

Access menu tabs from the tool's home page (Figure 1) using the navigation bar. Hover your cursor over the tab you wish to see and click.

There are 5 tabs:

1. **Home** – tool purpose, user resources and contact information (Figure 1)
2. **Choose study area** –select the LGA the beach is in and check beach attributes data
3. **LGA values** – LGA boundary-of-analysis CS, PS and EBO values for input to coastal management CBA
4. **State values** – state boundary-of-analysis CS, PS and EBO values for inclusion in coastal management CBA report where relevant
5. **Underlying data** – all data and assumptions used to calculate the CS, PS and EBO values.

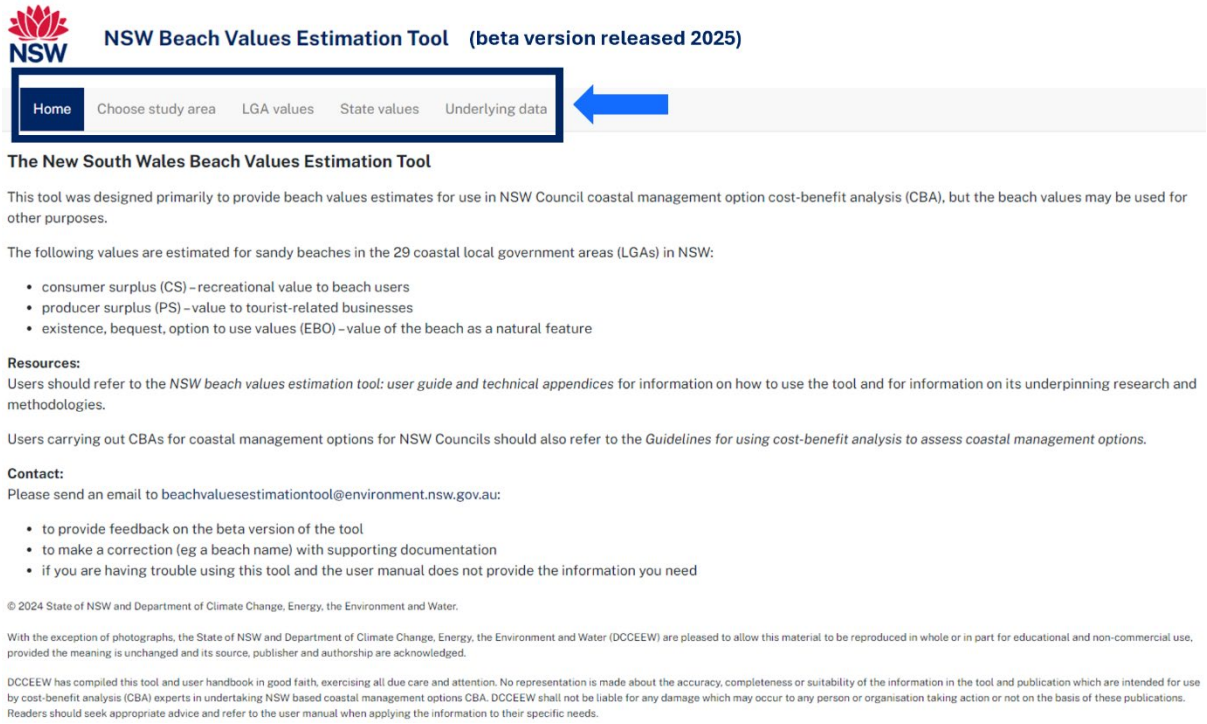


Figure 1 Home page menu tabs

2.1 Downloading and exporting

'LGA values', 'State values' and 'Underlying data' tab information can be printed, downloaded and copied-and-pasted to your chosen software for further analysis and inclusion in CBA reports.

Click the 'Copy' button and a notification will appear indicating how many rows of data have been copied to your clipboard.

Click the 'Excel' button and an Excel file will be saved in your 'Downloads' folder.

Click the ‘Print’ button and a window prompt will appear so you can send a copy of the screen to a printer.

2.2 ‘Choose study area’ tab

To obtain values estimates for a beach, select the LGA where the beach is located (Figure 2). LGAs are listed in alphabetical order in the drop-down menu.

Data in all other tabs is populated by the LGA selected in this tab and by any changes made to scenario data fields (see below) in this tab. You cannot change LGA selection or scenario data fields from any other tab.

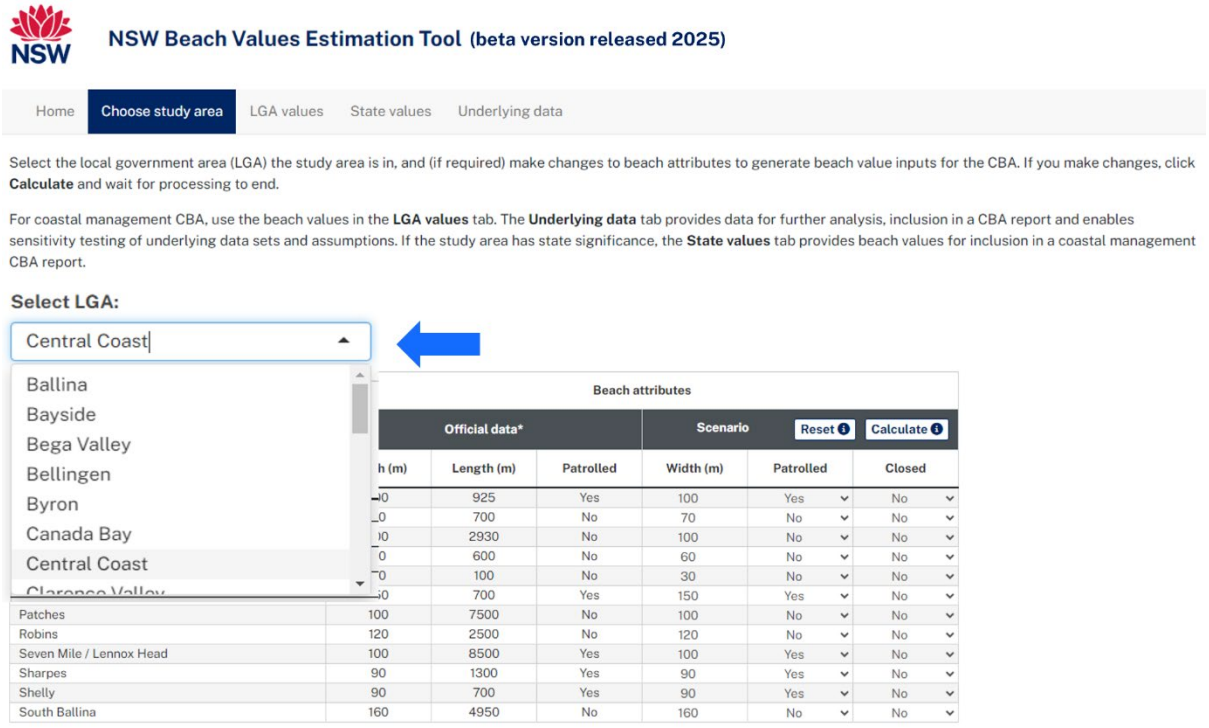


Figure 2 ‘Choose study area’ tab: select the LGA

When you select an LGA (other than Ballina which is the default setting), a list of beaches for the selected LGA will be displayed in alphabetical order (Figure 3). Use the scroll bar on the left to see all the beaches in the LGA.

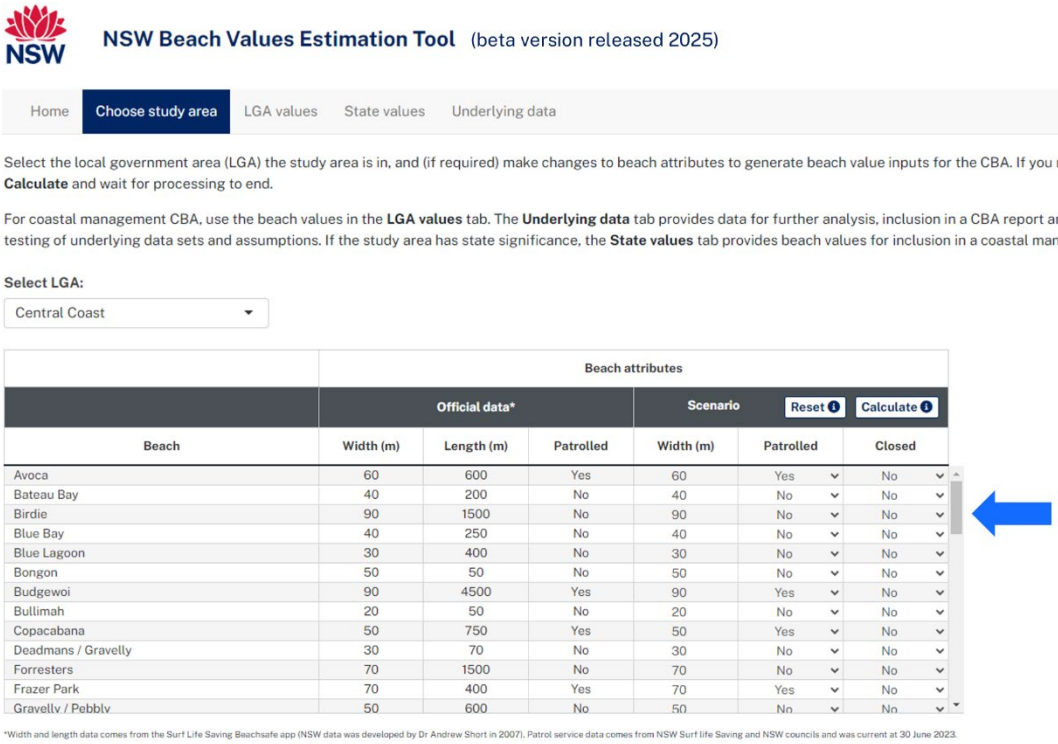


Figure 3 'Choose study area' tab: list of beaches in the LGA

2.2.1 Official data

Surf Life Saving NSW provided width and length attribute data sourced from *Beaches of the New South Wales Coast, A guide to their nature, characteristics, surf and safety* (Short 2007). Patrol status data was sourced from Surf Life Saving NSW and NSW councils. Official data cannot be edited.

If current beach width and patrol status match the official data, then the CS, PS and EBO values estimates in all the tabs ('LGA values', 'State values' and 'Underlying data') can be used for the base case.

The term 'official data' is used instead of 'base case' because current conditions at a beach may not match official data and the estimates would therefore not represent base case values. This is likely to be common, since the official dataset is static and beach conditions are dynamic. As a tool user you can generate updated base case values by changing scenario data fields where official data and beach conditions do not match (see next section).

2.2.2 Scenario data fields

Changes to beach attribute data fields in the 'Scenario' columns can be used to:

- estimate updated base case CS, PS and EBO values where current beach attributes do not match official data
- obtain first-pass estimates of coastal management impacts (including for simple CBA such as amenity-only sand replenishment).

The term ‘scenario’ is used instead of (management) ‘option’ because the beach attributes in the scenario section can be changed to generate both option values and updated base case values.

2.2.3 Changing scenario data fields

The beach width and the patrol status can be changed at more than one beach at a time. However, it is not possible to change the width or patrol status of a beach and to close it at the same time because the tool calculates beach closure impacts separately from the impacts of beach attribute changes. Closing a beach will reset attributes to the official data values, and changing an attribute will reset the beach status to open.

You can make changes by clicking the ‘Scenario’ cells to change the values:

- For beach width, enter a specific number in the ‘Width’ cell, or click the arrows to adjust the value up or down.
- For patrol status, use the drop-down menu in the ‘Patrolled’ cell to select either ‘Yes’ or ‘No’.
- To close the beach for the analysis, select 'Yes' in the 'Closed' cells for the relevant beaches.
- Any changes to attributes will be shaded light blue.

Note: visitation behaviour modelling

Based on the visitation behavioural modelling:

- an **increase** in beach width will **increase** the number of visits to that beach
- **introducing** a patrol service will **increase** the number of visits to that beach.

Creating a scenario will impact visitation figures for all other beaches, both within the LGA and outside the LGA. Therefore, depending on the scenario, the CS and PS for all other beaches will be affected. However, the total (net) impact of increasing beach width or introducing a patrol service on CS and PS values will be positive for the LGA. Either a beach width decrease or removal of a patrol service will have a negative total (net) impact on CS and PS values for the LGA.

EBO values

EBO values are independent of recreation use or visitation and reflect the value of a beach as a stand-alone natural feature. Therefore, changes in width to one beach will not impact the EBO value of other beaches within or outside the LGA.

Limitations on beach width changes apply for estimating the benefits of widening by sand replenishment. See Section 4.2, ‘Limit on benefits of sand replenishment'.

When using the scenario function of the tool for simple cost benefit analysis and first pass assessments, users should keep in mind the limitations relating to significant

beach width changes. See Section 4.4 Limit on using scenarios to estimate beach width change impacts.

Click the ‘Calculate’ button (Figure 4) to generate the results for any changes to scenario data fields. A ‘Processing calculation …’ status bar will appear in the bottom right-hand corner of the screen (Figure 5), to indicate results are being generated. This may take a few seconds.

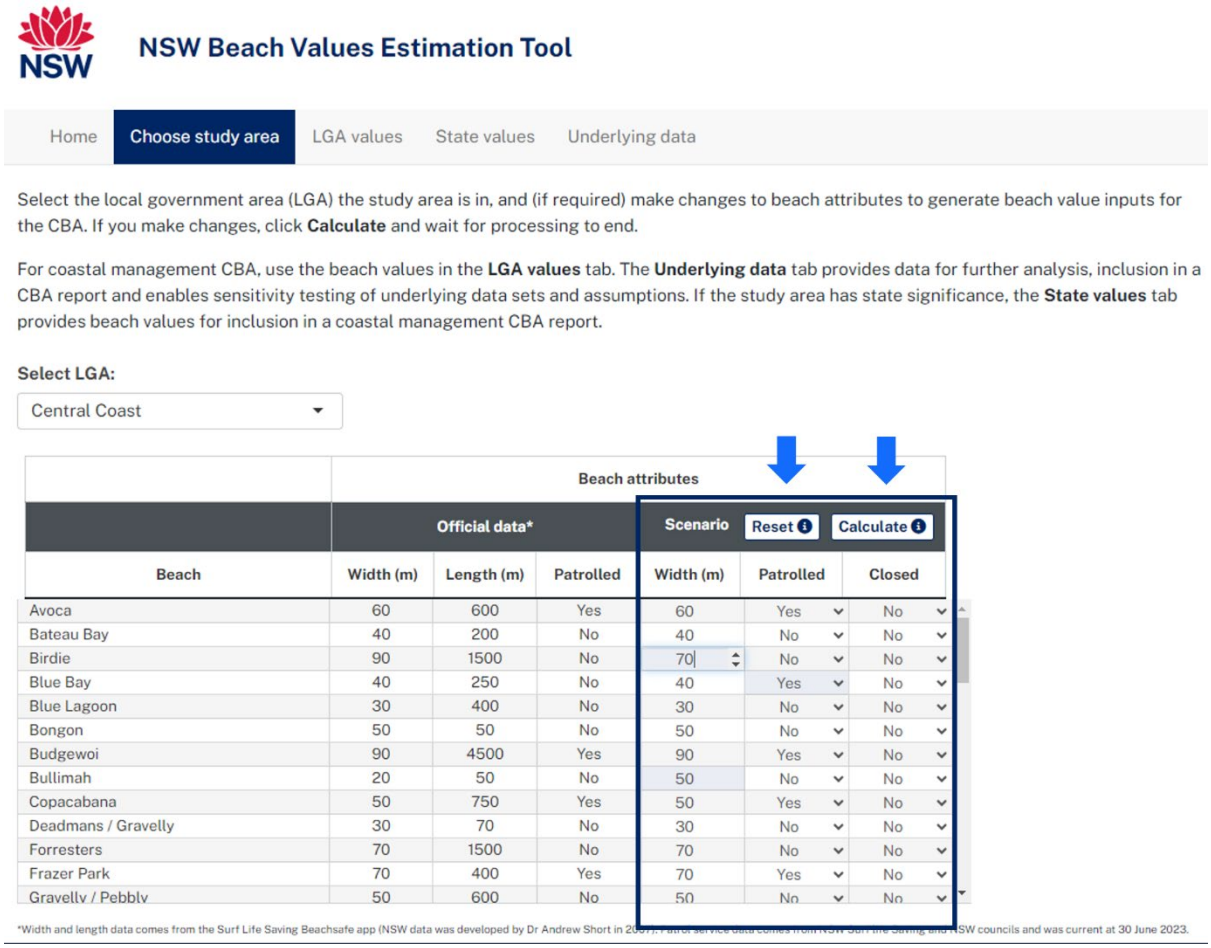


Figure 4 ‘Choose study area’ tab: reset scenario data and calculation functions

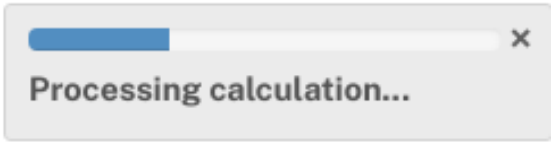


Figure 5 ‘Choose study area’ tab: ‘Processing calculation’ status bar

To reset all changes made to scenario data back to the official data figures, click the ‘Reset’ button (Figure 4). All cells in the scenario columns will revert, and the light-blue highlighting will be removed.

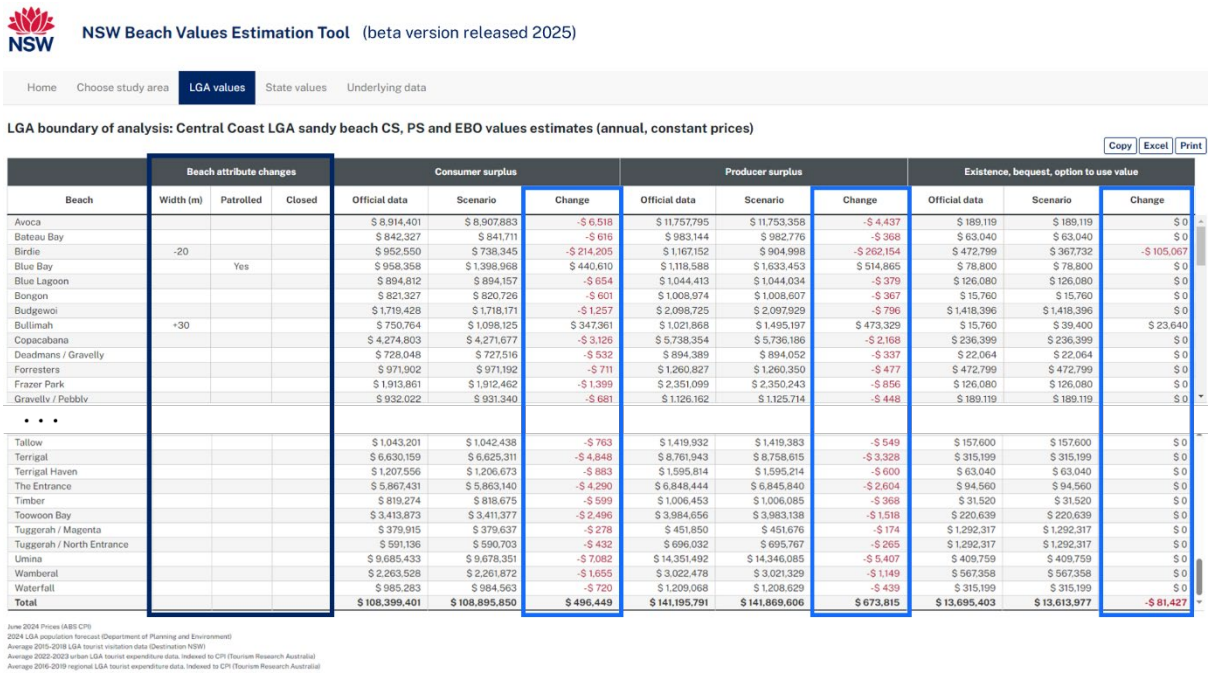
2.3 ‘LGA values’ tab

The CBA guidelines – *Guidelines for using cost-benefit analysis to assess coastal management options* (DPIE 2020) – stipulate the LGA should be used as the boundary of analysis. The values in this tab are the LGA-boundary-of-analysis-based values and these values should be used in coastal management CBA.

Any scenario data field changes made in the ‘Choose study area’ tab are shown in the ‘Beach attributes changes’ columns (the dark blue box in Figure 6). For demonstration purposes three scenario data fields have been changed.

LGA CS, PS and EBO values estimates based on official data and scenario data are provided, and differences between values in the ‘Official data’ columns and ‘Scenario’ columns are shown in the ‘Change’ columns (the blue boxes in Figure 6).

...



	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Avoca				$ 8,914,401	$ 8,907,883	-$ 6,518	$ 11,757,795	$ 11,753,358	-$ 4,437	$ 189,119	$ 189,119	$ 0
Bateau Bay				$ 842,327	$ 841,711	-$ 616	$ 983,144	$ 982,776	-$ 368	$ 63,040	$ 63,040	$ 0
Birdie	-20			$ 952,550	$ 738,345	-$ 214,205	$ 1,167,152	$ 904,998	-$ 262,154	$ 472,799	$ 367,732	-$ 105,067
Blue Bay		Yes		$ 958,358	$ 1,398,968	$ 440,610	$ 1,118,588	$ 1,633,453	$ 514,865	$ 78,800	$ 78,800	$ 0
Blue Lagoon				$ 894,812	$ 894,157	-$ 654	$ 1,044,413	$ 1,044,034	-$ 379	$ 126,080	$ 126,080	$ 0
Bongon				$ 821,327	$ 820,726	-$ 601	$ 1,008,974	$ 1,008,607	-$ 367	$ 15,760	$ 15,760	$ 0
Budgewoi				$ 1,719,428	$ 1,718,171	-$ 1,257	$ 2,098,725	$ 2,097,929	-$ 796	$ 1,418,396	$ 1,418,396	$ 0
Bullimah	+30			$ 750,764	$ 1,098,125	$ 347,361	$ 1,021,868	$ 1,495,197	$ 473,329	$ 15,760	$ 39,400	$ 23,640
Copacabana				$ 4,274,803	$ 4,271,677	-$ 3,126	$ 5,738,354	$ 5,736,186	-$ 2,168	$ 236,399	$ 236,399	$ 0
Deadmans / Gravelly				$ 728,048	$ 727,516	-$ 532	$ 894,389	$ 894,052	-$ 337	$ 22,064	$ 22,064	$ 0
Forresters				$ 971,902	$ 971,192	-$ 711	$ 1,260,827	$ 1,260,350	-$ 477	$ 472,799	$ 472,799	$ 0
Frazer Park				$ 1,913,861	$ 1,912,462	-$ 1,399	$ 2,351,099	$ 2,350,243	-$ 856	$ 126,080	$ 126,080	$ 0
Gravelly / Pebbly				$ 932,022	$ 931,340	-$ 681	$ 1,126,162	$ 1,125,714	-$ 448	$ 189,119	$ 189,119	$ 0
• • •												
Tallow				$ 1,043,201	$ 1,042,438	-$ 763	$ 1,419,932	$ 1,419,383	-$ 549	$ 157,600	$ 157,600	$ 0
Terrigal				$ 6,630,159	$ 6,625,311	-$ 4,848	$ 8,761,943	$ 8,758,615	-$ 3,328	$ 315,199	$ 315,199	$ 0
Terrigal Haven				$ 1,207,556	$ 1,206,673	-$ 883	$ 1,595,814	$ 1,595,214	-$ 600	$ 63,040	$ 63,040	$ 0
The Entrance				$ 5,867,431	$ 5,863,140	-$ 4,290	$ 6,848,444	$ 6,845,840	-$ 2,604	$ 94,560	$ 94,560	$ 0
Timber				$ 819,274	$ 818,675	-$ 599	$ 1,006,453	$ 1,006,085	-$ 368	$ 31,520	$ 31,520	$ 0
Toowoon Bay				$ 3,413,873	$ 3,411,377	-$ 2,496	$ 3,984,656	$ 3,983,138	-$ 1,518	$ 220,639	$ 220,639	$ 0
Tuggerah / Magenta				$ 379,915	$ 379,637	-$ 278	$ 451,850	$ 451,676	-$ 174	$ 1,292,317	$ 1,292,317	$ 0
Tuggerah / North Entrance				$ 591,136	$ 590,703	-$ 432	$ 696,032	$ 695,767	-$ 265	$ 1,292,317	$ 1,292,317	$ 0
Umina				$ 9,685,433	$ 9,678,351	-$ 7,082	$ 14,351,492	$ 14,346,085	-$ 5,407	$ 409,759	$ 409,759	$ 0
Wamberal				$ 2,263,528	$ 2,261,872	-$ 1,655	$ 3,022,478	$ 3,021,329	-$ 1,149	$ 567,358	$ 567,358	$ 0
Waterfall				$ 985,283	$ 984,563	-$ 720	$ 1,209,068	$ 1,208,629	-$ 439	$ 315,199	$ 315,199	$ 0
Total				**$ 108,399,401**	**$ 108,895,850**	**$ 496,449**	**$ 141,195,791**	**$ 141,869,606**	**$ 673,815**	**$ 13,695,403**	**$ 13,613,977**	**-$ 81,427**

June 2024 Prices (ABS CPI)
2024 LGA population forecast (Department of Planning and Environment)
Average 2015-2018 LGA tourist visitation data (Destination NSW)
Average 2022-2023 urban LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)
Average 2016-2019 regional LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)

Figure 6 ‘LGA values’ tab: beach attribute changes

In the example above:

- Birdie Beach: decreasing the width by 20 m reduces the CS and PS values because visitation falls. Some of the loss in visitation to Birdie Beach is distributed to other beaches in the LGA. The EBO value also falls because some of the beach width is lost.
- Blue Bay Beach: providing a patrol service increases the CS and PS because visitation increases, but the EBO value is unchanged because this value is not linked to visitation. Some of the increase in visitation to Blue Bay Beach will have come from other beaches in the LGA.
- Bullimah Beach: increasing the width by 30 m increases the CS, PS and EBO values. CS and PS values increase because visitation increases. Some of the increase in

visitation will have come from other beaches in the LGA. The EBO value increases because the beach is bigger.

- The net effects of all the changes (the yellow box) are that visitation in the Central Coast LGA increases because introducing a patrol service and widening a beach offsets the negative impact of narrowing at another beach so overall LGA visitation increases.

Obtaining LGA values data is the starting point for estimating base case and management option CS, PS and EBO costs and benefits. See Section 3, 'User journeys (worked examples)' for information on what data you need, and Section 4, 'Calculating beach values costs and benefits' for what to do with the data.

2.4 'State values' tab

While the CBA guidelines stipulate using the LGA as the boundary of analysis for coastal management CBA, the tool also provides CS, PS and EBO values estimates using a state-based boundary-of-analysis (Figure 7) so that any significant state costs or benefits can be noted in a CBA report. State-level impacts must not be included in coastal management cost-benefit calculations.)

If you are not using beach values for coastal management CBA and or a Council level project, you should use these state values in your work.

State-based values include LGA values. State-only values can be derived by subtracting the LGA figures in the 'LGA values' tab from the figures in the 'State values' tab.

Any scenario data field changes made in the 'Choose study area' tab are shown in the 'Beach attribute changes' columns (the dark blue box) in this tab (Figure 7).

State CS, PS and EBO values estimates based on official data and scenario data are provided, and any differences in official and scenario data estimates are shown in the 'Change' columns (blue boxes).

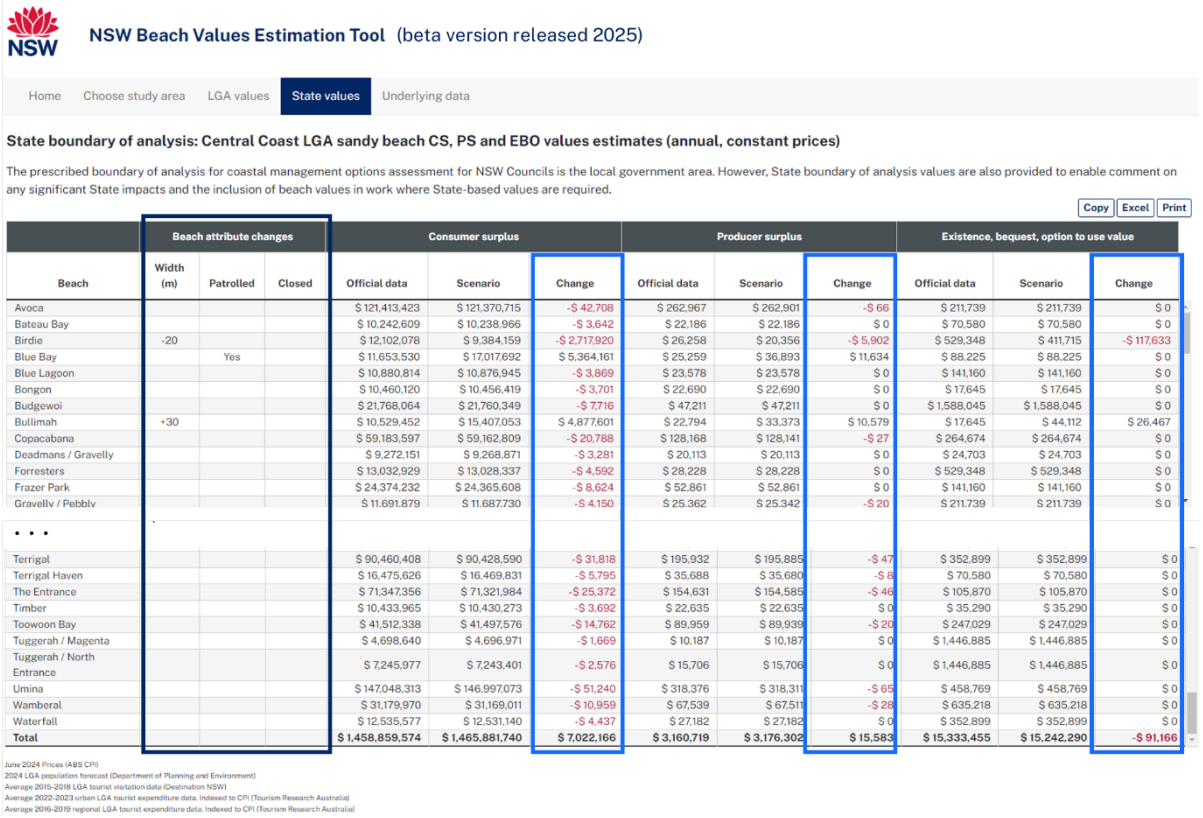


Figure 7 'State values' tab

2.5 'Underlying data' tab

Underlying data and assumptions are provided in this tab for inclusion in CBA reports. This information also allows you to examine tool results, and provides the flexibility to build scenarios offline to test the sensitivity of key variables and use alternative datasets.

Underlying data provided in this tab (Figure 8 and Figure 9) is as follows:

- visitation data used to calculate CS and PS values
- tourism expenditure per visit which is used to calculate PS per visit
- LGA and state PS per visit to calculate PS values
- implied LGA and state average CS per visit
- Australian tourism industry profitability to calculate PS
- LGA and state value per linear metre of sand used to calculate EBO values.

Dataset details are provided at the bottom of the screen (Figure 9) for inclusion in CBA reports and to adjust if data becomes available between tool updates.

The tool is updated once a year and a revised version is published in September.

NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

Central Coast LGA underlying visitation estimates (annual)

Please refer to the technical appendicies in the user handbook for more information on calculations and methodology.

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	Visits by origin													
	Official data						Scenario						Change	
Beach	LGA	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight	Total	LGA	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight	Total	Change #	Change %
Avoca	62,932	349,431	428,985	10,015	8,132	859,496	62,878	349,298	428,822	10,012	8,131	859,140	-356	0
Bateau Bay	5,947	29,212	35,863	845	686	72,554	5,941	29,201	35,849	845	686	72,523	-30	0
Birdie	6,725	34,682	42,578	1,000	812	85,796	5,212	26,892	33,015	775	630	66,524	-19,273	-22
Blue Bay	6,766	33,236	40,803	962	781	82,548	9,875	48,534	59,583	1,405	1,141	120,537	37,989	+46
Blue Lagoon	6,317	31,032	38,098	898	729	77,074	6,312	31,021	38,083	898	729	77,042	-32	0
Bongon	5,798	29,982	36,808	864	702	74,154	5,793	29,971	36,794	864	702	74,123	-31	0
Budgewoi	12,139	62,364	76,562	1,798	1,460	154,322	12,128	62,340	76,532	1,798	1,460	154,258	-64	0
Bullimah	5,300	30,371	37,285	868	705	74,530	7,751	44,438	54,555	1,271	1,032	109,048	34,518	+46
Copacabana	30,179	170,544	209,371	4,881	3,964	418,939	30,152	170,479	209,291	4,880	3,963	418,766	-173	0
Deadmans / Gravelly	5,140	26,577	32,628	766	622	65,732	5,135	26,567	32,615	766	622	65,705	-27	0
Forresters	6,861	37,470	46,000	1,075	873	92,280	6,855	37,455	45,983	1,075	873	92,242	-38	0
Frazer Park	13,511	69,864	85,770	2,013	1,635	172,794	13,499	69,838	85,738	2,013	1,635	172,722	-72	0
Gravelly / Pebbly	6,580	33,463	41,082	966	784	82,875	6,574	33,450	41,066	965	784	82,840	-35	0

Figure 8 'Underlying data' tab: visits by origin

Central Coast LGA tourist expenditure data (per visit, constant prices)

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	Visits by origin			
	Official data			
	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight
Tourist expenditure per visit	$172.11	$99.05	$172.11	$76.77
LGA producer surplus per visit	$19.28	$11.09	$19.28	$8.60
State producer surplus per visit			$19.28	$8.60

Other assumptions

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LGA resident average consumer surplus per visit	$141.65
State resident average consumer surplus per visit	$144.26
IBIS World Australian Industry Tourism profitability 2023	11.20%
LGA based EBO value per 1 meter length of sandy beach	$315.20
State based EBO value per 1 meter length of sandy beach	$352.90

June 2024 Prices (ABS CPI)
2024 LGA population forecast (Department of Planning and Environment)
Average 2022-2023 urban LGA tourist expenditure data, indexed to CPI (Tourism Research Australia)
Average 2016-2019 regional LGA tourist expenditure data, indexed to CPI (Tourism Research Australia)

Figure 9 'Underlying data' tab: tourism expenditure data and other assumptions

3. User journeys (worked examples)

User journeys provide information specific to the needs of the 2 user groups the BVET is designed for:

- council staff or CBA practitioners conducting simple CBAs (e.g. to assess the benefits of one-off or ongoing sand nourishment to improve beach amenity)
- CBA practitioners conducting more-complex analysis in which management options include protection against beach erosion.

3.1 Simple cost-benefit analysis

You can use the BVET in simple CBA to assess the impact of beach nourishment to manage or improve beach amenity, for example.

3.1.1 Example

In this hypothetical worked example, we want to assess the impact of beach nourishment at Monterey Beach in Bayside LGA. Monterey Beach is a section of Lady Robinsons Beach which '... commences at President Avenue ... and extends 1 km to the south' (Beachsafe app), ending at the groyne near the end of Scarborough Street (area indicated by the orange line in Figure 10). The beach is 30 m wide according to official data. In this example we want to know what the benefits of nourishing the beach, increasing its width by 50 m (that is, from 30 to 80 m) will be.

Figure 10 Monterey Beach, Bayside LGA

Source: Six Maps, NSW Government.

In the 'Choose study area' tab, select 'Bayside' from the drop-down list (Figure 11).

Data in all other tabs is populated by which LGA is selected in this tab and by what changes are made to scenario data fields in this tab. You cannot change LGA selection or scenario data fields from any other tab.

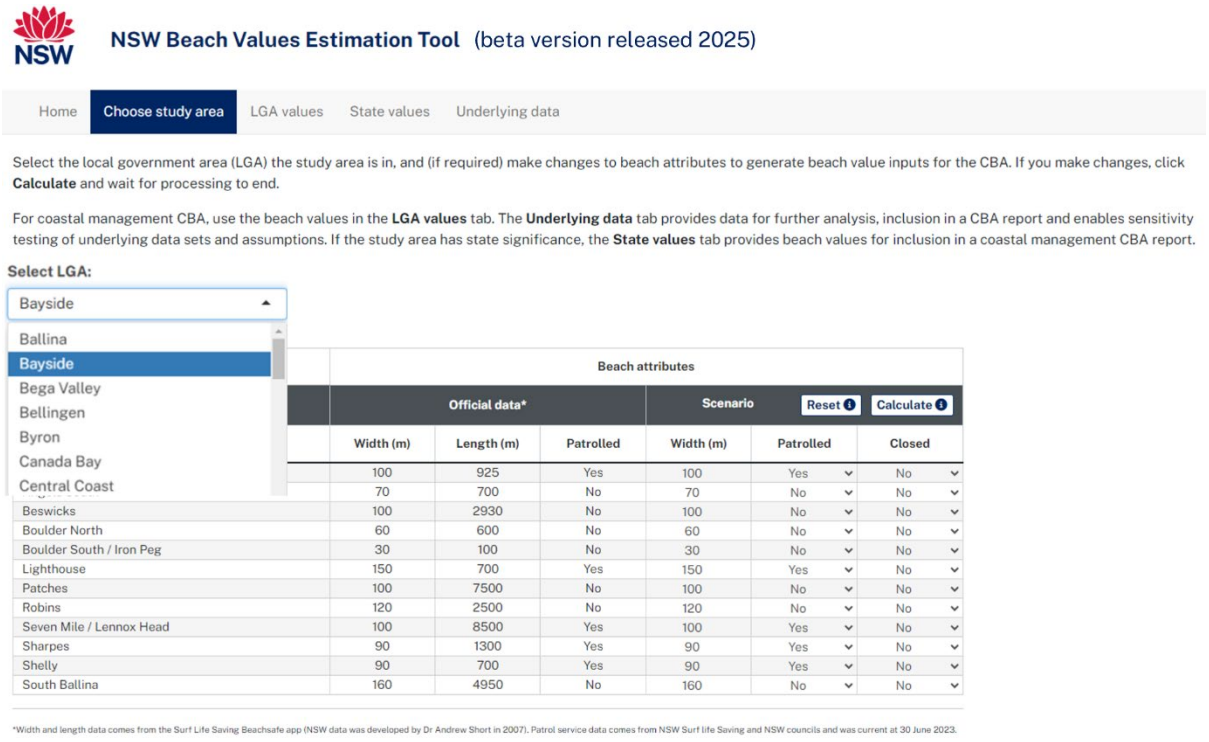

Figure 11 'Choose study area' tab: select Bayside LGA

The screen will refresh with a list of beaches in Bayside LGA (Figure 12).

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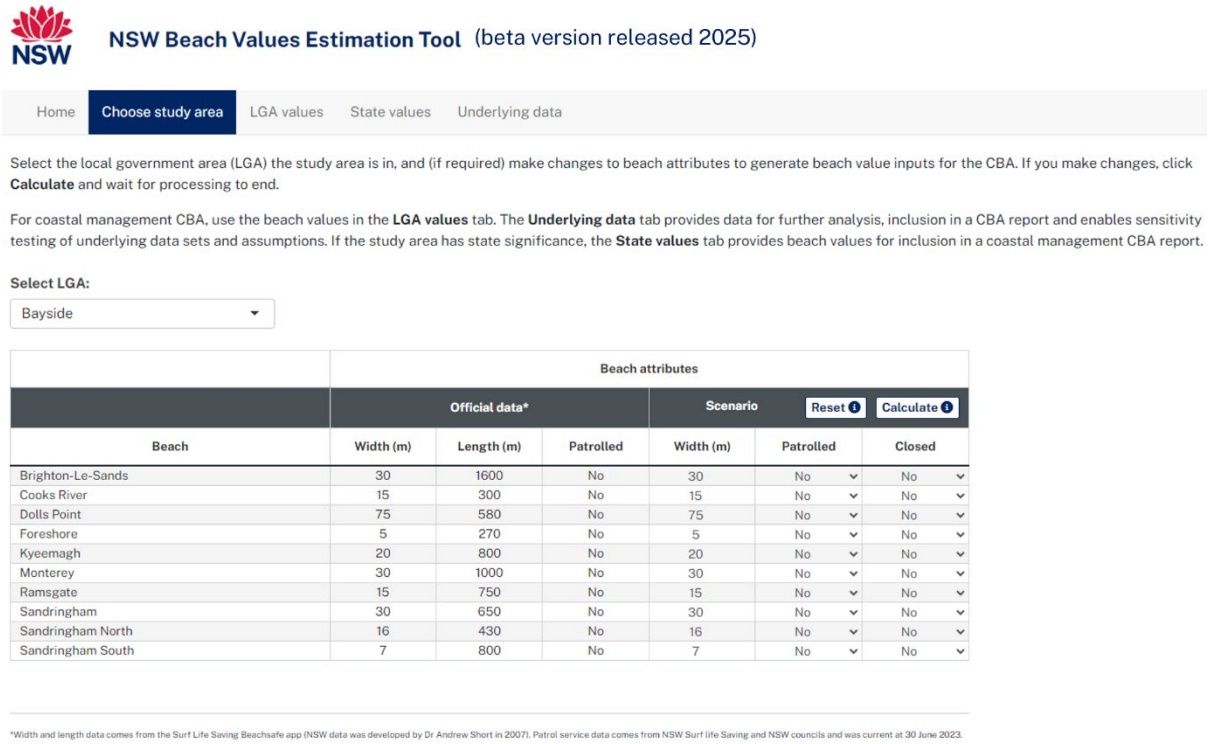


Figure 12 'Choose study area' tab: list of beaches in Bayside LGA

3.1.2 Simple CBA option values estimates

If current beach conditions match official data

If the current average width of Monterey Beach (low-tide shoreline to the seawall or the foot of the sand dunes) is the same as the official data, the total LGA values provided in the 'LGA values' tab are the base case values.

To find out how widening Monterey Beach by 50 m impacts beach values, in the 'Scenario' columns change the 'Width' figure to 80 m (current width of 30 m plus 50 m added by nourishment) (Figure 13) and click the 'Calculate' button. The 'Processing calculation' status bar at the bottom right-hand corner of the screen will disappear when the calculations are complete.

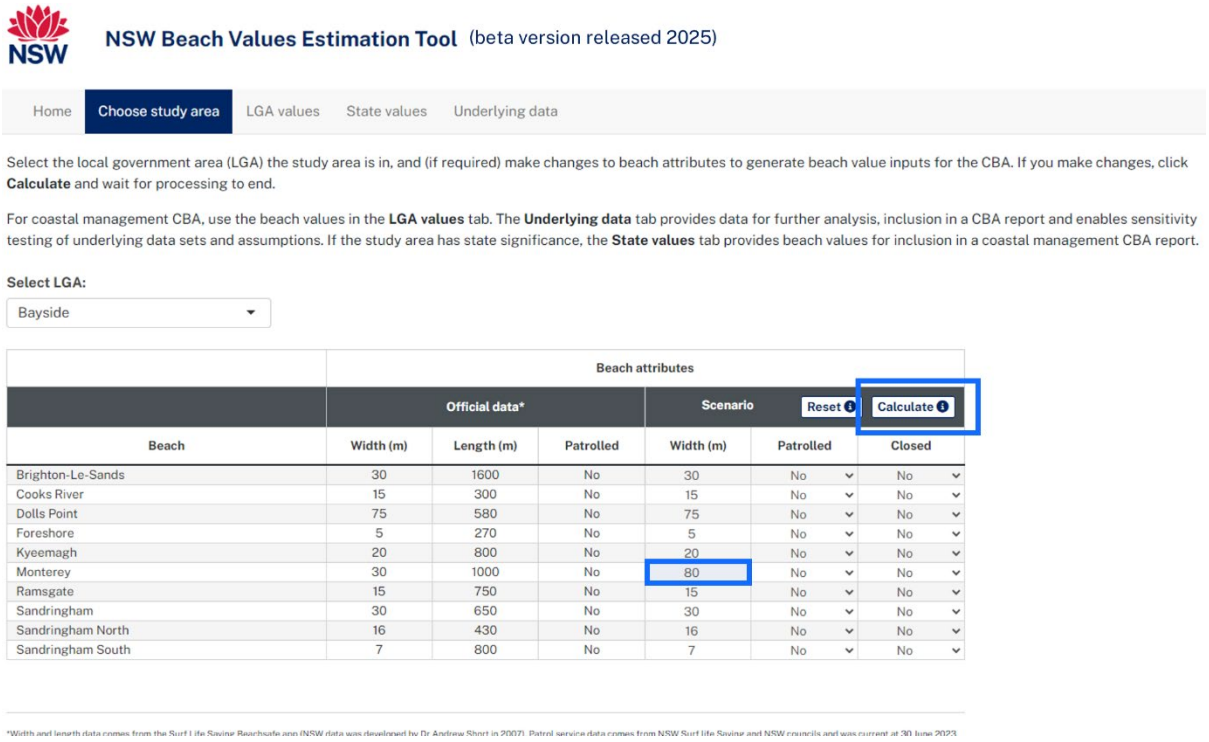
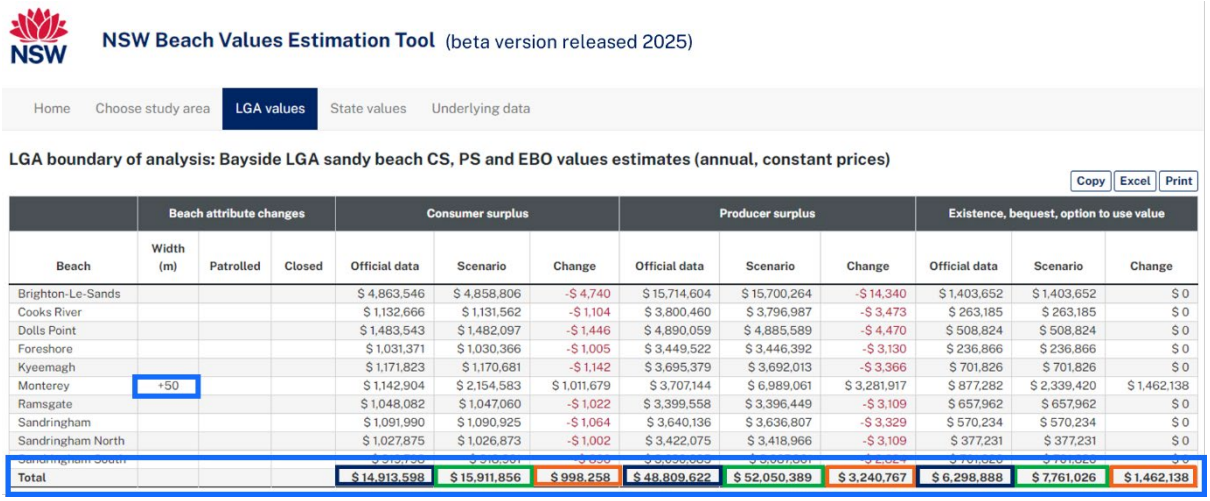


Figure 13 Change scenario width of Monterey Beach to 80 m

Once the calculations are complete, click the 'LGA values' tab (Figure 14) to obtain the results.



NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

LGA boundary of analysis: Bayside LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy Excel Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Brighton-Le-Sands				$ 4,863,546	$ 4,858,806	-$ 4,740	$ 15,714,604	$ 15,700,264	-$ 14,340	$ 1,403,652	$ 1,403,652	$ 0
Cooks River				$ 1,132,666	$ 1,131,562	-$ 1,104	$ 3,800,460	$ 3,796,987	-$ 3,473	$ 263,185	$ 263,185	$ 0
Dolls Point				$ 1,483,543	$ 1,482,097	-$ 1,446	$ 4,890,059	$ 4,885,589	-$ 4,470	$ 508,824	$ 508,824	$ 0
Foreshore				$ 1,031,371	$ 1,030,366	-$ 1,005	$ 3,449,522	$ 3,446,392	-$ 3,130	$ 236,866	$ 236,866	$ 0
Kyeemagh				$ 1,171,823	$ 1,170,681	-$ 1,142	$ 3,695,379	$ 3,692,013	-$ 3,366	$ 701,826	$ 701,826	$ 0
Monterey	+50			$ 1,142,904	$ 2,154,583	$ 1,011,679	$ 3,707,144	$ 6,989,061	$ 3,281,917	$ 877,282	$ 2,339,420	$ 1,462,138
Ramsgate				$ 1,048,082	$ 1,047,060	-$ 1,022	$ 3,399,558	$ 3,396,449	-$ 3,109	$ 657,962	$ 657,962	$ 0
Sandringham				$ 1,091,990	$ 1,090,925	-$ 1,064	$ 3,640,136	$ 3,636,807	-$ 3,329	$ 570,234	$ 570,234	$ 0
Sandringham North				$ 1,027,875	$ 1,026,873	-$ 1,002	$ 3,422,075	$ 3,418,966	-$ 3,109	$ 377,231	$ 377,231	$ 0
Sandringham South												
Total				$ 14,913,598	$ 15,911,856	$ 998,258	$ 48,809,622	$ 52,050,389	$ 3,240,767	$ 6,298,888	$ 7,761,026	$ 1,462,138

Figure 14 Base case and 50 m sand replenishment option values estimates

Figure 14 shows that Monterey Beach width was increased by 50 m (the small blue box). The change columns show the CS, PS and EBO values for Monterey Beach increase under this scenario, but the CS and PS values for all other beaches decrease because some visitation is substituted to Monterey. Overall, LGA beach visitation increases so there is a net increase in LGA CS, PS and EBO values (the orange boxes) for a 50 m widening of Monterey Beach from sand replenishment. We use the LGA totals so that redistribution impacts are included (otherwise benefits would be overstated).

The tool values reflect annual benefits derived from a beach. So, you would use LGA 'Total' row figures for CS, PS and EBO values for the base case in every year of the study period and the CS, PS and EBO values for the scenario from the year sand replenishment takes place.

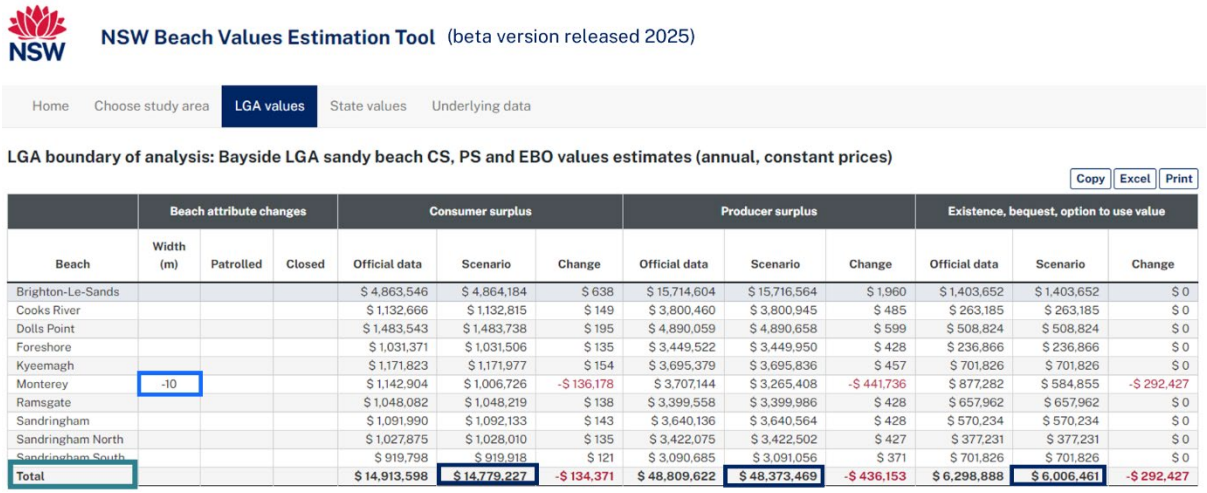
You should refer to Section 4, 'Calculating beach values costs and benefits' to see if any of the special considerations apply, and make adjustments where relevant.

If current beach conditions do not match official data

If the current (average) width of the beach (low-tide shoreline to the seawall or foot of the sand dunes) does not match the width in the 'Official data' column you need to change the 'Scenario' beach width to the current average width to generate updated estimates for the base case. If the current patrol status is not the same as the 'Official data' this needs to be changed too.

If, for example, the current average width is 20 m (10 m narrower than the official width) change the scenario width to 20 m (current width of 30 m minus 10 m narrowing), click the 'Calculate' button, then copy ('Copy' button) or download ('Excel' button) data from each tab in the tool and label the scenario estimates 'base case'. The totals in the dark blue boxes in Figure 15 are updated base case values estimates.

Copy or download this information for the 'LGA values' tab and the 'State values' and 'Underlying data' tabs.



NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

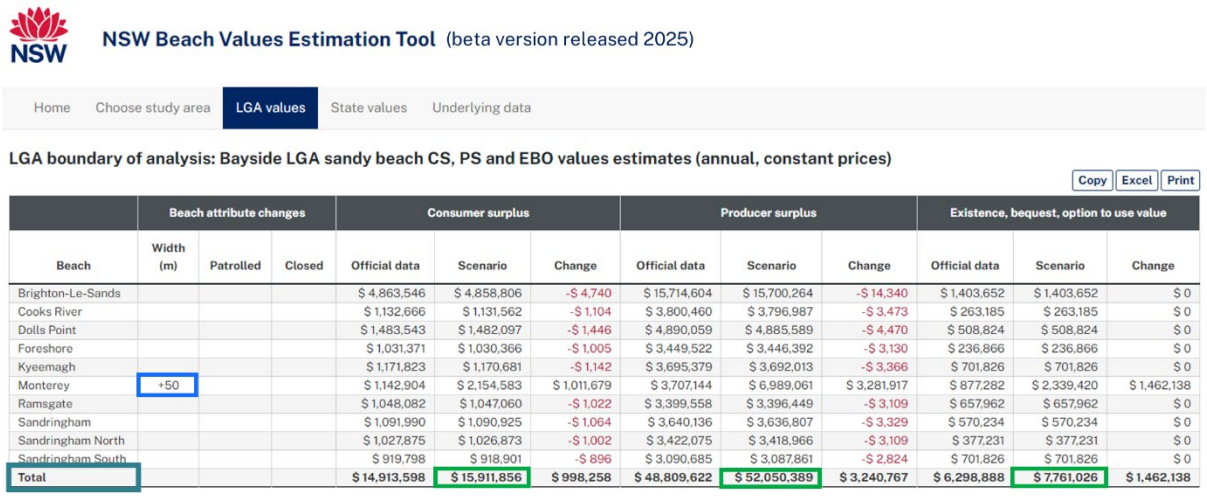
LGA boundary of analysis: Bayside LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy Excel Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Brighton-Le-Sands				$ 4,863,546	$ 4,864,184	$ 638	$ 15,714,604	$ 15,716,564	$ 1,960	$ 1,403,652	$ 1,403,652	$ 0
Cooks River				$ 1,132,666	$ 1,132,815	$ 149	$ 3,800,460	$ 3,800,945	$ 485	$ 263,185	$ 263,185	$ 0
Dolls Point				$ 1,483,543	$ 1,483,738	$ 195	$ 4,890,059	$ 4,890,658	$ 599	$ 508,824	$ 508,824	$ 0
Foreshore				$ 1,031,371	$ 1,031,506	$ 135	$ 3,449,522	$ 3,449,950	$ 428	$ 236,866	$ 236,866	$ 0
Kyeemagh				$ 1,171,823	$ 1,171,977	$ 154	$ 3,695,379	$ 3,695,836	$ 457	$ 701,826	$ 701,826	$ 0
Monterey	-10			$ 1,142,904	$ 1,006,726	-$ 136,178	$ 3,707,144	$ 3,265,408	-$ 441,736	$ 877,282	$ 584,855	-$ 292,427
Ramsgate				$ 1,048,082	$ 1,048,219	$ 138	$ 3,399,558	$ 3,399,986	$ 428	$ 657,962	$ 657,962	$ 0
Sandringham				$ 1,091,990	$ 1,092,133	$ 143	$ 3,640,136	$ 3,640,564	$ 428	$ 570,234	$ 570,234	$ 0
Sandringham North				$ 1,027,875	$ 1,028,010	$ 135	$ 3,422,075	$ 3,422,502	$ 427	$ 377,231	$ 377,231	$ 0
Sandringham South				$ 919,798	$ 919,918	$ 121	$ 3,090,685	$ 3,091,056	$ 371	$ 701,826	$ 701,826	$ 0
Total				$ 14,913,598	$ 14,779,227	-$ 134,371	$ 48,809,622	$ 48,373,469	-$ 436,153	$ 6,298,888	$ 6,006,461	-$ 292,427

Figure 15 **Current-condition-based values estimates (actual average beach width 10 m narrower than official data)**

Go back to the 'Choose study area' tab to change the scenario width to 80 m, click 'Calculate', then copy or download data from each tab as above. The data in the green boxes in Figure 16 are the scenario (option) values.



NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

LGA boundary of analysis: Bayside LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy Excel Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Brighton-Le-Sands				$ 4,863,546	$ 4,858,806	-$ 4,740	$ 15,714,604	$ 15,700,264	-$ 14,340	$ 1,403,652	$ 1,403,652	$ 0
Cooks River				$ 1,132,666	$ 1,131,562	-$ 1,104	$ 3,800,460	$ 3,796,987	-$ 3,473	$ 263,185	$ 263,185	$ 0
Dolls Point				$ 1,483,543	$ 1,482,097	-$ 1,446	$ 4,890,059	$ 4,885,589	-$ 4,470	$ 508,824	$ 508,824	$ 0
Foreshore				$ 1,031,371	$ 1,030,366	-$ 1,005	$ 3,449,522	$ 3,446,392	-$ 3,130	$ 236,866	$ 236,866	$ 0
Kyeemagh				$ 1,171,823	$ 1,170,681	-$ 1,142	$ 3,695,379	$ 3,692,013	-$ 3,366	$ 701,826	$ 701,826	$ 0
Monterey	+50			$ 1,142,904	$ 2,154,583	$ 1,011,679	$ 3,707,144	$ 6,989,061	$ 3,281,917	$ 877,282	$ 2,339,420	$ 1,462,138
Ramsgate				$ 1,048,082	$ 1,047,060	-$ 1,022	$ 3,399,558	$ 3,396,449	-$ 3,109	$ 657,962	$ 657,962	$ 0
Sandringham				$ 1,091,990	$ 1,090,925	-$ 1,064	$ 3,640,136	$ 3,636,807	-$ 3,329	$ 570,234	$ 570,234	$ 0
Sandringham North				$ 1,027,875	$ 1,026,873	-$ 1,002	$ 3,422,075	$ 3,418,966	-$ 3,109	$ 377,231	$ 377,231	$ 0
Sandringham South				$ 919,798	$ 918,901	-$ 896	$ 3,090,685	$ 3,087,861	-$ 2,824	$ 701,826	$ 701,826	$ 0
Total				$ 14,913,598	$ 15,911,856	$ 998,258	$ 48,809,622	$ 52,050,389	$ 3,240,767	$ 6,298,888	$ 7,761,026	$ 1,462,138

Figure 16 **Values estimates for sand replenishment option**

The tool values reflect annual benefits derived from a beach. Use the LGA CS, PS and EBO 'Total' value figures from Figure 15 for the base case in every year of the study period. Use the LGA CS, PS and EBO 'Total' value figures from Figure 16 from the year sand nourishment takes place.

We use the LGA totals so that redistribution impacts are included (otherwise benefits would be overstated).

3.2 Complex cost-benefit analysis

If you are undertaking a more-complex coastal management CBA where, for example, sand erosion poses a risk to safety and public and private assets, you will need to extract 2 sets of data to calculate impacts over the study period. First you will need CS,

PS and EBO values for the beach being studied, and second you will need an estimate of CS and PS visitation redistribution values.

We have assumed CBA practitioners will have Monte Carlo modelling of coastal-process data (to assess impact points and configure management options), and that the probability-of-impact data will be applied to beach values and visitation redistribution values to estimate the **dynamic impact** of beach width changes over time. See Section 3.2.4, 'Complex CBA beach values impacts over time'.

However, you may also wish to explore some scenarios to obtain (static) first-pass cost-benefit estimates of coastal management options.

3.2.1 Example

In this hypothetical example a seawall is proposed for Coledale Beach in the Wollongong LGA, and we want to estimate the costs of Coledale Beach narrowing over time (assuming there is no sand nourishment).

In the 'Choose study area' tab, select Wollongong LGA and the screen will show the list of beaches in this LGA (Figure 17).

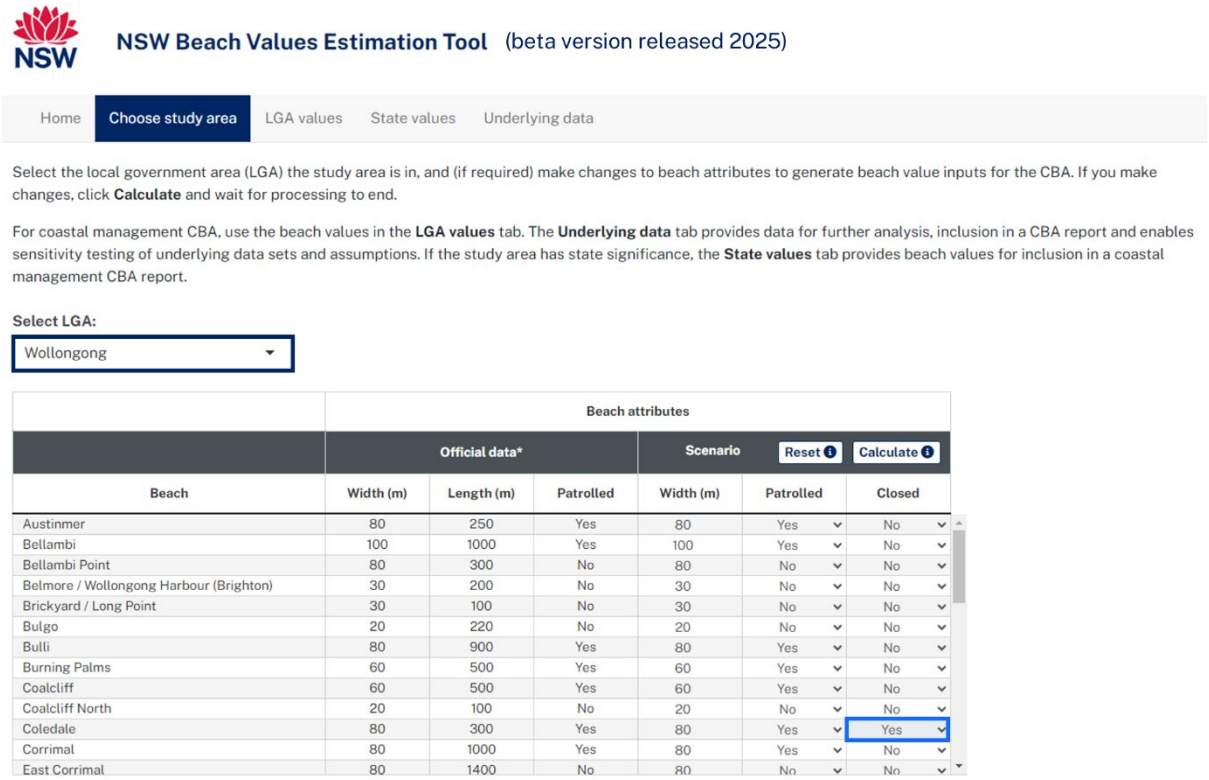


Figure 17 'Choose study area' tab: select Wollongong LGA

If current beach conditions are the same as official data

If the official data for Coledale Beach reflects current average beach width and patrol status, the beach values in the 'LGA values' tab are the base case values for Coledale Beach (the figures in the blue boxes in Figure 18). Mote Carlo coastal modelling probability-of-impact data needs to be applied to these values to calculate the stream of costs from sand loss at Coledale Beach over the study period.

Closed-beach scenario redistribution impact

To find out what the **maximum potential visitor redistribution impact** is, you need to set the beach status to closed (the blue box in Figure 17) so the values in the 'Scenario' columns reflect what the total LGA value would be if the beach did not exist, and people visited other beaches instead. Click 'Yes' in the 'Closed' column for Coledale Beach, then click 'Calculate' to generate the scenario values.

Apply the probability-of-impact data to the difference between the change in Coledale Beach values (the orange boxes in Figure 18) and the change in total LGA values (the green boxes in Figure 18):

CS: Coledale Beach change $513,976 – LGA change $476,240 = $37,736.

PS: Coledale Beach change $826,681 – LGA change $791,519 = $35,162.

NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

LGA boundary of analysis: Wollongong LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy | Excel | Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Austinmer				$ 2,797,278	$ 2,799,368	$ 2,089	$ 4,188,972	$ 4,191,004	$ 2,032	$ 56,038	$ 56,038	$ 0
Bellambi				$ 2,016,898	$ 2,018,404	$ 1,506	$ 2,687,639	$ 2,688,948	$ 1,309	$ 224,153	$ 224,153	$ 0
Bellambi Point				$ 2,081,623	$ 2,083,177	$ 1,555	$ 2,773,874	$ 2,775,234	$ 1,360	$ 67,246	$ 67,246	$ 0
Belmore / Wollongong Harbour (Brighton)				$ 1,054,041	$ 1,054,828	$ 787	$ 1,267,182	$ 1,267,808	$ 626	$ 44,831	$ 44,831	$ 0
Brickyard / Long Point				$ 1,413,782	$ 1,414,838	$ 1,056	$ 2,117,171	$ 2,118,207	$ 1,036	$ 22,415	$ 22,415	$ 0
Bulgo				$ 467,780	$ 468,129	$ 349	$ 846,792	$ 847,196	$ 404	$ 49,314	$ 49,314	$ 0
Bulli				$ 2,452,442	$ 2,454,274	$ 1,832	$ 3,481,474	$ 3,483,159	$ 1,685	$ 201,738	$ 201,738	$ 0
Burning Palms				$ 1,009,456	$ 1,010,210	$ 754	$ 2,138,702	$ 2,139,732	$ 1,030	$ 112,077	$ 112,077	$ 0
Coalcliff				$ 517,292	$ 517,678	$ 386	$ 940,448	$ 940,914	$ 466	$ 112,077	$ 112,077	$ 0
Coalcliff North				$ 1,163,537	$ 1,164,406	$ 869	$ 2,114,511	$ 2,115,551	$ 1,040	$ 22,415	$ 22,415	$ 0
Coledale			Yes	$ 513,976	$ 0	-$ 513,976	$ 826,681	$ 0	-$ 826,681	$ 67,246	$ 67,246	$ 0
Corrimal				$ 1,823,472	$ 1,824,834	$ 1,362	$ 2,372,133	$ 2,373,272	$ 1,139	$ 224,153	$ 224,153	$ 0
...												
Sharky				$ 699,433	$ 699,955	$ 522	$ 1,102,640	$ 1,103,185	$ 545	$ 89,661	$ 89,661	$ 0
Stanwell Park				$ 1,797,051	$ 1,798,394	$ 1,342	$ 3,253,072	$ 3,254,635	$ 1,563	$ 190,530	$ 190,530	$ 0
Thirroul				$ 2,232,200	$ 2,233,867	$ 1,667	$ 3,342,764	$ 3,344,374	$ 1,610	$ 224,153	$ 224,153	$ 0
Thommos Rock				$ 473,221	$ 473,575	$ 353	$ 856,635	$ 857,037	$ 402	$ 11,208	$ 11,208	$ 0
Towradgi				$ 887,852	$ 888,515	$ 663	$ 1,115,249	$ 1,115,767	$ 518	$ 224,153	$ 224,153	$ 0
Werrong				$ 527,843	$ 528,237	$ 394	$ 955,516	$ 955,995	$ 479	$ 44,831	$ 44,831	$ 0
Windang (South)				$ 463,611	$ 463,957	$ 346	$ 570,514	$ 570,795	$ 281	$ 797,985	$ 797,985	$ 0
Wollongong City				$ 2,457,044	$ 2,458,879	$ 1,835	$ 2,954,163	$ 2,955,588	$ 1,425	$ 941,443	$ 941,443	$ 0
Wollongong South				$ 741,433	$ 741,986	$ 554	$ 892,773	$ 893,189	$ 416	$ 313,814	$ 313,814	$ 0
Wombarra				$ 564,595	$ 565,017	$ 422	$ 928,154	$ 928,593	$ 439	$ 89,661	$ 89,661	$ 0
Woonona				$ 1,227,858	$ 1,228,775	$ 917	$ 1,701,957	$ 1,702,777	$ 820	$ 224,153	$ 224,153	$ 0
Total				**$ 51,039,607**	**$ 50,563,366**	-$ 476,240	**$ 73,516,439**	**$ 72,724,920**	-$ 791,519	**$ 8,546,957**	**$ 8,546,957**	**$ 0**

June 2024 Prices (ABS CPI)
2024 LGA population forecast (Department of Planning and Environment)
Average 2015-2018 LGA tourist visitation data (Destination NSW)
Average 2022-2023 urban LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)
Average 2016-2019 regional LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)

Figure 18 **Base case beach values and close-the-beach redistribution impacts**

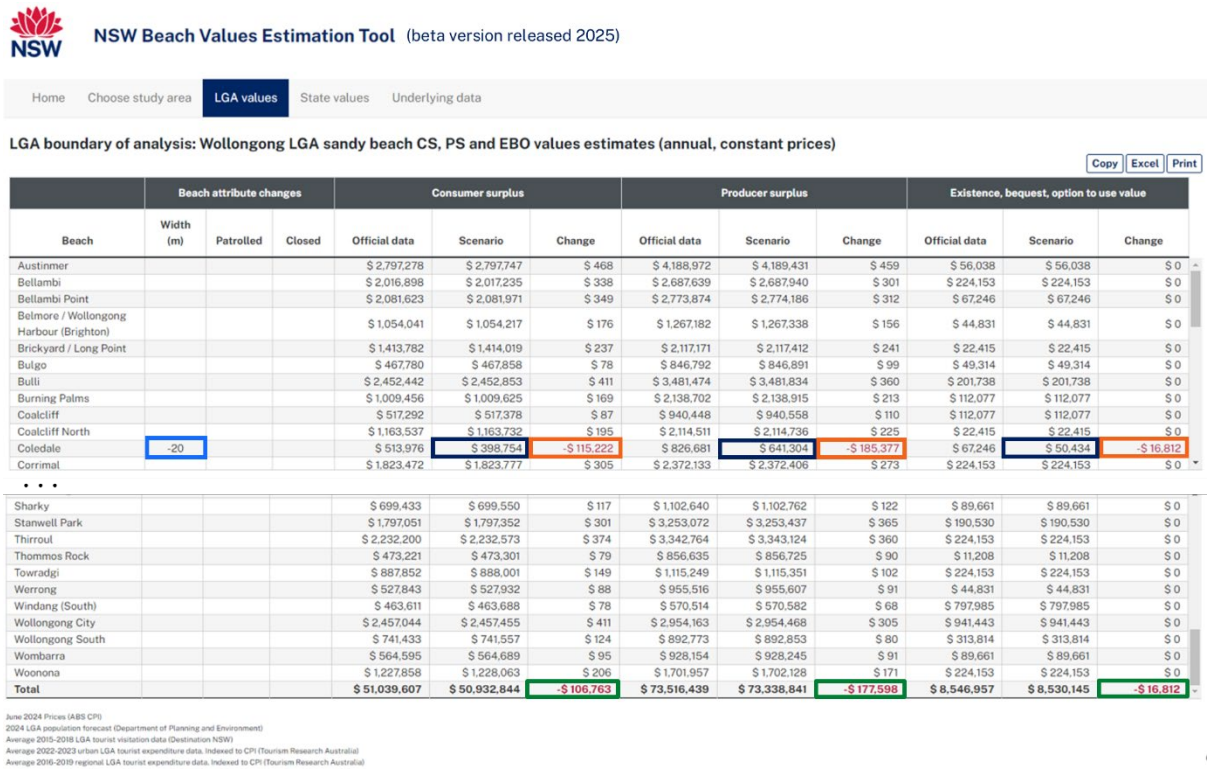
Refer to Section 4, 'Calculating beach values costs and benefits' to see if any of the special considerations apply, and make adjustments where relevant.

If current beach conditions are not the same as official data

If the current average width of the beach (low-tide shoreline to the seawall or foot of the sand dunes) is different from the official width, you need to change the scenario beach width to the current average width to generate updated estimates for the base case. If the current patrol status is not the same as the official data this needs to be changed too.

If, for example, the current average width of Coledale beach is 60 m (20 m narrower than the official width) change the scenario width to 60 m, click 'Calculate' then copy or

download data from each tab in the tool, and label the scenario estimates ‘base case’. The data in dark blue boxes in Figure 19 provide updated base case values estimates for Coledale Beach. Monte Carlo coastal process probability-of-impact data needs to be applied to these values to estimate the impact on CS, PS and EBO values over time.



NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

LGA boundary of analysis: Wollongong LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy | Excel | Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Austinmer				$ 2,797,278	$ 2,797,747	$ 468	$ 4,188,972	$ 4,189,431	$ 459	$ 56,038	$ 56,038	$ 0
Bellambi				$ 2,016,898	$ 2,017,235	$ 338	$ 2,687,639	$ 2,687,940	$ 301	$ 224,153	$ 224,153	$ 0
Bellambi Point				$ 2,081,623	$ 2,081,971	$ 349	$ 2,773,874	$ 2,774,186	$ 312	$ 67,246	$ 67,246	$ 0
Belmore / Wollongong Harbour (Brighton)				$ 1,054,041	$ 1,054,217	$ 176	$ 1,267,182	$ 1,267,338	$ 156	$ 44,831	$ 44,831	$ 0
Brickyard / Long Point				$ 1,413,782	$ 1,414,019	$ 237	$ 2,117,171	$ 2,117,412	$ 241	$ 22,415	$ 22,415	$ 0
Bulgo				$ 467,780	$ 467,858	$ 78	$ 846,792	$ 846,891	$ 99	$ 49,314	$ 49,314	$ 0
Bulli				$ 2,452,442	$ 2,452,853	$ 411	$ 3,481,474	$ 3,481,834	$ 360	$ 201,738	$ 201,738	$ 0
Burning Palms				$ 1,009,456	$ 1,009,625	$ 169	$ 2,138,702	$ 2,138,915	$ 213	$ 112,077	$ 112,077	$ 0
Coalcliff				$ 517,292	$ 517,378	$ 87	$ 940,448	$ 940,558	$ 110	$ 112,077	$ 112,077	$ 0
Coalcliff North				$ 1,163,537	$ 1,163,732	$ 195	$ 2,114,511	$ 2,114,736	$ 225	$ 22,415	$ 22,415	$ 0
Coledale	-20			$ 513,976	$ 398,754	-$ 115,222	$ 826,681	$ 641,304	-$ 185,377	$ 67,246	$ 50,434	-$ 16,812
Corrimal				$ 1,823,472	$ 1,823,777	$ 305	$ 2,372,133	$ 2,372,406	$ 273	$ 224,153	$ 224,153	$ 0
...												
Sharky				$ 699,433	$ 699,550	$ 117	$ 1,102,640	$ 1,102,762	$ 122	$ 89,661	$ 89,661	$ 0
Stanwell Park				$ 1,797,051	$ 1,797,352	$ 301	$ 3,253,072	$ 3,253,437	$ 365	$ 190,530	$ 190,530	$ 0
Thirroul				$ 2,232,200	$ 2,232,573	$ 374	$ 3,342,764	$ 3,343,124	$ 360	$ 224,153	$ 224,153	$ 0
Thommos Rock				$ 473,221	$ 473,301	$ 79	$ 856,635	$ 856,725	$ 90	$ 11,208	$ 11,208	$ 0
Towradgi				$ 887,852	$ 888,001	$ 149	$ 1,115,249	$ 1,115,351	$ 102	$ 224,153	$ 224,153	$ 0
Werrong				$ 527,843	$ 527,932	$ 88	$ 955,516	$ 955,607	$ 91	$ 44,831	$ 44,831	$ 0
Windang (South)				$ 463,611	$ 463,688	$ 78	$ 570,514	$ 570,582	$ 68	$ 797,985	$ 797,985	$ 0
Wollongong City				$ 2,457,044	$ 2,457,455	$ 411	$ 2,954,163	$ 2,954,468	$ 305	$ 941,443	$ 941,443	$ 0
Wollongong South				$ 741,433	$ 741,557	$ 124	$ 892,773	$ 892,853	$ 80	$ 313,814	$ 313,814	$ 0
Wombarra				$ 564,595	$ 564,689	$ 95	$ 928,154	$ 928,245	$ 91	$ 89,661	$ 89,661	$ 0
Woonona				$ 1,227,858	$ 1,228,063	$ 206	$ 1,701,957	$ 1,702,128	$ 171	$ 224,153	$ 224,153	$ 0
Total				**$ 51,039,607**	**$ 50,932,844**	**-$ 106,763**	**$ 73,516,439**	**$ 73,338,841**	**-$ 177,598**	**$ 8,546,957**	**$ 8,530,145**	**-$ 16,812**

June 2024 Prices (ABS CPI)
2024 LGA population forecast (Department of Planning and Environment)
Average 2015-2018 LGA tourist visitation data (Destination NSW)
Average 2022-2023 urban LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)
Average 2016-2019 regional LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)

Figure 19 **Current-condition-based values estimates (actual average beach width 20 m narrower than official data)**

To find out what the **maximum potential visitor redistribution impact** is, follow the steps outlined above using the ‘closed-beach scenario’. The PS and CS redistribution values derived using the closed-beach scenario then need to be adjusted (downwards) to consider the fact that some redistribution of visitation will have already occurred with the narrowing of Coledale Beach by 20 m.

You can do this by first calculating the redistribution impact of the scenario where Coledale Beach is 20 m narrower, and then subtracting this amount from the closed-beach scenario values. The ‘narrower-beach scenario’ redistribution impacts are calculated by subtracting the Coledale Beach value changes (the orange boxes in Figure 19), from the total LGA figures in the green boxes in Figure 19) from the closed-beach scenario redistribution impacts.

Narrower-beach scenario redistribution impact

CS: Coledale Beach loss of $115,222 – LGA loss of $106,763 = $8,459 redistribution effect.

PS: Coledale Beach loss of $185,377 – LGA loss of $177,598 = $7,779 redistribution effect.

The maximum redistribution impacts for inclusion in CBA calculations would be:

CS: Closed-beach scenario $37,736 – narrower-beach scenario $8,459 = $29,277.

PS: Closed-beach scenario $35,162 – narrower-beach scenario $7,779 = $27,383.

Refer to Section 4, 'Calculating beach values costs and benefits' to see if any of the special considerations apply, and make adjustments where relevant.

3.2.2 Complex CBA beach values impacts over time

The CBA guidelines recommend using Monte Carlo simulation to provide calculated predictions of coastline change in terms of the probability of exceedance, that is, the coastline position that has a 50% (or 10%, etc) probability of being exceeded in the year 2050 (or 2100, etc).

You can use this data to calculate the value of property losses (for the base case in the absence of protection, for example). The flow of risk-adjusted costs over time is calculated by multiplying the value of an asset by the marginal probability of impact risk (as estimated by the average exceedance probability [AEP]) for each year in the study period. This same approach can be used to calculate the value of CS, PS and EBO value losses in the event of beach width loss over time, and to estimate offsetting value of CS and PS beach visitation substitution over time.

Note that we use the marginal probability because an asset can only be lost once. That is, if $1 million in value is lost in year 1, this value cannot be lost again in year 2. Also, the AEP data is produced using the method consistent with that in Kinsela et al. (2017).

The beach values in the tool are provided for the whole area of the beach: the width times the length. To make sure the beach value impacts are not over or underestimated, we recommend using the AEP line data that most closely tracks the landward boundary of a beach and does not go beyond the sandy area.

For example, of the AEP curves in Figure 20, the blue 50% AEP curve is the closest to the landward boundary of the beach. The orange 10% AEP sits higher than the landward boundary of the beach and its use would be more relevant to calculating the value of built asset impacts for any property near that line.

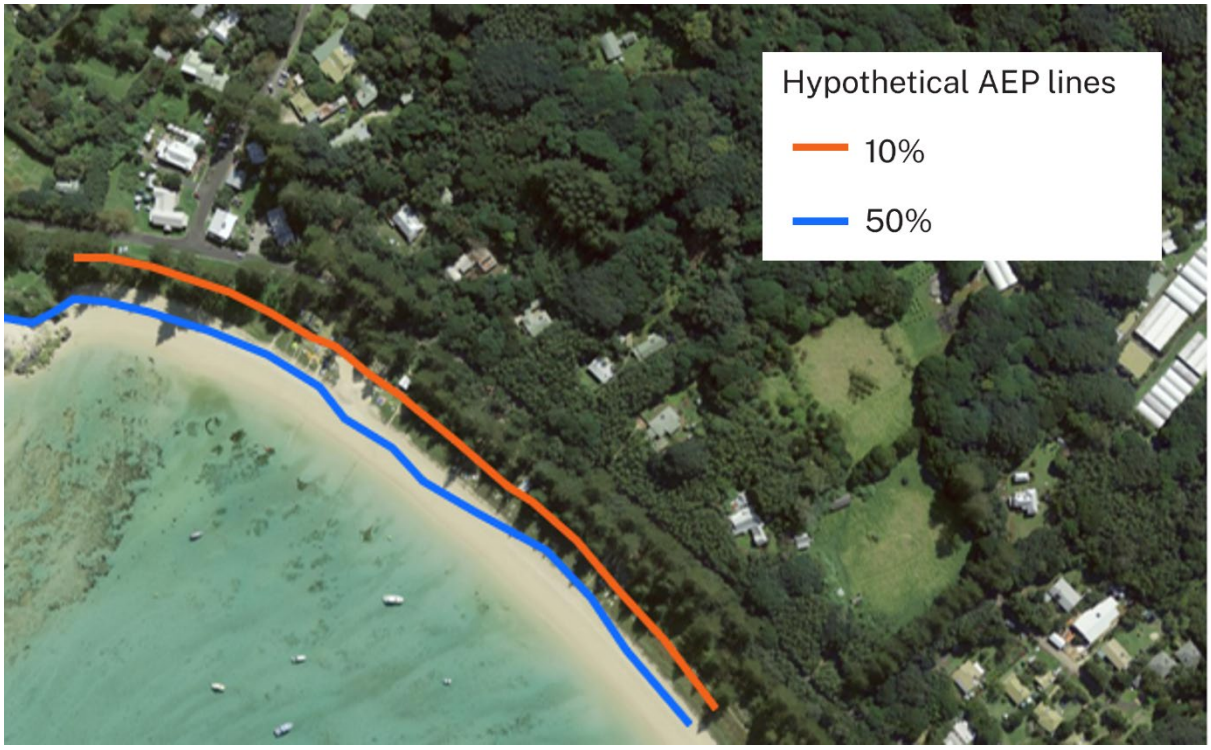


Figure 20 **Hypothetical annual average exceedance lines**

4. Calculating beach values costs and benefits

4.1 Use official beach definitions

The tool estimates beach values based on beach data from Short (2007). Short defined NSW beaches and their length by the extent of uninterrupted sand running from north to south. These definitions are available from Short (2007) and from the Surf Life Saving Australia (SLSA) Beachsafe app.

These official beach definitions must be used in coastal management CBA so the CS, PS and EBO values included in option assessment align with the area the values are assigned to.

For example, when referring to Lake Cathie Beach, people may be referring to the 200 m area where the patrol service is set up (the dark blue line in Figure 21), whereas Lake Cathie Beach, as defined in Short (2007), is officially 1.9 km long (the medium blue line in Figure 21).

In some locations, single stretches of a beach are subdivided into separate beaches in the BVET where local names are commonly used. For example, instead of using Lady Robinsons Beach (Bayside LGA) in the tool, Kyeemagh, Brighton-Le-Sands, Monterey and Ramsgate are used. Lady Robinsons Beach is divided between these 4 beaches in accordance with the descriptions in the Beachsafe app.

However, because of their remoteness, some stretches of sand have not been divided into separate beaches in the tool. For example, Bennetts Beach (Mid-Coast LGA), which is 14.3 km long, has not been divided into Dark Point, White Sands, Lemon Tree, the Baskets, and Lovers Walk. However, Tea Gardens Hawks Nest Surf Life Saving Club provided beach count data for the underlying research, so 1 km of Bennetts Beach has been assigned to 'Hawks Nest Beach' to correspond with this data collection point.

Some LGAs have duplicate beach names, so the nearest suburb is reported in brackets next to the beach name in the tool to guide you to the correct beach. For example, there are 2 beaches identified as 'Gap' in Kempsey LGA. To help you differentiate between them they are listed in the tool as Gap (Arakoon) and Gap (Hat Head).

4.2 Limit on benefits of sand replenishment

There is a limit to CS and PS value gains from sand nourishment given that wider beaches may deter visitors and that most of the activity on a beach occurs within a limited area:

- Research shows people do not like to walk too far across (hot and soft) sand to find a spot to settle, so widening a beach could reduce the number of visitors and the CS and PS values.

  - Valdermoro and Jimenez (2006) reference:
    - Jimenez & Sanches-Arcilla (2001), which stated beach users (in Spain) found walking across large areas of very hot sand uncomfortable
    - Villares (1999), which found strong criticism of excessive beach width due to nourishment of some Spanish beaches
    - a CEDEX (2000) survey, which found users of Spanish beaches gave a negative score to beaches wider than 50 m.
- Much of the recreation value of a beach is tied to the recreation zone, which is commonly limited to 25 m, including the first 5 m into the water.
  - Valdermoro and Jimenez (2006) proposed that a minimum beach width of 20 m to 25 m is ideal for recreation activity, including the 5 m for water-based activity.

The tool does not incorporate limitations on benefits to CS and PS from beach widening because the parameters for negative impacts and diminishing benefits are not known.

We recommend the benefits of sand nourishment at any beach be limited to an increase in beach width from its current state to a maximum width of 81 m (the average width of NSW patrolled beaches) or 100 m (the median width of NSW patrolled beaches).

- The extent of sand replenishment may create more width than is 'natural' to the beach to preserve/prolong the benefits of sand replenishment; the benefit of less frequent sand replenishment will be reflected in lower sand replenishment costs.

For EBO values, it is not clear that an increase in value from widening a beach beyond its natural state should be included as a benefit, since the EBO value represents the value to the community of preserving the beach as a natural feature in its natural state. Respondents to a survey underlying the EBO values in the tool were not asked about their willingness to pay to widen a beach (beyond its natural state). Given this, we recommend EBO value increases be limited to gains from restoring a beach to its (recent) naturally occurring width, which may be narrower than the average widths used to estimate CS and PS gains from sand nourishment.

4.3 Limit on using scenarios to estimate beach width change impacts

Beach visitation is determined by sand width and other beach attributes, such as the distance from population centres and availability of a patrol service, toilets, a cafe/kiosk or a park (see Table 6). Visitation linked to these other attributes is calculated independent of sand width, because we do not know what the trigger points are for, say, initiating or cancelling a patrol service or opening or closing a cafe. We also are unsure of how sand width impacts visitation related to innate beach attributes such as distance to a population centre or availability of a park.

This means the tool may underestimate the impact of the more significant or extreme 'Scenario' beach width changes on CS and PS values because visitation generated by beach attributes, other than beach width, is essentially held constant.

Users should be aware of the tool's limitations when using 'Scenarios' to obtain estimates involving substantial changes to beach width. This would include scenarios where, say, beach width changes by more than 50% or where beach width narrows to less than 20 m (Valdermoro and Jimenez 2006).

4.4 Reduced benefits of sand replenishment over time

Any benefits from beach nourishment are expected to decline over time from the initial nourishment actions as sand and beach width is lost due to underlying sediment deficiencies in the sediment budget. Where relevant, the CS, PS and EBO benefit values of sand nourishment should be adjusted downward over time or between any repeated sand nourishment activities.

For example, if the CS benefit of sand replenishment is $1 million per year and sand replenishment is planned at 5-year intervals (for example, in year 1 and year 6), the benefits could fall by 1/5 in the second year, 2/5 in the third year and so on, using a straight-line depreciation approach (see Table 1).

Table 1 **Adjusting benefits of sand replenishment for sand loss over time or between replenishment activity**

Value	Year 1	Year 2	Year 3	Year 4	Year 5
Consumer surplus	$1,000,000	$800,000	$600,000	$400,000	$200,000

4.5 Adjusting beach values

The beach values included in CBA should be adjusted when the area of coastal management impact is not equal to the length of the beach (as defined by Short 2007). Also, there may be grounds to adjust values where visitation is concentrated in one area, due to access or adjacent facilities and services and the same recreation experience cannot be duplicated at another location on the same beach.

4.5.1 Changes to beach length

Beach widening from beach nourishment or losses in beach width (for example, from a seawall occupying the beach margin and in the absence of sand nourishment) may only impact part of a beach, and it would be reasonable in these circumstances to adjust the CS and PS values used in CBA to reflect only the proportion of the beach affected.

For example, using Lake Cathie with a hypothetical seawall as a case study, only the proportion of Lake Cathie Beach in front of the seawall would be impacted by construction of the seawall (the light blue line in Figure 21). The hypothetical 300 m-long seawall would occupy only 16% of total beach length. Consequently, only 16% of

CS and PS beach values for Lake Cathie should be included in annual benefit and cost calculations.

EBO values should also be adjusted for the proportion of beach length affected.

Figure 21 **Lake Cathie case study, hypothetical seawall**

4.5.2 Uneven visitation distribution

Visitation will tend to be evenly distributed along the stretch of sand at relatively shorter beaches in built-up areas with multiple access points. For example, visitation at Bondi Beach (see Image 1 below) tends to be evenly distributed.

Where beach visitation is evenly distributed, the beach length and area of the beach visited are the same. CS and PS beach values apply evenly along the length of the beach and there is no need to (further) adjust CS and PS values included in cost-benefit calculations.

Image 1 Even distribution of beach visitation at Bondi Beach. Rosie Nicolai/DCCEEW

However, at other locations visitation may be concentrated in one area, for example where there is low population density, there are limited access points, or a patrol service is provided only at one spot on a relatively long beach.

At Lake Cathie Beach for instance, visitation tends to be concentrated in the 200 m 'patrolled area' in front of, and adjacent to, the mouth of the lake (indicated by the orange line in Figure 21). Much of the beach to the south of the patrolled area tends to have exposed rock and be relatively narrower.

While the area of the beach not in the patrolled area is used for walking, fishing, and some swimming, visitation to this area is relatively low compared to the patrolled area, where approximately 23,000 visitors were counted during the 2019 swim season. While some of this visitation is attributable to the presence of a patrol, the aesthetics and calm-water swimming option provided by the adjacent lagoon would also influence visitation.

If the beach width was to be reduced where visitation is concentrated, and the same recreational experience cannot be achieved at other locations on the beach, consideration could be given to assigning a higher proportion of CS and PS values to the area of the beach impacted by any seawall.

In the Lake Cathie Beach example, the area of beach in front of the proposed seawall may be wide enough for recreation, but further south the beach narrows and has exposed coffee rock and may, therefore, not offer the same recreational experience.

4.6 Using alternative visitation data

'Underlying data' tab information enables you to generate your own estimates of beach values for sensitivity testing, and to substitute more-recent data or site-specific data, including more-recent beach count data for the beach in the study area.

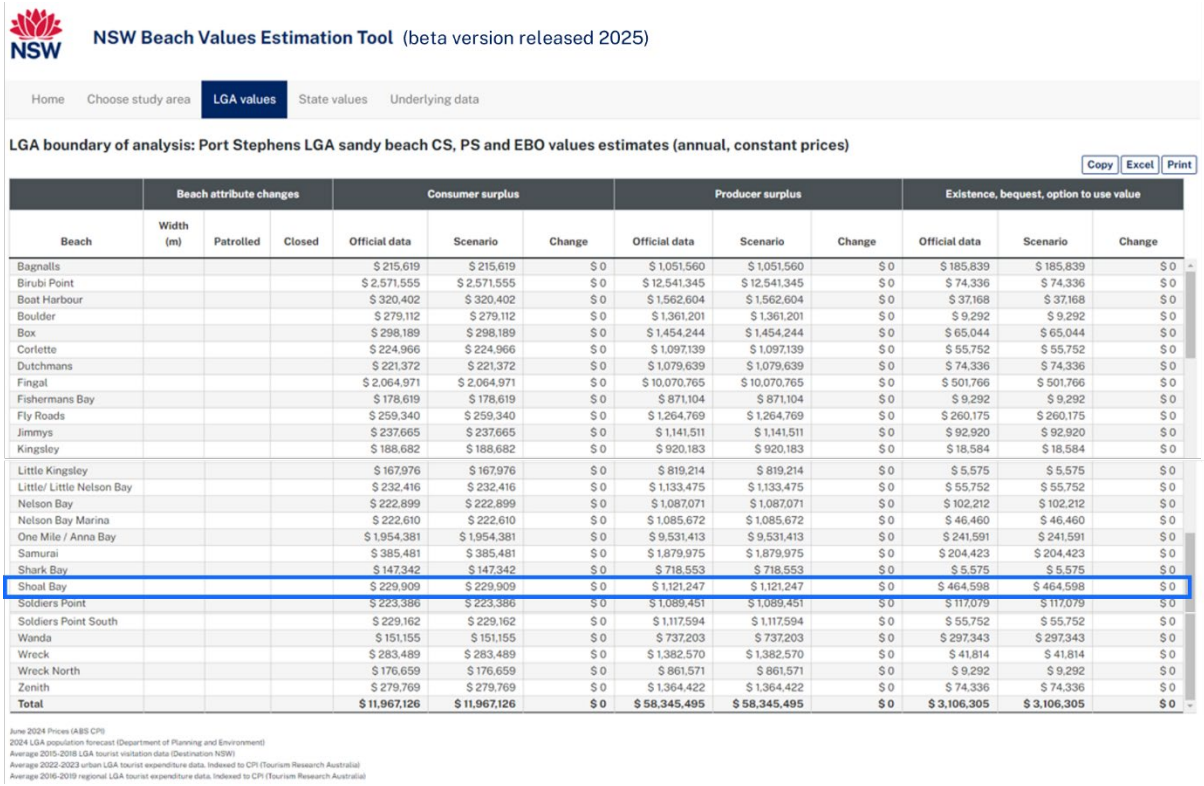
You may also redistribute, but not increase, visitation between the beaches in the LGA where the beach attribute preference model that distributes visitation to specific beaches does not consider factors affecting visitation outside the beach attribute parameters (Table 7).

For example, in Port Stephens LGA, Shoal Bay is ranked 13 out of the 26 beaches by CS value (Figure 22). Shoal Bay does not have a patrol service and is narrow and steep in places, but it is a relatively protected beach opposite a holiday park in a built-up area, so this CS value may be considered an underestimate given these factors.

In this instance, the toilets and shops form part of the foreshore development and are not recorded as attributes of the beach in the applied beach attribute dataset (supplied by Surf Life Saving NSW). If you think it is justifiable to increase the CS and PS value of Shoal Bay you can redistribute visitation from beaches in Port Stephens that are more remote and have fewer amenities than Shoal Bay.

It is important to keep in mind that the model estimates the number of people who go on the beach. It does not estimate visits to the broader beach area to enjoy the view, get a coffee or a meal, or rest part way through a bike ride or walk. Furthermore, only part of Shoal Bay beach has access to toilets and shops, and these are some distance from where most of the parking is located, so there are limiting factors to visitation.

Users should view the LGA beach attributes in the beach preferences model (link to spreadsheet in the 'Resources' section) to, for example, check whether the data used reflects current attributes at each beach, and to validate redistribution of visits where there are differences in attributes.



NSW Beach Values Estimation Tool (beta version released 2025)

Home | Choose study area | LGA values | State values | Underlying data

LGA boundary of analysis: Port Stephens LGA sandy beach CS, PS and EBO values estimates (annual, constant prices)

Copy Excel Print

	Beach attribute changes			Consumer surplus			Producer surplus			Existence, bequest, option to use value		
Beach	Width (m)	Patrolled	Closed	Official data	Scenario	Change	Official data	Scenario	Change	Official data	Scenario	Change
Bagnalls				$ 215,619	$ 215,619	$ 0	$ 1,051,560	$ 1,051,560	$ 0	$ 185,839	$ 185,839	$ 0
Birubi Point				$ 2,571,555	$ 2,571,555	$ 0	$ 12,541,345	$ 12,541,345	$ 0	$ 74,336	$ 74,336	$ 0
Boat Harbour				$ 320,402	$ 320,402	$ 0	$ 1,562,604	$ 1,562,604	$ 0	$ 37,168	$ 37,168	$ 0
Boulder				$ 279,112	$ 279,112	$ 0	$ 1,361,201	$ 1,361,201	$ 0	$ 9,292	$ 9,292	$ 0
Box				$ 298,189	$ 298,189	$ 0	$ 1,454,244	$ 1,454,244	$ 0	$ 65,044	$ 65,044	$ 0
Corlette				$ 224,966	$ 224,966	$ 0	$ 1,097,139	$ 1,097,139	$ 0	$ 55,752	$ 55,752	$ 0
Dutchmans				$ 221,372	$ 221,372	$ 0	$ 1,079,639	$ 1,079,639	$ 0	$ 74,336	$ 74,336	$ 0
Fingal				$ 2,064,971	$ 2,064,971	$ 0	$ 10,070,765	$ 10,070,765	$ 0	$ 501,766	$ 501,766	$ 0
Fishermans Bay				$ 178,619	$ 178,619	$ 0	$ 871,104	$ 871,104	$ 0	$ 9,292	$ 9,292	$ 0
Fly Roads				$ 259,340	$ 259,340	$ 0	$ 1,264,769	$ 1,264,769	$ 0	$ 260,175	$ 260,175	$ 0
Jimmys				$ 237,665	$ 237,665	$ 0	$ 1,141,511	$ 1,141,511	$ 0	$ 92,920	$ 92,920	$ 0
Kingsley				$ 188,682	$ 188,682	$ 0	$ 920,183	$ 920,183	$ 0	$ 18,584	$ 18,584	$ 0
Little Kingsley				$ 167,976	$ 167,976	$ 0	$ 819,214	$ 819,214	$ 0	$ 5,575	$ 5,575	$ 0
Little/ Little Nelson Bay				$ 232,416	$ 232,416	$ 0	$ 1,133,475	$ 1,133,475	$ 0	$ 55,752	$ 55,752	$ 0
Nelson Bay				$ 222,899	$ 222,899	$ 0	$ 1,087,071	$ 1,087,071	$ 0	$ 102,212	$ 102,212	$ 0
Nelson Bay Marina				$ 222,610	$ 222,610	$ 0	$ 1,085,672	$ 1,085,672	$ 0	$ 46,460	$ 46,460	$ 0
One Mile / Anna Bay				$ 1,954,381	$ 1,954,381	$ 0	$ 9,531,413	$ 9,531,413	$ 0	$ 241,591	$ 241,591	$ 0
Samurai				$ 385,481	$ 385,481	$ 0	$ 1,879,975	$ 1,879,975	$ 0	$ 204,423	$ 204,423	$ 0
Shark Bay				$ 147,342	$ 147,342	$ 0	$ 718,553	$ 718,553	$ 0	$ 5,575	$ 5,575	$ 0
Shoal Bay				$ 229,909	$ 229,909	$ 0	$ 1,121,247	$ 1,121,247	$ 0	$ 464,598	$ 464,598	$ 0
Soldiers Point				$ 223,386	$ 223,386	$ 0	$ 1,089,451	$ 1,089,451	$ 0	$ 117,079	$ 117,079	$ 0
Soldiers Point South				$ 229,162	$ 229,162	$ 0	$ 1,117,594	$ 1,117,594	$ 0	$ 55,752	$ 55,752	$ 0
Wanda				$ 151,155	$ 151,155	$ 0	$ 737,203	$ 737,203	$ 0	$ 297,343	$ 297,343	$ 0
Wreck				$ 283,489	$ 283,489	$ 0	$ 1,382,570	$ 1,382,570	$ 0	$ 41,814	$ 41,814	$ 0
Wreck North				$ 176,659	$ 176,659	$ 0	$ 861,571	$ 861,571	$ 0	$ 9,292	$ 9,292	$ 0
Zenith				$ 279,769	$ 279,769	$ 0	$ 1,364,422	$ 1,364,422	$ 0	$ 74,336	$ 74,336	$ 0
Total				**$ 11,967,126**	**$ 11,967,126**	**$ 0**	**$ 58,345,495**	**$ 58,345,495**	**$ 0**	**$ 3,106,305**	**$ 3,106,305**	**$ 0**

June 2024 Prices (ABS CPI)
2024 LGA population forecast (Department of Planning and Environment)
Average 2015-2018 LGA tourist visitation data (Destination NSW)
Average 2022-2023 urban LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)
Average 2016-2019 regional LGA tourist expenditure data. Indexed to CPI (Tourism Research Australia)

Figure 22 Port Stephens LGA beaches: Shoal Bay CS value ranks 13 out of the 26 beaches

5. Underlying methodology

5.1 Estimating visitation to NSW beaches

5.1.1 Data sources

Beaches are an important part of the Australian cultural identity, and a focal point for our recreation and leisure activities. Recent studies have found that Australians who live close to the coast visit beaches at least once a week. 'Visiting the beach' is also reported as a recreational activity by 1.2 million international and 2.1 million interstate tourists who visit New South Wales each year (average 2015 to 2018 pre-COVID visitation, Tourism Research Australia [2019]).

Despite the prominent role beaches play in tourism and leisure in New South Wales, firm numbers on beach visitation rates are not readily available from a single, complete data source. This relates, at least in part, to the extensive nature of the NSW coastline, which hosts more than 900 beaches, spans more than 2,000 km, and contains many rugged and isolated spots.

The tool provides the first estimate of total sandy beach visitation for New South Wales by integrating data from several data sources (see Table 2).

Table 2 Data sources used to compile visitation estimates for NSW beaches

Data name	Source
SLSA-paid lifeguard counts	• Provided by SLSA from its internal data holdings. • Provides visitor counts for 74 beaches, for an average of 65 days of in a 12-month period*. • Details of count procedures (start and finish times and count intervals) were also provided.
SLSA volunteer/ club counts	• Provided by SLSA from its internal data holdings. • Increases the average days counted at SLSA-patrolled beaches from 65 to 87 days in a 12-month period.
Council-paid lifeguard counts	• Provided by various councils. • Provides total visitation estimates for an additional 85 beaches. • Data provided as total monthly visitation.
Smart Beaches monitoring survey dataset	• Initiated by the Coastal Safety Group. • Uses mobile phone data to report on the nature of beach visits in terms of length of stay and timing of visits (including out-of-hours visitation) based on information from 525 beach visits in Lake Macquarie, NSW. • Smart Beaches, Coastal Safety Group
Beach attributes data	• Attributes of relevance were identified from literature review and by conducting 2 focus-group discussions with NSW beach users. • 10 beach characteristics and their appropriate levels were identified through this process. • The attribute levels for each beach were then estimated by the Department of Climate Change, Energy, the Environment and Water (then the Office of Environment and Heritage).

* Depending on school and public holidays, the swim season starts in September and can finish as late as May in the following year.

5.1.2 Data compilation processes

The steps we used to integrate data from the various sources in Table 2 are summarised in Figure 23, and are described in detail below.

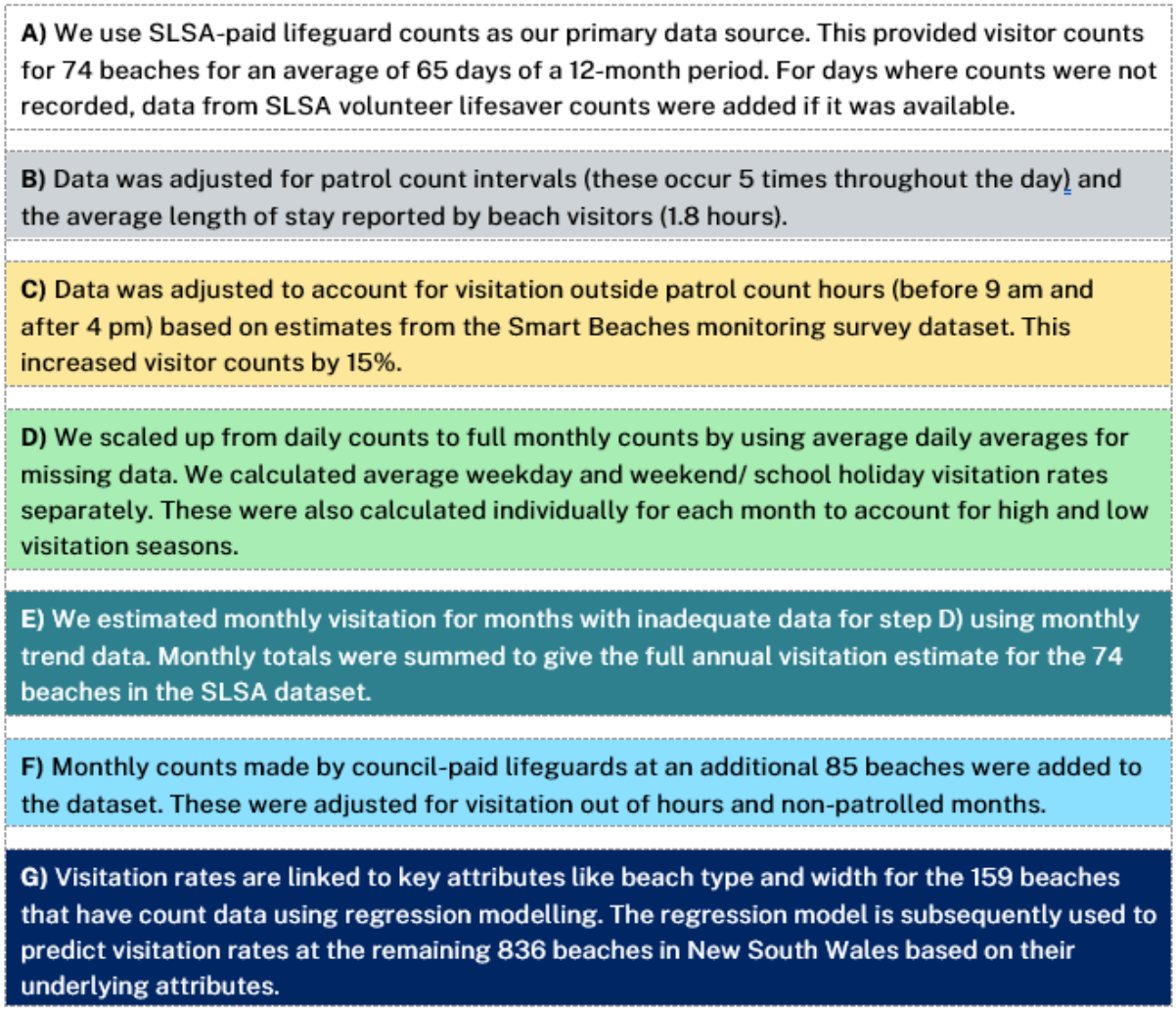


Figure 23 Steps to integrate data sources and estimate visitation for all NSW beaches

A) Integrating SLSA lifeguard and SLSA club counts

SLSA provided its daily beach count figures from its paid and volunteer patrol services for the 2018 swim season (September 2017 to April 2018).

Beaches can be patrolled by both paid SLSA lifeguards and volunteer SLSA club patrols on the same day, but beach counts made by these different groups may or may not relate to the same period of the day, or the same stretch of beach.

Where multiple counts were available for the same beach on the same day, we used counts from the largest dataset – the SLSA-paid lifeguard counts – as our primary reference point. This maximised consistency of counts within the combined dataset. For days when count data was not available from the SLSA-paid lifeguard count dataset, data from SLSA volunteer patrol counts was used.

SLSA beach counts were adjusted for SLSA counting procedures, making adjustments for multiple counts, count interval, start and finish times, and count days/seasons as described in steps B) and C).

B) Count interval

For beaches in the SLSA-paid lifeguard count dataset, visitor counts are made at 9 am, 10 am, 12 pm, 2 pm and 4 pm. This means that lifeguards double count some visitors who stay longer than the count interval (for example, visitors who arrive at 8:45 am and stay 3.5 hours would be counted at 9 am, 10 am and 12 pm), and miss counting other visitors who arrive and leave within a single count interval (for example, visitors who arrive at 2:30 pm and leave at 3 pm would not be counted).

SLSA-paid lifeguard data was adjusted to take account of the count interval following the method described by Parsons et al. (2013), as set out in Equation 1. Parsons et al. (2013) incorporates count interval and seasonal adjustments into a single equation which we dealt with separately under steps A) and C).

Actual count = raw count x count frequency / average length of stay (Equation 1)

The average length of stay at the beach was estimated using the results of a survey that recorded length-of-stay data for 606 beachgoers in New South Wales. Using weighted averaging of the frequencies reported in Table 3, the average length of stay is approximately 1.8 hours. This yielded an adjustment coefficient of 0.96, which was applied to counts across all beaches.

Table 3 Length of stay at the beach*

Time spent at the beach	Frequency	Share of total
less than 30 minutes	23	4.4%
30 minutes to 1 hour	129	24.6%
1 hour to 2 hours	187	35.6%
2 hours to 3 hours	125	23.8%
3 hours to 4 hours	34	6.5%
4 hours to 5 hours	18	3.4%
5 hours to 8 hours	8	1.5%
more than 8 hours	1	0.2%

* From a survey of beach users undertaken for the BVET project which included questions for use by the Smart Beaches program.

C) Patrol starting and finishing times

SLSA-paid lifeguard beach counts are limited to the hours from 9 am to 4 pm, so they omit a subset of beach visitors who visit early in the morning or later in the evening. Data from a Smart Beaches monitoring survey of 525 beach goers in Lake Macquarie, New South Wales, showed that 15% of visitors go to the beach outside patrol hours (Lake

Macquarie Council Beaches, Smart Beaches Manager) so this factor was used to adjust beach visits.

D) Number of days counted

The SLSA-paid lifeguard count dataset (the primary dataset) included counts for an average of 65 patrol days per beach (maximum of 290 and median of 21). Where they related to counts for a day on which there was no patrol reported by the SLSA-paid lifeguards, counts made by SLSA clubs were added. This increased count coverage to an average of 87 and median 70 days per beach.

Because each beach recorded visitor counts for a different number of days, and because most beaches reported counts for only a subset of days in each month – sometimes weekdays, sometimes only weekends and school holidays – the number and types of days when counting took place will have a big influence on monthly visitation totals. Daily count data was converted to monthly estimates using Equation 2:

$$\textit{Monthly count} = \textit{average count}_{w} \times \textit{days}_{w} + \textit{average count}_{h} \times \textit{days}_{h} \qquad \textit{(Equation 2)}$$

Where: *average count* is the average daily total for weekdays ($_w$) or weekends and school holidays ($_h$), and *days* is the number of weekdays *($_w$)* or weekends and school holidays *($_h$)* in the month.

E) Non-patrol season

Visitation for months with inadequate data for step D), including months where specific beaches were unpatrolled, was estimated using year-long trends in visitation observed at a subset of 7 NSW beaches. Monthly totals were summed to give the full annual visitation estimate for the 74 beaches in the SLSA-paid lifeguard count dataset.

F) Including beaches with council count data

In some LGAs, local councils provide their own paid lifeguard services. This data had already been scaled up to estimate total monthly visitation. In some cases, it also accounted for visits made before 9 am and/or after 4 pm (this was the case for Waverley LGA lifeguard counts). As for SLSA data, most beaches had several non-patrolled months where no visitor counts were recorded. Visitation for these months was estimated using the method described in steps D) and E).

Council-paid lifeguard count data added total visitation estimates for an additional 85 beaches. Combining data from SLSA and council data provided annual beach visitation estimates for 159 NSW beaches. Data checking assigned 93 of these as ‘high confidence’, described in step G).

G) Estimating visitation at beaches without count data

Visitation data relating to the 93 ‘high confidence’ beaches was used to develop an ordinary least squares (OLS) regression model that described visitation as a function of the beach attributes presented in Table 4. (The dependent variable in the OLS model

was the logarithm of beach visitation.) Visitation was interpolated to the remaining 775 NSW beaches using a benefit transfer function.

In economics the process of estimating visitation or value for a site of interest where data is lacking, based on visitation or value observed at other similar sites, is referred to as 'benefit transfer'. The literature specifies that robust benefit transfer should be based on regression-type functions, like those we have used, rather than by transferring raw estimates of visitation or value.

Table 4 Attributes used in benefit transfer function to interpolate beach visitation to all NSW beaches

Attribute	Description
Constant	The intercept
Beach type	A dummy variable to represent the beach types: iconic, main, surf, bay, national park and open coast (reference)
Beach length, width	Normalised beach length and width
Patrol	A dummy variable to indicate the presence of a patrol service
Income	Normalised average income of the LGA where the beach is located
Population	Normalised population of the LGA where the beach is located
Distance	The driving distance to the beach from Sydney CBD (in logarithm format) as a proxy for relative remoteness from the population centre

Parameterising the OLS regression model started with a set of 159 beaches for which count data was available. To address the influence of outliers within the data, a 2-step process was employed. Initially, standardised residuals were computed, and a predetermined outlier threshold of 1.844 was established.

Any observation with residuals exceeding this threshold was identified as a potential outlier and subsequently removed from the dataset. The estimation process was then iteratively repeated, with each round of removal and re-estimation constituting one iteration. After 10 iterations, the final model used a sample of 93 beaches.

The final benefit transfer equation successfully explained variations in beach visitation rates with a high degree of confidence ($R^2 = 0.93$). This model was subsequently used to estimate visitation for all NSW beaches for which count data was unavailable. For a detailed visualisation of the final estimation produced by the OLS model see Table 5.

Table 5 Ordinary least squares regression results from n=93 beaches

Coefficient	Estimate	Standard error	t value	t value	Pr(>|t|)
(Intercept)	13.821	0.837	16.507	0.000	***
Iconic beach	1.006	0.310	3.241	0.002	**
Main beach	–0.373	0.300	–1.246	0.216	
Surf beach	–0.775	0.304	–2.554	0.013	*
Bay beach	–0.462	0.366	–1.262	0.211	
National park beach	–0.910	0.340	–2.675	0.009	**
Beach length	–1.261	0.275	–4.592	0.000	***
Beach width	1.209	0.177	6.839	0.000	***
Patrolled	0.673	0.306	2.202	0.031	*
LGA population	0.414	0.145	2.855	0.005	**
LGA average weekly income	1.594	0.300	5.318	0.000	***
Distance to Sydney	–0.230	0.055	–4.198	0.000	***
Estimation statistics					
Residual standard error	0.29	On 81 DF*			
Multiple R-squared	0.94				
Adjusted R-squared	0.93				
F-statistic	107.5	On 11 and 81 DF	p-value	< 2.22e-16	–
Number of observations	93				
Log likelihood	–10.56	(DF=13)	–	–	–
AIC	42.12				
BIC	80.04				

DF: degrees of freedom

* The coefficient is statistically significant at the 10% level (p-value ≤ 0.10).

** The coefficient is statistically significant at the 5% level (p-value ≤ 0.05).

*** The coefficient is statistically significant at the 1% level (p-value ≤ 0.01).

LGA average weekly income is calculated using census data and is not indexed for wage changes because wage change data is unlikely to apply equally in every LGA, particularly in LGAs with differing industry employment profiles. This means visitation will tend to be underestimated increasingly during the 4 years before this data is updated following release of new census data. Sensitivity testing of +25% and –25% visitation data should capture the potential impact of not adjusting LGA weekly income data between census reporting.

5.1.3 Estimated baseline visitation to NSW beaches

Using the compilation approach described in Section 5.1.4, total (that is, combined state, interstate and international) visitation to all NSW beaches was estimated to be 148.5 million visits per year. This equates to average visitation rates of ~25 visits per year for all adult NSW residents, made up of:

- ~40 visits per year for adult residents living within 10 km of the coast
- ~9 visits per year for those living further from the coast.

These figures are consistent with estimates of beach visitation by NSW residents from a survey undertaken by Surf Life Saving NSW (SLSNSW 2022) (Figure 24) which shows a high rate of visitation for those living less than 10 km from the coast (40% will visit the beach at least once a week [52 times a year] and 24% will visit the beach at least once a month [12 times a year]).

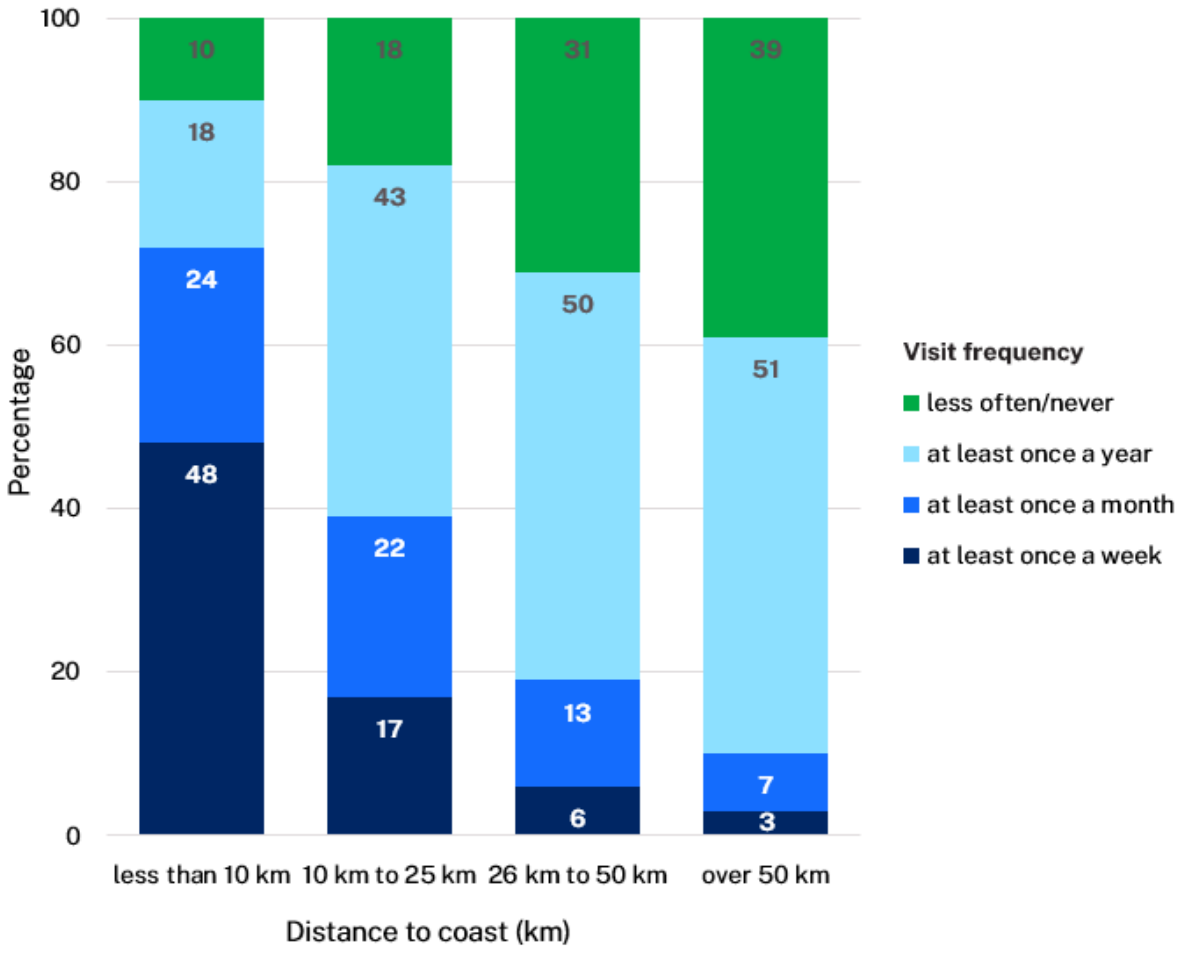


Figure 24 **Beach visitation frequency by NSW residents by distance to the coast**

Source: Surf Life Saving NSW (SLSNSW accessed 2022).

5.1.4 Estimating baseline visitation by origin and destination

Visitor origin and destination determines whether the value of a beach visit is included in LGA and/or state boundary-of-analysis CS, PS and EBO values estimates. Therefore, it was necessary to estimate baseline visitation by visitor origin (accounting for LGA, intrastate, interstate and international visitor preferences) and destination (the specific LGAs and beaches visited).

We followed the 5 steps in Figure 25 to estimate baseline visitation by origin and destination. Additional detail is provided below.

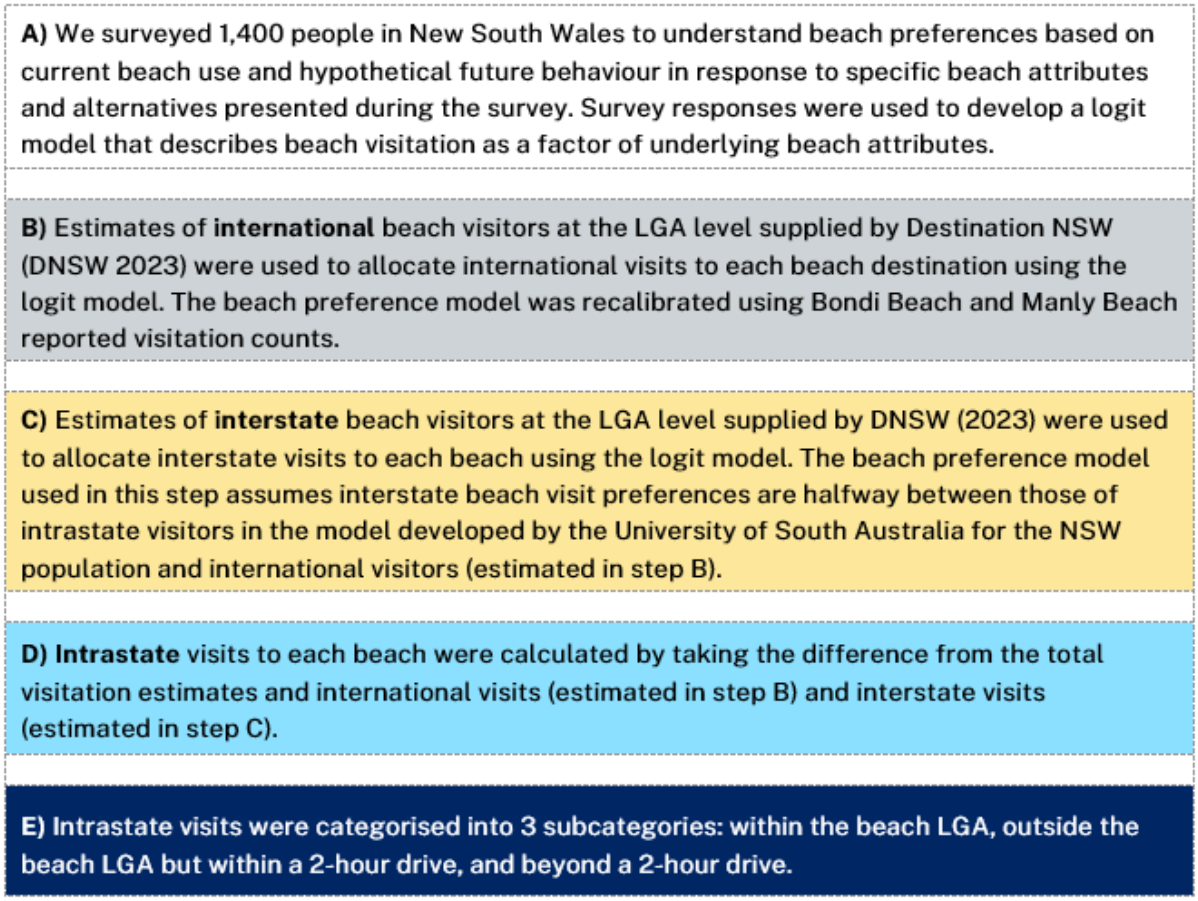


Figure 25 Data sources and steps used to estimate beach visitation by visitor origin

A) Understanding visitor preferences

Visitor preferences for different beach attributes were estimated based on a beach preference model developed by researchers at the University of South Australia.

The model was based on our survey of more than 1,400 people in New South Wales, drawn from random postcodes spanning the full extent of New South Wales. It was scaled to account for the demographics of individual respondents (to account for over-representation of women and high-income earners, for example). This means the results of the survey can be considered representative of the preferences of NSW residents.

The survey asked about actual visitation to NSW beaches, as well as posing hypothetical questions about the types of beaches people might like to visit in the future. Survey responses were used to specify a regression model that could explain beach visitation rates based on beach attributes. Preferences were expressed in terms of the attributes presented in Table 6. Full details of the beach preference model can be found in Ardeshiri et al. (2017).

Table 6 Parameter estimates from the logit model

Name	Value	Rob. std error	Rob. t-test	Rob. r-value
Iconic beach intercept	0.114	0.0639	1.79	0.074
Bay beach intercept	0.184	0.0674	2.73	0.006
Surf beach intercept	0.134	0.0581	2.31	0.021
Main beach intercept (Reference)	0	0	0	0
Beach length	–0.00549	0.00372	–1.48	0.140
Beach width	0.0127	0.000982	12.9	0.000
Beach crowding	–0.0115	0.000461	–25	0.000
Distance from home	-0.0101	0.000326	–31	0.000
Distance to an access point	–0.000258	3.18E-05	–8.11	0.000
Escarpment height	0.224	0.0233	9.63	0.000
Availability of toilets	0.404	0.0273	14.8	0.000
Availability of a patrol service	0.379	0.0248	15.3	0.000
Availability of a park	0.257	0.0246	10.5	0.000
Availability of a kiosk or cafe	0.259	0.0249	10.4	0.000
Number of estimated parameters	14			
Sample size	1,436			
Final log likelihood	–21,309.27			
Rho-square-bar for the init. model	0.37			
Akaike information criterion	42,652.55			
Bayesian information criterion	42,742.13			

The beach preference model was applied to a dataset containing all the attributes for each beach in New South Wales to estimate beach-specific visitation rates. It also included a term relating to the distance between survey respondents' home and the beach of interest.

This means the regression model could be used to estimate the probability that an individual from a specific postcode would visit a specific beach accounting for both beach attributes (like those in Table 6) and beach distance from the respondent's home. Note that the probability of no visit is included in visit estimation.

B) Distributing international visitors to specific beach destinations

International visitor numbers to all NSW beaches were provided by DNSW (2023) from the International Visitor Survey (IVS) by Tourism Research Australia (2023a). The IVS dataset is based on surveys of 40,000 international visitors as they depart Australia

each year. It includes questions about the types of activities they participate in during their stay in Australia, including whether they visited a beach.

IVS data for the period 2015 to 2018 reported that, on average, 2.7 million international visitors who stayed in New South Wales reported visiting a beach.

Small sample sizes for data collected in years affected by COVID travel restrictions (2020, 2021, 2022) means more recent 4-year average data for 2020 to 2023 is not available.

'Visitor origin' was estimated using the data from DNSW on the number of nights international tourists (who reported visiting a beach in New South Wales) stayed in each NSW LGA. The origin was taken as the centroid of the LGA, and visitors were assigned to specific beaches using Equation 3:

Total international visitation $_{beach}$ = P(b) x population who visited a beach *(Equation 3)*

where P(b) is the probability of visiting a beach.

An adapted version of the logit model described above was used to estimate P(b). After assigning international visitors to beaches in line with the preferences of intrastate tourists described above, the beach preference model was retrained to align more closely with international tourists' beach preferences.

This involved introducing model coefficients that deliver modelled international visitation in line with published figures for specific beaches, including Bondi Beach (1.4 million) and Manly Beach (0.99 million).

- Bondi visitor profile YE December 2016 stated 90% of the total 1.6 million international visitors (n=1,440,000) to Bondi went to the beach (DNSW 2017a).
- Manly visitor profile YE December 2016 stated that, 90% of the total 1.1 million international visitors (n=990,000) to Manly went to the beach (DNSW 2017b).

For this purpose, Equation 4 was used to recalibrate each beach constant.

$\alpha_j^1 = \alpha_j^0 + \ln\left(\frac{S_j}{\hat{S}_j^0}\right)$ *(Equation 4)*

Where:

α_j^0 is the estimated alternative-specific constant for alternative j and it is used as the starting value

S_j is the share of beach visitation to the selected beach derived from the logit model

$\hat{S}_j^0$ is the actual share of beach visitation.

This equation will raise the constant for that alternative if the actual share for an alternative exceeds the predicted share, or lower the constant if the actual share is below the predicted share. With the new constants, the shares were predicted again and compared with the actual shares, and, if needed, the constants were adjusted again.

This process was repeated until the forecasted shares were sufficiently close to the actual shares. The resulting model allocated 65% of visitation to Bondi and Manly beaches, with the remaining 35% distributed among other beaches in proportion to their share of total beach visitation. For more robust results, a separate study on international beach preferences could be conducted.

C) Distributing interstate visitors to specific beaches

Interstate visitor numbers were estimated based on DNSW (2023) tourism data from the National Visitor Survey (NVS) by Tourism Research Australia (2023b). This is a similar survey to the IVS described in step B), but it relates to domestic tourists. The survey program interviews 120,000 domestic visitors nationally each year. As for the IVS, the NVS asks about the types of activities that tourists participate in during their intrastate or interstate stay, including if they visited a beach.

NVS data for the period 2015 to 2018 showed that, on average, 2.5 million interstate visitors to New South Wales visited a beach. We have assumed that interstate visitors' preferences lie somewhere between those of international and intrastate tourists – skewed somewhat towards iconic beaches like Bondi and Manly, but including a higher rate of visitation to other beaches. The final interstate visitors to each beach destination were estimated following the same process described in step B).

D) Distributing intrastate beach visitors to each LGA origin

Intrastate beach visitation figures for each destination were calculated by subtracting the sum of international and interstate beach visitation (calculated in steps A) and B)) from the total beach visitation obtained using the benefit transfer function for that specific destination. Bayes' theorem (Joyce 2021) was used next, as shown in Equation 5, to redistribute these intrastate beach visitation figures, estimating the number of visits made from each LGA of origin.

$$P(O|D) = \frac{P(D|O)\,P(D)}{P(O)} \qquad \textit{(Equation 5)}$$

Where:

P(O|D) represents the probability of visiting a beach from an LGA, given the beach destination

P(D|O) represents the probability of beach visitation given the original destination

P(D) is the probability of beach visitation

P(O) is the probability of visiting a beach from the LGA.

P(D|O) is calculated using the same logit model described in step A), and all the constants are recalibrated using Equation 4. P(D) was calculated by taking the share of beach visitation at the beach over the total visitation to all beaches. P(O) is calculated using a gravity model (Anderson 2011) that uses Newton's law of gravitation to predict movement (people or goods) between I and J. As described in Equation 6, population at the LGA (Y_i) and the LGA's 2021 SAIFA scores (E_i) were used as attracting forces (pushing factors) to visit a beach, and the actual driving distance $\left(d_{ij}\right)$ from the centroid

of the LGA to the beach as the pulling factor to reduce the potential visit to the beach. k is a constant and b is the exponent of distance. The values of k and b vary depending on the specific dataset and can be estimated if actual data exists. However, for this study, they are considered to be equal to 1.

$$P(O_{ij}) = K\frac{Y_i E_i}{d_{ij}^b} \qquad \textit{(Equation 6)}$$

Figure 26 provides examples of beach visitation per capita to Bondi and Manly beaches.

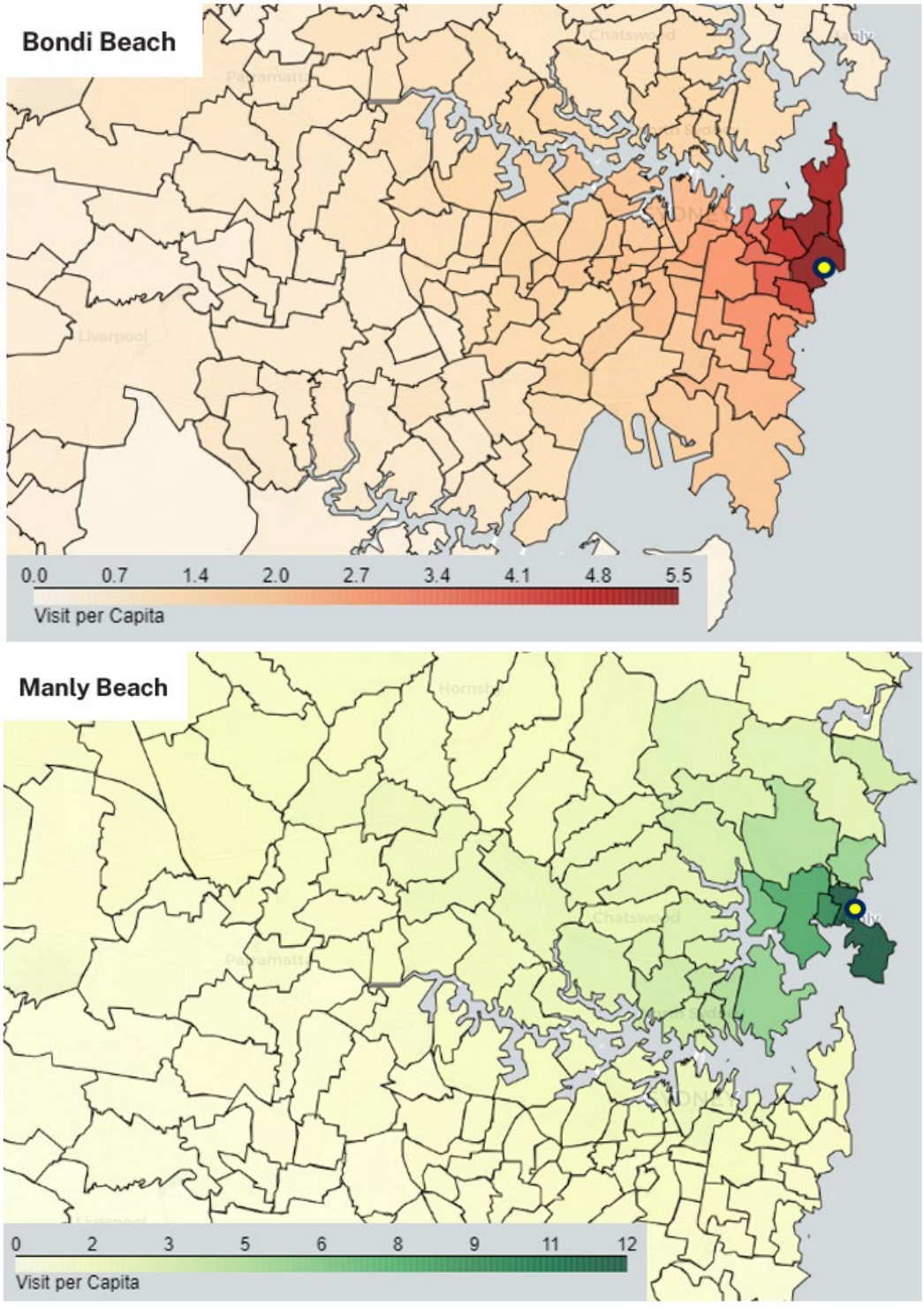


Figure 26 Examples of NSW resident beach visitation per capita

E) Categorise intrastate values into 3 subcategories

Given that our estimates of total intrastate visitation identify visitation rates to each beach from each LGA, we were able to further classify intrastate visitors into 3 subcategories:

- within the beach LGA (where visitor origin is within the same LGA as the beach of interest)
- outside the beach LGA but within a 2-hour drive (assuming an average speed of 45 km/hour as the threshold of the 2-hour drive to replicate city driving conditions).
- beyond a 2-hour drive.

This is important because these groups of visitors will be included or excluded from CS and PS values estimates according to the boundary of analysis used (Table 11 and Table 13).

Appendix A provides all the total, international, interstate and intrastate visits (showing within LGA, outside LGA but within a 2-hour drive, and beyond a 2-hour drive subcategories) as calculated using the steps above.

5.1.5 Estimating visitor displacement

When one of the beach attributes described in Table 7 changes (for example, when beach width narrows from sand erosion) this will affect visitor preferences. Where there is a poorer fit between visitor preferences and beach attributes (that is, where the change reduces the beach's appeal) visitors may respond in one of 3 ways:

- they may continue to visit the impacted beach with the same frequency, but their enjoyment will be diminished. In economic terms, reduced enjoyment is estimated as 'reduced utility' for a specific beach visit
- they may choose to visit a different beach for some or all of their beach visits
- they may make fewer beach visits each year.

These responses are not mutually exclusive. For example, a specific visitor may make fewer beach visits and direct their remaining visitation away from the impacted beach.

The BVET estimates the impacts of changes to beach attributes by repeating the beach preference modelling described in steps A) to E) above (Section 5.1.4) on a dataset that includes the changed beach attributes, and comparing visitor numbers to the estimated baseline.

This approach accounts for both reduced enjoyment at the impacted site (reduced consumer surplus) and, if the impact is large enough, it will assign visitors to a different beach site. Where utility of either the impacted, or the new, beach site is lower than zero we assume the beach visit will not occur.

5.2 Estimating consumer surplus

5.2.1 Travel cost survey

Consumer surplus is estimated based on travel-cost modelling.

Data for the travel-cost analysis came from a statewide sample of NSW residents. In all, n=1436 beachgoing NSW residents were drawn from a consumer sample of a major national online panel company. The survey was administered in the period 12 to 22 August 2016 through a web-based interface.

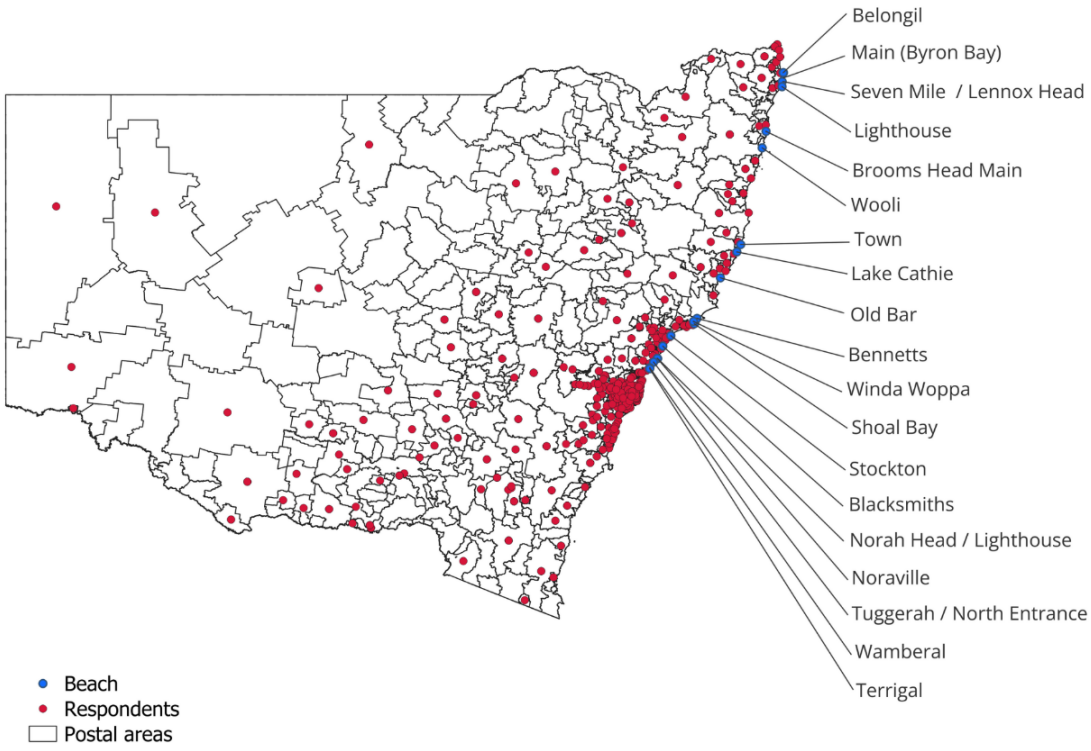
Respondents were recruited roughly in proportion to the composition of the NSW population in terms of key demographic variables, such as age, gender and income. Figure 27 provides an overview of sample distribution over New South Wales, with respondents positioned at their postal code centroid (red dots) and the 39 beaches included in the visitation survey (blue dot).

- A value of travel time equal to $23.59 per hour was calculated using 40% (Austroads 2012) of the NSW reported seasonally adjusted average weekly earnings for full-time ordinary adult workers ($1,887.50 per week in November 2023 [ABS 2024]). Using an average walking speed of 5 km/h and driving speed of 50 km/h, and following the proportion of the mode shares, the value of time (VOT) was calculated as $0.90 per km.
- The final cost of travel per km was calculated using Equation 7.

$$Travel\ cost\ \left(\frac{\$}{km}\right) = VOT\ per\ km + (Share\ of\ private\ trip * \$0.35) + (Share\ of\ public\ transport\ trips * \$0.39) = \$1.25 \text{ per km.} \quad \textit{(Equation 7)}$$

The return trip was considered when calculating the travel cost in the R_Shiny code for the tool.

(a)



(b)

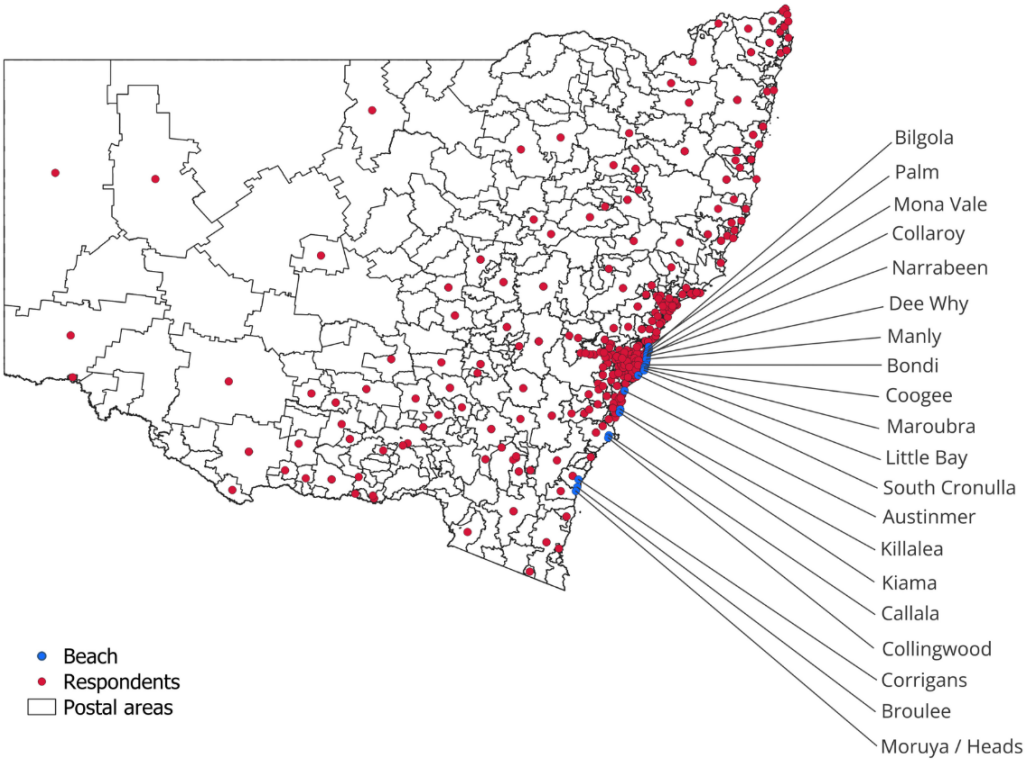


Figure 27 **Distribution of NSW respondents. Map a represents New South Wales from the Central Coast north to the NSW–Queensland border. Map b represents the area from Sydney south to the Victorian border**

Postal areas are an Australian Bureau of Statistics mesh block approximation of a general definition of postcodes.

5.2.2 Calculating the public transport fair

Step 1: Obtain the average fee from the NSW Opal website

As the reported average trip length for public transportation is 12.40 km, we subsequently calculated the average fares for adult peak and off-peak hours in the relevant distance category for various public transport modes, such as metro and train, bus and light rail, and ferry (Table 7).

Following the trend shown in Figure 28, we assumed that 60% of the trips are made during peak hours, with the remaining 40% occurring during off-peak hours. Therefore, in calculating the average, we weighted the fees for peak and off-peak hours by 60% and 40%, respectively.

Table 7 NSW metropolitan public transport fares August 2024

Distance travelled	Adult peak fares	Adult off-peak fares	Average weighted fares
Travel by metro and train			
0–10 km	$4.20	$2.94	
10–20 km	$5.22	$3.65	$4.59
20–35 km	$6.01	$4.20	
36–65 km	$8.03	$5.62	
Over 65 km	$10.33	$7.23	
Travel by bus and light rail			
0–3 km	$3.20	$2.24	
3–8 km	$4.36	$3.05	
Over 8 km	$5.60	$3.92	$4.93
Travel by ferry			
0–9 km	$7.13	–	
Over 9 km	$8.92	–	$8.92

Source: Transport for NSW Opal webpages transportnsw.info/tickets-opal/opal/fares-payments/adult-fares, accessed August 2024.

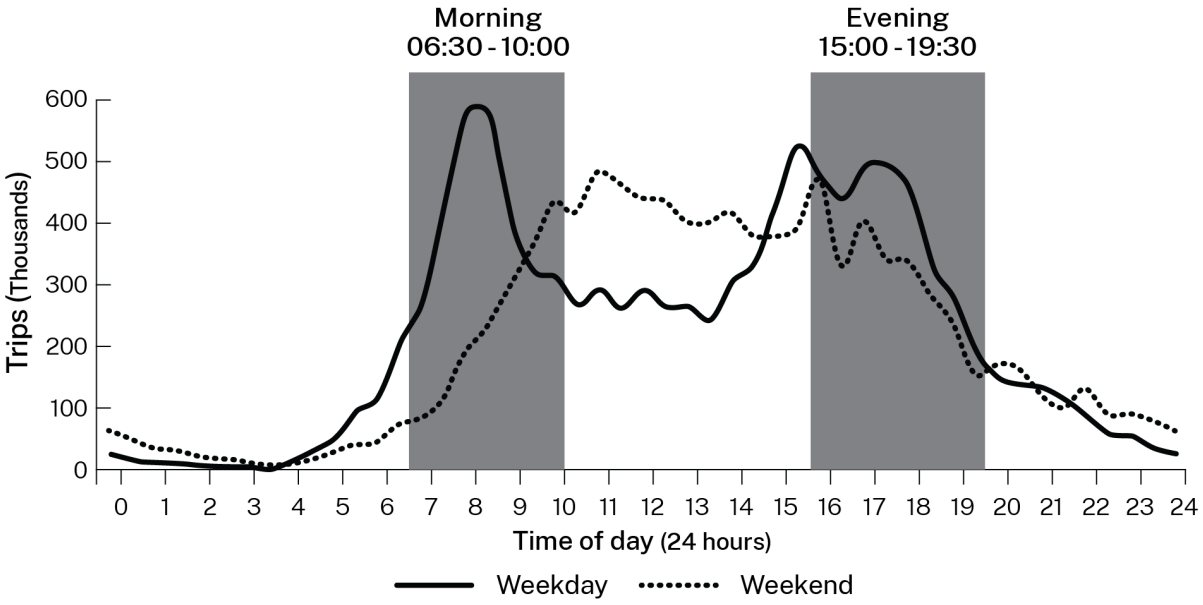


Figure 28 Number of public transport trips during a 24-hour period

Source: Transport for NSW website www.transport.nsw.gov.au/data-and-research/data-and-insights/public-transport-trips-all-modes, accessed 2022.

Step 2: Calculate the average fare for all public transport modes

The share of trips for each mode can be calculated by using the reported number of travellers/trips by mode in October 2023 (TfNSW 2023). This share is then multiplied by the average fare for each mode, resulting in $4.85 as the average fare across all public transport modes (Table 8).

Table 8 Average public transport fare August 2024

Mode	Trips (per day)	Share of total	Average fares	Average fare for all modes
Train	26,779,840	50%	$4.59	
Metro	2,133,124	4%	$4.59	
Bus	19,645,679	37%	$4.93	$4.85
Light rail	3,200,576	6%	$4.93	
Ferry	1,348,739	3%	$8.92	
Total	**53,107,98**	**100%**		

5.2.3 Estimating baseline consumer surplus

Under the logit assumptions, the consumer surplus associated with a set of beach alternatives takes a closed form that is easy to calculate. By definition, a person's consumer surplus is the utility, in dollar terms, that the person receives in the choice situation. That is, how much they would be willing to pay to access the beach.

The decision-maker chooses the beach alternative that provides the greatest utility. Consumer surplus is therefore $CS_n=(1/\alpha_n)\max_j(U_{nj})$, where α_n is the marginal utility of

income: $dU_n/dY_n=\alpha n$, with Y_n the income of person n. The division by α_n translates utility into dollars, since $1/\alpha_n=dY_n/dU_n$, which gives you the monetary equivalent of the total value for a visit. Since there is no entry charge for accessing NSW beaches, the entire value that visitors are willing to pay constitutes consumer surplus. This is consistent with the area under a demand curve in classical welfare economics.

The researcher does not observe U_{nj} and therefore cannot use this expression to calculate the decision-maker's consumer surplus. Instead, the researcher observes V_{nj} and knows the distribution of the remaining portion of utility. With this information, the researcher can calculate the expected consumer surplus:

$$E(CS_n) = \frac{1}{\alpha_n} \ln\left(\sum_{j=1}^{J} e^{v_{nj}}\right) + C \qquad \textit{(Equation 8)}$$

where C is an unknown constant that represents the fact that the absolute level of utility cannot be measured. Note that the argument in parentheses in this expression is the denominator of the logit choice probability mentioned earlier. V_{nj} refers to the observed or systematic utility that person n derives from beach alternative j, as determined by the measurable attributes of the beach (e.g. width, patrol presence, distance). This is distinct from U_{nj}, which includes both observed and unobserved components of utility.

To calculate the change in consumer surplus, for α_n we used the negative coefficient estimated for travel distance and converted it to travel cost using the $1.25 cost of travel explained previously. The total consumer surplus estimates were divided by party size to give a final estimate of the travel cost on a per person per visit basis.

Table 9 provides the consumer surplus estimates for each NSW coastal LGA, including LGA boundary-of-analysis values and state boundary-of-analysis values. In most instances, estimates of consumer surplus using the LGA boundary of analysis (that is, the average consumer surplus that accrues to beach visitors who reside within the same LGA as the beach) are larger per visit than consumer surplus estimates using the state boundary of analysis (that is, the average consumer surplus that accrues to beach visitors from further away). This is consistent with literature (Zhang et al. 2015) that reports that those who live close to a beach tend to value it more highly than those who live further away.

Table 9 **Consumer surplus estimates (annual) and average consumer surplus per visit (constant prices, June quarter consumer price index 2024)**

LGA	LGA boundary of analysis			State boundary of analysis		
	CS	Visits	Av CS	CS	Visits (domestic)	Av CS
Ballina	$15,827,111	70,467	224.60	$185,981,386	1,122,005	$165.76
Bayside	$14,913,598	101,186	147.39	$257,490,002	1,778,716	$144.76
Bega Valley	$44,847,595	294,695	152.18	$656,744,639	4,937,816	$133.00
Bellingen	$357,847	1,948	183.70	$36,978,972	250,873	$147.40
Byron	$39,004,840	172,249	226.44	$581,525,975	3,433,559	$169.37
Canada Bay	$2,068,102	14,043	147.27	$82,946,960	573,310	$144.68
Central Coast	$108,399,401	765,260	141.65	$1,458,859,574	10,112,831	$144.26
Clarence Valley	$18,611,324	92,486	201.23	$373,005,720	2,421,643	$154.03
Coffs Harbour	$30,970,248	157,485	196.66	$408,718,433	2,738,365	$149.26
Eurobodalla	$32,643,721	223,793	145.87	$699,031,362	5,051,491	$138.38
Kempsey	$4,929,240	28,355	173.84	$238,939,219	1,632,019	$146.41
Kiama	$2,775,612	20,034	138.54	$245,569,283	1,717,576	$142.97
Lake Macquarie	$26,592,798	186,777	142.38	$504,289,477	3,503,475	$143.94
Mid-Coast	$13,764,044	91,895	149.78	$402,149,012	2,792,798	$144.00
Mosman	$11,972,799	80,835	148.11	$818,151,399	5,648,355	$144.85
Nambucca Valley	$1,644,851	9,010	182.55	$95,051,950	645,690	$147.21

LGA	LGA boundary of analysis			State boundary of analysis		
	CS	Visits	Av CS	CS	Visits (domestic)	Av CS
Newcastle	$47,862,327	329,638	145.20	$676,135,952	4,704,765	$143.71
Northern Beaches	$268,522,463	1,836,482	146.22	$3,620,372,395	24,998,014	$144.83
Port Macq. Hastings	$18,704,706	112,049	166.93	$375,837,984	2,588,979	$145.17
Port Stephens	$11,967,126	82,881	144.39	$386,562,554	2,690,588	$143.67
Randwick	$98,493,469	665,896	147.91	$1,864,793,379	12,873,650	$144.85
Richmond Valley	$1,185,180	5,583	212.28	$58,754,835	366,730	$160.21
Shellharbour	$6,821,398	48,858	139.62	$215,493,698	1,504,274	$143.25
Shoalhaven	$54,492,593	400,054	136.21	$928,751,778	6,564,053	$141.49
Sutherland Shire	$91,659,002	631,276	145.20	$1,630,493,108	11,270,512	$144.67
Tweed	$50,168,547	226,134	221.85	$257,350,537	1,484,656	$173.34
Waverley	$41,588,398	281,104	147.95	$1,365,616,021	9,426,131	$144.88
Wollongong	$51,039,607	361,238	141.29	$818,181,970	5,683,981	$143.95
Woollahra	$42,119,783	284,539	148.03	$1,409,753,500	9,731,235	$144.87
Total	**$1,153,947,730**	**7,576,250**	**$152.30**	**$20,653,531,074**	**142,248,090**	$145.20

Our estimates are within the range of published estimates of consumer surplus values that include both resident and visitor data (Table 10). Consumer surplus estimates for residents only tend to be lower, reflecting lower travel costs and range from $12.86 per person for residents of the Clarence Valley in New South Wales (Raybould et al 2013, June 2024 prices) to $49.10 per person for people living within 50 km of the coast adjacent to the Great Barrier Reef (Rolfe and Gregg 2012, June 2024 prices).

As stated above, the travel cost survey was conducted in 2016 so we have indexed the survey data for inflation to bring these values into line with other data used in tool calculations.

Table 10 Consumer surplus per visit estimates that include resident and visitor data (per person, June 2024 prices)

CS	Reference	Country
$27.08	Zhang et al 2015	Australia
$45.20	Zambrano-Monserrate et al 2018	Ecuador
$54.61	Andersson et al 2015	Australia
$155.56	Pitt 1992	Australia
$219.61	Blackwell 2007	Australia
$245.43	Catma 2024	USA

5.2.4 Estimating change in consumer surplus with changing beach attributes

The change in consumer surplus that results from a change in the alternatives and/or the choice set is calculated from Equation 9. Expected consumer surplus ($E(CS_n)$) is calculated twice: first under the conditions before the change, and again under the conditions after the change. The difference between the two results is the change in consumer surplus:

$$\Delta E(CS_n) = \frac{1}{\alpha_n}\left[\ln\left(\sum_{j=1}^{J_1} e^{v_{nj}^1}\right) - \ln\left(\sum_{j=1}^{J_0} e^{v_{nj}^0}\right)\right] \qquad \textit{(Equation 9)}$$

where the superscripts 0 and 1 refer to before and after the change. The number of alternatives can change (for example, a new alternative can be added) as well as the attributes of the alternatives.

Since the unknown constant C enters expected consumer surplus both before and after the change, it drops out of the difference and can therefore be ignored when calculating changes in consumer surplus (Train 2009).

Equation 9 can be used if the marginal utility of income is constant over the range of implicit income changes that are considered by the policy. Thus, for policy changes that change consumer surplus by small amounts per person relative to income (like our proposed policy application), the formula can be used even though in reality the marginal utility of income varies with income.

5.2.5 Including consumer surplus in CBA

Consumer surplus is relevant only for certain visitor types, depending on the boundary of analysis used in the CBA. The inclusion or exclusion of consumer surplus values for different boundary assumptions is shown in Table 11.

Table 11 Inclusion or exclusion of CS for different visitor types based on the CBA boundary of analysis

Visitor origin	Include CS if LGA boundary?	Include CS if State boundary?
LGA	Yes	Yes
Intrastate	No	Yes
Interstate	No	No
International	No	No

5.3 Estimating producer surplus

Producer surplus is the benefit that producers gain from selling goods and services. It is similar to profit, in that is calculated as revenue received minus the cost of supplying goods and services.

11.2% of total expenditure by visitors to NSW beaches is assumed to be consumer surplus, using the industry-average profit margins reported in the *Tourism in Australia* report (IBISWorld 2023). This producer surplus proportion was applied to average expenditure by international overnight, domestic overnight and day trip expenditure rates as outlined in Table 12.

The expenditure figures in Table 12 come from Tourism Research Australia (2024). Non-urban LGA data is based on average expenditure for the 2016 to 2019 average number of visitors who reported they visited a beach. Urban LGA (denoted by '*' in the table) expenditure is based on 2022–23 expenditure figures for domestic visitors and 2023 expenditure figures for international visitors.

Table 12 Per night/trip expenditure by visitors by origin*

Corresponding producer surplus has been calculated at 11.2% of per trip/day trip expenditure

LGA	Daily expenditure ($)			Producer surplus ($)		
	Inter*	Dom**	Day trip	Inter*	Dom**	Day trip
Ballina	86.67	287.26	104.01	9.71	32.17	11.65
Bayside*	184.79	254.68	222.84	20.70	28.52	24.96
Bega	86.67	186.97	180.77	9.71	20.94	20.25
Bellingen	48.29	126.29	102.77	5.41	14.14	11.51
Byron	86.67	251.35	126.29	9.71	28.15	14.14
Canada Bay*	109.01	221.30	90.77	12.21	24.79	10.17
Central Coast	76.77	172.11	99.05	8.60	19.28	11.09
Clarence	94.10	194.39	132.49	10.54	21.77	14.84
Coffs Harbour	60.67	208.01	196.87	6.80	23.30	22.05
Eurobodalla	105.25	170.87	132.49	11.79	19.14	14.84
Kempsey	78.01	137.44	108.96	8.74	15.39	12.20
Kiama	75.53	188.20	107.72	8.46	21.08	12.06
Lake Macquarie	82.96	142.39	108.96	9.29	15.95	12.20
Mid Coast	65.62	164.68	128.77	7.35	18.44	14.42
Mosman*	109.01	221.30	90.77	12.21	24.79	10.17
Nambucca	29.72	123.82	89.15	3.33	13.87	9.98
Newcastle	100.29	185.73	147.34	11.23	20.80	16.50
Northern Beaches*	71.63	212.13	97.90	8.02	23.76	10.97
Port Macq-Hasting	61.91	204.30	162.20	6.93	22.88	18.17
Port Stephens	89.15	260.02	112.67	9.98	29.12	12.62
Randwick*	145.34	186.63	86.69	16.28	20.90	9.71
Richmond Valley	30.95	126.29	94.10	3.47	14.14	10.54
Shellharbour	52.00	302.12	120.10	5.82	33.84	13.45
Shoalhaven	96.58	167.15	126.29	10.82	18.72	14.14
Sutherland*	93.43	120.34	81.59	10.46	13.48	9.14
Tweed	80.48	173.35	111.44	9.01	19.41	12.48
Waverley*	109.01	221.30	90.77	12.21	24.79	10.17
Wollongong	138.68	179.54	105.25	15.53	20.11	11.79
Woollahra*	109.01	221.30	90.77	12.21	24.79	10.17

* Urban LGA.

5.3.1 Estimating change in producer surplus with changing beach attributes

The producer surplus per visit (Table 12) is a fixed number so it does not change when beach attributes change. The estimated producer surplus per visit is applied to the number of visits from each visitor group (see below), so any change in visitor group numbers in response to changing beach attributes will be reflected in a change in producer surplus value estimates at each beach in the LGA (and in total/net LGA CS estimates).

5.3.2 Including producer surplus in CBA

Producer surplus is only relevant for certain visitor types, depending on the boundary of analysis applied in a CBA. The visitor categories used by Tourism Research Australia are matched to the visitor origins used in the tool in Table 13.

Table 13 Assumptions used to allocate expenditure and PS to different visitor types based on the CBA boundary of analysis

Visitor origin (tool)	TRA visitor expenditure category applied	Include PS in boundary?	
		LGA	State
LGA	Day trip	No	No
Intrastate	If origin < 120 km from beach of interest, day trip	Yes	No
	If origin > 120 km from beach of interest, domestic overnight	Yes	No
Interstate	Interstate overnight	Yes	Yes
International	International overnight	Yes	Yes

For the model underpinning the tool we assumed all interstate visits were an overnight stay. This means the LGA boundary of analysis PS for coastal LGAs near the state borders (Byron and Tweed in the north and Eurobodalla in the south) will be higher than if the percentage of interstate day trip visits were included in PS calculations because the day trip expenditure is usually lower than overnight trip expenditure.

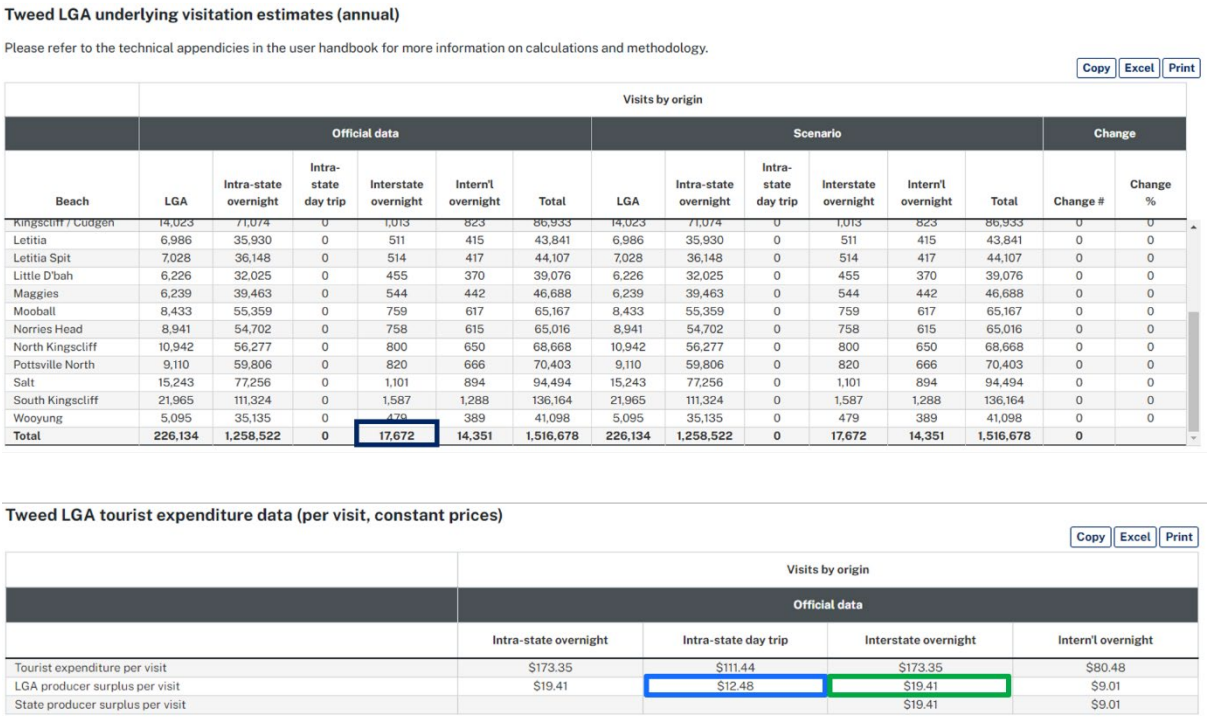
You can adjust LGA boundary-of-analysis PS calculations for LGAs on the NSW border by recalculating the interstate visits PS value using the percentage of overnight and day trips data in Table 14 and trip expenditure data (Tourism Research Australia 2024).

Table 14 **Percent of interstate trips by type of trip (average 2015 to2018 of those who said they went to the beach)**

LGA	Overnight	Day trip
Byron	48.23%	51.77%
Eurobodalla	73.73%	26.27%
Tweed	39.70%	60.30%

Source: Destination New South Wales (2023).

Working through an example, the tool estimates 17,672 total interstate visits (black box) to Tweed LGA (Figure 29). If you apply the overnight stay producer surplus per visit for interstate visits ($19.41), interstate visits contribute $343,014 to the LGA producer surplus.



Tweed LGA underlying visitation estimates (annual)

Please refer to the technical appendicies in the user handbook for more information on calculations and methodology.

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	Visits by origin													
	Official data						Scenario						Change	
Beach	LGA	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight	Total	LGA	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight	Total	Change #	Change %
Kingscliff / Cudgen	14,023	71,074	0	1,013	823	86,933	14,023	71,074	0	1,013	823	86,933	0	0
Letitia	6,986	35,930	0	511	415	43,841	6,986	35,930	0	511	415	43,841	0	0
Letitia Spit	7,028	36,148	0	514	417	44,107	7,028	36,148	0	514	417	44,107	0	0
Little D'bah	6,226	32,025	0	455	370	39,076	6,226	32,025	0	455	370	39,076	0	0
Maggies	6,239	39,463	0	544	442	46,688	6,239	39,463	0	544	442	46,688	0	0
Mooball	8,433	55,359	0	759	617	65,167	8,433	55,359	0	759	617	65,167	0	0
Norries Head	8,941	54,702	0	758	615	65,016	8,941	54,702	0	758	615	65,016	0	0
North Kingscliff	10,942	56,277	0	800	650	68,668	10,942	56,277	0	800	650	68,668	0	0
Pottsville North	9,110	59,806	0	820	666	70,403	9,110	59,806	0	820	666	70,403	0	0
Salt	15,243	77,256	0	1,101	894	94,494	15,243	77,256	0	1,101	894	94,494	0	0
South Kingscliff	21,965	111,324	0	1,587	1,288	136,164	21,965	111,324	0	1,587	1,288	136,164	0	0
Wooyung	5,095	35,135	0	479	389	41,098	5,095	35,135	0	479	389	41,098	0	0
Total	**226,134**	**1,258,522**	**0**	**17,672**	**14,351**	**1,516,678**	**226,134**	**1,258,522**	**0**	**17,672**	**14,351**	**1,516,678**	**0**	

Tweed LGA tourist expenditure data (per visit, constant prices)

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	Visits by origin			
	Official data			
	Intra-state overnight	Intra-state day trip	Interstate overnight	Intern'l overnight
Tourist expenditure per visit	$173.35	$111.44	$173.35	$80.48
LGA producer surplus per visit	$19.41	$12.48	$19.41	$9.01
State producer surplus per visit			$19.41	$9.01

Figure 29 **Tweed LGA visitation**

If we split interstate visits into overnight and day trips using the proportions for Tweed LGA provided above, (39.70% = 7,016 overnight visits and 60.30% = 10,656 day trips) and multiply interstate overnight visits by $19.41 (green box) and multiply day trips by the producer surplus per day trip ($12.48, blue box), the PS total from interstate visits is $269,166, which is $73,848 lower than the PS estimated by the tool (where all interstate visits are assumed to be overnight visits) (Table 15).

Table 15 **Tweed LGA: PS annual values if interstate visits are separated into overnight and day trips**

Beach	Number of interstate visits (annual)			Adjusted PS values (annual)	
	Tool data	Destination NSW data			
	Interstate overnight	Overnight 39.70%	Day trip 60.30%	Overnight	Day trip
Cabarita	1427	567	860	$10,996	$10,739
Casuarina	756	300	456	$5,826	$5,689
Cotton	542	215	327	$4,177	$4,079
Cudgera	595	236	359	$4,585	$4,478
Dreamtime	509	202	307	$3,922	$3,830
Duranbah/ Flagstaff	2,083	827	1,256	$16,051	$15,676
Fingal	1,273	505	768	$9,809	$9,580
Hastings Point	1,146	455	691	$8,831	$8,624
Kingscliff/ Cudgen	1,013	402	611	$7,806	$7,623
Letitia	511	203	308	$3,938	$3,846
Letitia Spit	514	204	310	$3,961	$3,868
Little D'bah	455	181	274	$3,506	$3,424
Maggies	544	216	328	$4,192	$4,094
Mooball	759	301	458	$5,849	$5,712
Norries Head	758	301	457	$5,841	$5,704
North Kingscliff	800	318	482	$6,165	$6,020
Pottsville North	820	326	494	$6,319	$6,171
Salt	1,101	437	664	$8,484	$8,286
South Kingscliff	1,587	630	957	$12,229	$11,943
Wooyung	479	190	289	$3,691	$3,605
Total visits	17,672	7016	10,656	$136,176	$132,990
PS from interstate visits	**$343,014**				**$269,166**
PS value difference					*–$73,848*

5.4 Estimating existence, bequest and option value

Existence, bequest and option (EBO) values are defined as follows:

- **existence value:** the value obtained from knowing certain things exist for economic, moral, ethical or other reasons
- **option value:** the benefit placed on the potential future ability to use a resource (whether by current or future generations)
- **bequest value:** the value attributed to maintaining something for the benefit of future generations.

EBO values are sometimes referred to as 'non-use' values. Unlike recreation values, these benefits accrue to all (or most) people in the population – not just beach users.

A single combined figure for EBO value was estimated by using a stated preference survey of 606 NSW residents undertaken by the University of NSW (UNSW) on behalf of the Department of Climate Change, Energy, the Environment and Water in 2019 (then the Department of Planning and Environment).

The survey employed a contingent valuation (CV) approach, asking respondents how much they would be willing to pay (WTP) per year, to maintain the current extent of sandy beaches in the face of coastal erosion processes along the NSW coastline. The study estimated a WTP value of $96.41 (June 2024 prices, $80.16 in September 2019) for households in coastal LGAs and $108.42 (June 2024 prices, $90.14 in September 2019) for all NSW households.

The household WTP value is similar to that obtained by a previous stated preference study undertaken by the University of South Australia (also commissioned by the department, then the Office of Environment and Heritage) in September 2016 that used discrete choice modelling to determine how much respondents would be willing to contribute to a management levy to prevent beach loss in New South Wales (Ardeshiri et al. 2019). That study reported an average WTP of $95.16 (June 2024 prices, $75 September 2016 prices) for NSW households.

A significant element of the 2019 study undertaken by UNSW is its contribution to the understanding of the part-whole bias in relation to WTP to maintain sandy beaches. Survey responses were analysed using 'payment ladders' to identify willingness to pay for preservation of sandy beaches at various spatial scales (a single beach, all beaches in an LGA, or all beaches in New South Wales).

It found no significant difference in respondents' willingness to pay for a single beach (the closest beach to their home location) compared to their WTP for all beaches in their LGA, or all beaches in New South Wales. This finding around value scaling is typical of CV and choice modelling studies.

In a practical sense it introduces an important constraint on the total WTP that can be extracted from an individual household – full WTP should not be applied to single sites, and certainly not to sequential sites as this would constitute double counting. Accordingly, we estimated WTP as a single payment per household, which is

subsequently divided across all beaches in the LGA (or across all beaches in New South Wales for a state-based boundary of analysis).

Because the UNSW study did not find any difference in WTP according to beach type (iconic beach, bay beach, main beach and surf beach), the total WTP collected from households in the LGA was applied evenly across beach types on a per metre length basis.

For example, the levy raised in Ballina LGA would be $1,945,479 (WTP $96.41 x 20,178 households in 2024 (DP 2022). The LGA has 31.41 m of sandy beach (DCCEEW 2024). This means we used $61.95 per metre length to value the beaches (levy divided by length of beaches) in Ballina LGA. The value per metre applied in each LGA varies significantly given differences in the number of households and the length of sandy beaches in an LGA.

The levy raised from all state households, 3,178,728, (DP 2022) would be $344,631,142. Dividing this figure by the length of sandy beach in the state (976.57 km, [DCCEEW 2024]) means we used $352.90 per metre length to calculate EBO values for the state-based boundary of analysis.

5.4.1 Estimating change in EBO value with changing beach attributes

Both the above-mentioned studies commissioned by the department to estimate EBO value assessed respondents' WTP to maintain beaches in their current state. Accordingly, we estimate loss of WTP in association with beach erosion in proportion to loss of sand (width) from a beach. For example, if a beach is 40 m wide and a coastal management option being assessed would narrow a beach by 4 m, the EBO value would be reduced by 10%.

5.4.2 Including EBO values in CBA

EBO value is only relevant for certain visitor types, depending on the boundary of analysis used in the CBA. The inclusion or exclusion of EBO values for different boundary assumptions is shown in Table 16.

Table 16 Inclusion or exclusion of EBO for different visitor types based on the CBA boundary of analysis

Visitor origin	Include EBO if LGA boundary?	Include EBO if state boundary?
LGA	Yes	Yes
Intrastate	No	Yes
Interstate	No	No
International	No	No

EBO value is also calculated differently depending on the boundary of analysis:

- **LGA boundary**: WTP per km of sand = WTP for coastal households * number of households in the relevant LGA/km of beach length in the relevant LGA.
- **State boundary**: WTP per km of sand = WTP for all NSW households * number of households in NSW/km of beach length in New South Wales.

5.4.3 Avoiding double counting

There is no double counting between the consumer surplus and EBO value in this study. Both the studies commissioned by the department to estimate EBO value (the 2016 choice survey undertaken by the University of South Australia and the 2019 contingent valuation survey undertaken by UNSW) tested respondents' willingness to pay a levy to preserve beach width irrespective of beach visitation. It was clear in both surveys that any levy would be additional to the travel costs that individual respondents would incur to access a given beach.

5.5 Updating estimates of visitation and value

5.5.1 Updating beach visitation data

The method used to estimate beach visitation described in this report represents best use of currently available data. However, the beach head count data used to parameterise our value transfer function and estimate visitation to all NSW beaches should be revised when better quality data becomes available. Several initiatives to improve data quality are currently underway, including the standardisation of patrol head counting.

Separate to this, the number of beach visits is updated to account for population growth as part of the BVET annual update.

5.5.2 Updating consumer surplus estimates

Consumer surplus estimates used in this study are derived from the travel cost survey described in Section 5.2. Elements of the method subsequently used to estimate total consumer surplus for a beach are updated annually (for example, all the changeable elements of the trip cost such as transport fairs, wages and fuel prices) and the consumer surplus value is indexed to inflation to provide estimates in today's dollars.

5.5.3 Updating producer surplus estimates

Producer surplus estimates used in this study are derived from expenditure data reported by Tourism Research Australia and average industry profit levels reported by IBISWorld (see Section 5.3). Both these sources are usually updated annually. Tourism Research Australia non-urban LGA four-year average expenditure data was impacted by small sample sizes during the COVID pandemic so this data is indexed for inflation to keep tool values current until more recent four-year average data becomes available.

5.5.4 Updating EBO values

EBO value estimates used in this study are derived from the contingent valuation survey described in Section 5.4. Elements of the method subsequently used to estimate EBO values for NSW beaches are updated annually (for example, household numbers and the willingness to pay figures for the LGA and state boundary of analysis are indexed for inflation).

Appendix A

Beach visits by LGA and origin, and as a percentage of total NSW beach visits (annual)

			Visits from outside NSW				Visits from within NSW					
LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Ballina LGA												
Angels North	144,634	0.10	1,368	0.04	1,685	0.07	9,098	0.13	21,260	0.02	111,223	0.26
Angels South	62,570	0.04	592	0.02	729	0.03	3,941	0.05	9,127	0.01	48,181	0.11
Beswicks	42,679	0.03	404	0.01	497	0.02	2,363	0.03	5,412	0.01	34,002	0.08
Boulder North	39,644	0.03	375	0.01	462	0.02	2,477	0.03	6,045	0.01	30,285	0.07
Boulder South/Iron Peg	34,309	0.02	325	0.01	400	0.02	2,147	0.03	5,191	0.01	26,247	0.06
Lighthouse	86,168	0.06	815	0.02	1,004	0.04	5,425	0.08	12,597	0.01	66,326	0.15
Patches	30,329	0.02	287	0.01	353	0.01	1,549	0.02	3,657	0.00	24,483	0.06
Robins	49,818	0.03	471	0.01	580	0.02	2,648	0.04	6,132	0.01	39,985	0.09
Seven Mile/Lennox Head	269,195	0.19	2,547	0.07	3,137	0.13	16,622	0.23	43,485	0.05	203,404	0.47
Sharpes	126,308	0.09	1,195	0.03	1,472	0.06	7,945	0.11	18,566	0.02	97,130	0.23
Shelly	207,850	0.15	1,967	0.05	2,422	0.10	13,087	0.18	30,386	0.04	159,989	0.37
South Ballina	52,701	0.04	499	0.01	614	0.03	3,164	0.04	7,164	0.01	41,261	0.10
Bayside LGA												
Brighton-Le-Sands	585,444	0.41	5,539	0.15	6,821	0.28	32,998	0.46	519,546	0.60	20,538	0.05
Cooks River	141,290	0.10	1,337	0.04	1,646	0.07	7,685	0.11	125,156	0.14	5,465	0.01
Dolls Point	181,975	0.13	1,722	0.05	2,120	0.09	10,066	0.14	161,048	0.19	7,019	0.02
Foreshore	128,264	0.09	1,214	0.03	1,494	0.06	6,998	0.10	113,615	0.13	4,943	0.01
Kyeemagh	137,862	0.10	1,304	0.04	1,606	0.07	7,951	0.11	121,695	0.14	5,306	0.01
Monterey	138,078	0.10	1,306	0.04	1,609	0.07	7,754	0.11	122,103	0.14	5,306	0.01
Ramsgate	126,623	0.09	1,198	0.03	1,475	0.06	7,111	0.10	111,972	0.13	4,866	0.01
Sandringham	135,377	0.09	1,281	0.03	1,577	0.06	7,409	0.10	119,906	0.14	5,204	0.01
Sandringham North	127,276	0.09	1,204	0.03	1,483	0.06	6,974	0.10	112,723	0.13	4,892	0.01

			Visits from outside NSW				Visits from within NSW					
LGA/beach	Total	%	Inter-national	%	Inter-state	%	Within LGA	%	Intra LGA < 2 hours	%	Intra LGA > 2 hours	%
Sandringham South	114,892	0.08	1,087	0.03	1,339	0.05	6,241	0.09	101,813	0.12	4,413	0.01
Bega Valley LGA												
1568	24,507	0.02	232	0.01	286	0.01	1,940	0.03	1,692	0.00	20,357	0.05
Aragunnu Bay	33,421	0.02	316	0.01	389	0.02	1,347	0.02	2,129	0.00	29,239	0.07
Armonds Bay	81,458	0.06	771	0.02	949	0.04	2,725	0.04	5,076	0.01	71,937	0.17
Aslings	55,560	0.04	526	0.01	647	0.03	4,403	0.06	3,790	0.00	46,194	0.11
Bar	100,644	0.07	952	0.03	1,173	0.05	7,978	0.11	6,844	0.01	83,697	0.20
Bar Mouth North	41,471	0.03	392	0.01	483	0.02	3,287	0.05	2,820	0.00	34,488	0.08
Bar Mouth South	24,846	0.02	235	0.01	289	0.01	1,970	0.03	1,690	0.00	20,662	0.05
Baragoot	28,409	0.02	269	0.01	331	0.01	886	0.01	1,735	0.00	25,188	0.06
Barragga Bay	80,827	0.06	765	0.02	942	0.04	2,703	0.04	5,037	0.01	71,380	0.17
Beares	74,501	0.05	705	0.02	868	0.04	1,909	0.03	4,576	0.01	66,443	0.15
Beares North	72,801	0.05	689	0.02	848	0.03	1,866	0.03	4,472	0.01	64,927	0.15
Begunnu Point 1	29,114	0.02	275	0.01	339	0.01	1,216	0.02	1,863	0.00	25,421	0.06
Begunnu Point 2	29,185	0.02	276	0.01	340	0.01	1,219	0.02	1,867	0.00	25,482	0.06
Bengunnu Point North	27,419	0.02	259	0.01	319	0.01	1,145	0.02	1,754	0.00	23,941	0.06
Bermagui Inlet 1	42,430	0.03	401	0.01	494	0.02	1,087	0.02	2,606	0.00	37,841	0.09
Bermagui Inlet 2	42,887	0.03	406	0.01	500	0.02	1,099	0.02	2,634	0.00	38,248	0.09
Bithry Inlet	67,429	0.05	638	0.02	786	0.03	2,816	0.04	4,314	0.00	58,874	0.14
Bithry Inlet North	71,698	0.05	678	0.02	835	0.03	2,995	0.04	4,587	0.01	62,602	0.15
Bittangabee Bay	25,977	0.02	246	0.01	303	0.01	2,057	0.03	1,794	0.00	21,578	0.05
Boulder Bay	27,171	0.02	257	0.01	317	0.01	1,602	0.02	1,792	0.00	23,204	0.05
Bournda Island	32,084	0.02	304	0.01	374	0.02	2,082	0.03	2,162	0.00	27,163	0.06
Boydtown	45,494	0.03	430	0.01	530	0.02	3,602	0.05	3,142	0.00	37,790	0.09
Brandy Creek	43,822	0.03	415	0.01	511	0.02	3,470	0.05	3,026	0.00	36,401	0.08
Breakaway	73,411	0.05	695	0.02	855	0.03	1,881	0.03	4,509	0.01	65,470	0.15
Brierly Point	27,407	0.02	259	0.01	319	0.01	2,170	0.03	1,893	0.00	22,766	0.05
Brierly Point East 1	68,109	0.05	644	0.02	794	0.03	5,393	0.07	4,703	0.01	56,575	0.13
Brierly Point East 2	68,113	0.05	644	0.02	794	0.03	5,393	0.07	4,704	0.01	56,578	0.13

			Visits from outside NSW				Visits from within NSW					
LGA/beach	Total	%	Inter-national	%	Inter-state	%	Within LGA	%	Intra LGA < 2 hours	%	Intra LGA > 2 hours	%
Bunga	31,280	0.02	296	0.01	364	0.01	1,204	0.02	1,982	0.00	27,434	0.06
Bunga North	28,978	0.02	274	0.01	338	0.01	1,116	0.02	1,836	0.00	25,415	0.06
Bunga South	30,461	0.02	288	0.01	355	0.01	1,173	0.02	1,930	0.00	26,716	0.06
Bungo	43,538	0.03	412	0.01	507	0.02	3,447	0.05	3,007	0.00	36,165	0.08
By	39,750	0.03	376	0.01	463	0.02	3,150	0.04	2,711	0.00	33,049	0.08
Camel Rock	68,309	0.05	646	0.02	796	0.03	1,622	0.02	4,164	0.00	61,081	0.14
Cape Howe	27,935	0.02	264	0.01	325	0.01	2,212	0.03	1,929	0.00	23,205	0.05
Cattle Bay Wharf	38,884	0.03	368	0.01	453	0.02	3,081	0.04	2,660	0.00	32,322	0.08
Cocora	47,232	0.03	447	0.01	550	0.02	3,741	0.05	3,243	0.00	39,251	0.09
Cowdroys	29,807	0.02	282	0.01	347	0.01	1,493	0.02	1,949	0.00	25,737	0.06
Currawulla	45,678	0.03	432	0.01	532	0.02	3,617	0.05	3,154	0.00	37,942	0.09
Cuttagee	82,531	0.06	781	0.02	962	0.04	2,688	0.04	5,127	0.01	72,974	0.17
Disaster Bay	30,709	0.02	291	0.01	358	0.01	2,431	0.03	2,121	0.00	25,508	0.06
Edrom 1	40,753	0.03	386	0.01	475	0.02	3,227	0.04	2,814	0.00	33,851	0.08
Edrom 2	40,752	0.03	386	0.01	475	0.02	3,227	0.04	2,814	0.00	33,851	0.08
Fisheries	50,322	0.04	476	0.01	586	0.02	3,984	0.06	3,475	0.00	41,800	0.10
Games Bay	26,919	0.02	255	0.01	314	0.01	1,814	0.03	1,809	0.00	22,728	0.05
Gillards	27,428	0.02	260	0.01	320	0.01	1,373	0.02	1,793	0.00	23,682	0.06
Haywards	73,825	0.05	699	0.02	860	0.04	1,794	0.02	4,510	0.01	65,962	0.15
Haywards Point	84,911	0.06	803	0.02	989	0.04	2,176	0.03	5,216	0.01	75,727	0.18
Horseshoe Bay	90,986	0.06	861	0.02	1,060	0.04	2,332	0.03	5,589	0.01	81,144	0.19
Jaggers	82,063	0.06	776	0.02	956	0.04	2,485	0.03	5,016	0.01	72,828	0.17
Jane Spiers	28,002	0.02	265	0.01	326	0.01	2,217	0.03	1,934	0.00	23,260	0.05
Jane Spiers North	27,220	0.02	258	0.01	317	0.01	2,155	0.03	1,880	0.00	22,610	0.05
Jerimbut Point	69,042	0.05	653	0.02	804	0.03	2,059	0.03	4,222	0.00	61,302	0.14
Keatings Head	101,088	0.07	956	0.03	1,178	0.05	2,590	0.04	6,210	0.01	90,154	0.21
Kianinny Bay	39,623	0.03	375	0.01	462	0.02	2,336	0.03	2,613	0.00	33,838	0.08
Leatherjacket Bay	24,936	0.02	236	0.01	291	0.01	1,974	0.03	1,722	0.00	20,713	0.05
Legges	42,528	0.03	402	0.01	496	0.02	3,367	0.05	2,937	0.00	35,326	0.08

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LGA/beach	Total	%	Inter-national	%	Inter-state	%	Within LGA	%	Intra LGA < 2 hours	%	Intra LGA > 2 hours	%
Little/Jigums	78,081	0.05	739	0.02	910	0.04	6,190	0.09	5,310	0.01	64,933	0.15
Little Creek	28,878	0.02	273	0.01	336	0.01	2,287	0.03	1,994	0.00	23,988	0.06
Long/Haycock	31,305	0.02	296	0.01	365	0.01	2,481	0.03	2,135	0.00	26,028	0.06
Merimbula	271,974	0.19	2,573	0.07	3,169	0.13	21,560	0.30	18,496	0.02	226,176	0.53
Merrica	27,425	0.02	259	0.01	320	0.01	2,171	0.03	1,894	0.00	22,781	0.05
Middle	67,250	0.05	636	0.02	784	0.03	5,331	0.07	4,573	0.01	55,926	0.13
Middle North	32,976	0.02	312	0.01	384	0.02	1,579	0.02	2,145	0.00	28,556	0.07
Middle South	29,560	0.02	280	0.01	344	0.01	1,480	0.02	1,933	0.00	25,523	0.06
Mills	72,470	0.05	686	0.02	844	0.03	2,378	0.03	4,506	0.01	64,056	0.15
Mogareeka Inlet	45,020	0.03	426	0.01	525	0.02	2,473	0.03	2,940	0.00	38,656	0.09
Moon Bay	28,855	0.02	273	0.01	336	0.01	1,549	0.02	1,879	0.00	24,818	0.06
Morehead	69,933	0.05	662	0.02	815	0.03	1,792	0.02	4,296	0.00	62,369	0.15
Moutrys	43,928	0.03	416	0.01	512	0.02	3,478	0.05	3,033	0.00	36,489	0.09
Mowarry Point 1	26,042	0.02	246	0.01	303	0.01	2,062	0.03	1,798	0.00	21,632	0.05
Mowarry Point 2	27,528	0.02	260	0.01	321	0.01	2,180	0.03	1,901	0.00	22,866	0.05
Munganno North	38,493	0.03	364	0.01	449	0.02	3,048	0.04	2,658	0.00	31,974	0.07
Munganno South	40,875	0.03	387	0.01	476	0.02	3,236	0.04	2,823	0.00	33,953	0.08
Murrah/Bunga	75,593	0.05	715	0.02	881	0.04	2,768	0.04	4,762	0.01	66,466	0.15
Nadgee	29,938	0.02	283	0.01	349	0.01	2,371	0.03	2,067	0.00	24,868	0.06
Nadgee Lake	30,182	0.02	286	0.01	352	0.01	2,390	0.03	2,084	0.00	25,070	0.06
Nelson	33,342	0.02	315	0.01	388	0.02	1,790	0.02	2,171	0.00	28,678	0.07
Newtons	28,847	0.02	273	0.01	336	0.01	2,284	0.03	1,992	0.00	23,962	0.06
North Tura/Dolphin Cove	26,140	0.02	247	0.01	305	0.01	1,975	0.03	1,741	0.00	21,872	0.05
Northcote	41,213	0.03	390	0.01	480	0.02	3,263	0.05	2,846	0.00	34,233	0.08
Pambula	104,476	0.07	989	0.03	1,217	0.05	8,282	0.11	7,105	0.01	86,883	0.20
Paspalum Point	28,941	0.02	274	0.01	337	0.01	1,553	0.02	1,885	0.00	24,892	0.06
Pebbly	43,076	0.03	408	0.01	502	0.02	1,023	0.01	2,626	0.00	38,518	0.09
Penders	27,079	0.02	256	0.01	316	0.01	1,297	0.02	1,761	0.00	23,449	0.05
Picnic	29,979	0.02	284	0.01	349	0.01	1,252	0.02	1,918	0.00	26,176	0.06

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LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Picnic North	30,661	0.02	290	0.01	357	0.01	1,281	0.02	1,962	0.00	26,771	0.06
Picnic Point	27,439	0.02	260	0.01	320	0.01	1,146	0.02	1,756	0.00	23,958	0.06
Pinnacles	25,953	0.02	246	0.01	302	0.01	2,057	0.03	1,770	0.00	21,578	0.05
Quarantine Bay	40,802	0.03	386	0.01	475	0.02	3,231	0.04	2,818	0.00	33,892	0.08
Quondolo	30,610	0.02	290	0.01	357	0.01	2,426	0.03	2,088	0.00	25,450	0.06
Rixons	40,651	0.03	385	0.01	474	0.02	3,219	0.04	2,807	0.00	33,767	0.08
Saltwater Creek	26,710	0.02	253	0.01	311	0.01	2,115	0.03	1,844	0.00	22,187	0.05
Saltwater North	27,628	0.02	261	0.01	322	0.01	2,188	0.03	1,908	0.00	22,949	0.05
Shelly	26,535	0.02	251	0.01	309	0.01	2,103	0.03	1,810	0.00	22,062	0.05
Short Point/Tura	67,029	0.05	634	0.02	781	0.03	5,188	0.07	4,542	0.01	55,884	0.13
Snug Cove	37,852	0.03	358	0.01	441	0.02	3,000	0.04	2,582	0.00	31,471	0.07
Tathra	85,455	0.06	809	0.02	996	0.04	4,956	0.07	5,622	0.01	73,073	0.17
Torarago Point	46,295	0.03	438	0.01	539	0.02	3,666	0.05	3,197	0.00	38,455	0.09
Tura Head	74,838	0.05	708	0.02	872	0.04	5,714	0.08	4,980	0.01	62,565	0.15
Wallagoot/Bournda	23,608	0.02	223	0.01	275	0.01	1,532	0.02	1,591	0.00	19,987	0.05
Wallagoot Gap	28,634	0.02	271	0.01	334	0.01	1,929	0.03	1,924	0.00	24,175	0.06
Whale	46,708	0.03	442	0.01	544	0.02	3,698	0.05	3,225	0.00	38,798	0.09
Wonboyn Bay	27,491	0.02	260	0.01	320	0.01	2,177	0.03	1,898	0.00	22,836	0.05
Worang Point	26,401	0.02	250	0.01	308	0.01	2,092	0.03	1,801	0.00	21,950	0.05
Yallumgo Cove	38,877	0.03	368	0.01	453	0.02	3,081	0.04	2,652	0.00	32,324	0.08
Zane Grey Pool	69,054	0.05	653	0.02	805	0.03	2,048	0.03	4,224	0.00	61,325	0.14
Bellingen LGA												
Hungry Head	30,153	0.02	285	0.01	351	0.01	230	0.00	1,853	0.00	27,434	0.06
Hungry Head North	83,203	0.06	787	0.02	969	0.04	642	0.01	5,139	0.01	75,666	0.18
North	32,682	0.02	309	0.01	381	0.02	279	0.00	2,212	0.00	29,500	0.07
Schnapper	82,450	0.06	780	0.02	961	0.04	615	0.01	4,896	0.01	75,198	0.18
Wenonah Head/Valla	27,797	0.02	263	0.01	324	0.01	182	0.00	1,637	0.00	25,391	0.06
Byron LGA												
Belongil	351,687	0.25	3,328	0.09	4,098	0.17	17,370	0.24	70,952	0.08	255,939	0.60

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Brays	55,020	0.04	521	0.01	641	0.03	2,406	0.03	10,561	0.01	40,891	0.10
Broken Head	146,481	0.10	1,386	0.04	1,707	0.07	6,405	0.09	28,118	0.03	108,865	0.25
Brunswick Heads	114,181	0.08	1,080	0.03	1,330	0.05	5,921	0.08	24,748	0.03	81,102	0.19
Clarks	432,759	0.30	4,095	0.11	5,042	0.21	21,355	0.30	87,535	0.10	314,732	0.73
Crabbes Creek	69,939	0.05	662	0.02	815	0.03	3,741	0.05	15,810	0.02	48,911	0.11
Harrys Hill	49,501	0.03	468	0.01	577	0.02	2,567	0.04	10,729	0.01	35,160	0.08
Kings 1	36,389	0.03	344	0.01	424	0.02	1,591	0.02	6,985	0.01	27,045	0.06
Kings 2	43,173	0.03	408	0.01	503	0.02	1,888	0.03	8,287	0.01	32,086	0.07
Little Wategos	195,929	0.14	1,854	0.05	2,283	0.09	9,668	0.13	39,631	0.05	142,493	0.33
Main	768,318	0.54	7,270	0.20	8,952	0.37	37,948	0.53	155,007	0.18	559,141	1.30
New Brighton/Ocean Shores	59,551	0.04	563	0.02	694	0.03	3,060	0.04	13,246	0.02	41,987	0.10
South Golden	113,823	0.08	1,077	0.03	1,326	0.05	6,088	0.08	25,731	0.03	79,601	0.19
Suffolk Park	130,019	0.09	1,230	0.03	1,515	0.06	5,806	0.08	25,121	0.03	96,346	0.22
Tallows	135,605	0.09	1,283	0.03	1,580	0.06	6,692	0.09	27,429	0.03	98,621	0.23
The Pass	297,700	0.21	2,817	0.08	3,469	0.14	14,690	0.20	60,217	0.07	216,508	0.50
Torakina	48,385	0.03	458	0.01	564	0.02	2,509	0.03	10,487	0.01	34,367	0.08
Tyagarah	67,300	0.05	637	0.02	784	0.03	3,433	0.05	14,102	0.02	48,345	0.11
Wategos	351,560	0.25	3,326	0.09	4,096	0.17	17,348	0.24	71,111	0.08	255,678	0.60
Whites	40,298	0.03	381	0.01	470	0.02	1,762	0.02	7,735	0.01	29,950	0.07
Canada Bay LGA												
Bayview Park	184,371	0.13	1,744	0.05	2,148	0.09	4,423	0.06	169,114	0.20	6,941	0.02
Cabarita	205,772	0.14	1,947	0.05	2,398	0.10	5,059	0.07	187,884	0.22	8,484	0.02
Quarantine Reserve	195,533	0.14	1,850	0.05	2,278	0.09	4,561	0.06	178,871	0.21	7,973	0.02
Central Coast LGA												
Avoca	859,496	0.60	8,132	0.22	10,015	0.41	62,932	0.87	681,072	0.79	97,345	0.23
Bateau Bay	72,554	0.05	686	0.02	845	0.03	5,947	0.08	53,570	0.06	11,505	0.03
Birdie	85,796	0.06	812	0.02	1,000	0.04	6,725	0.09	40,314	0.05	36,947	0.09
Blue Bay	82,548	0.06	781	0.02	962	0.04	6,766	0.09	60,949	0.07	13,090	0.03
Blue Lagoon	77,074	0.05	729	0.02	898	0.04	6,317	0.09	56,908	0.07	12,222	0.03

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Bongon	74,154	0.05	702	0.02	864	0.04	5,798	0.08	27,602	0.03	39,188	0.09
Budgewoi	154,322	0.11	1,460	0.04	1,798	0.07	12,139	0.17	89,931	0.10	48,995	0.11
Bullimah	74,530	0.05	705	0.02	868	0.04	5,300	0.07	56,869	0.07	10,787	0.03
Copacabana	418,939	0.29	3,964	0.11	4,881	0.20	30,179	0.42	319,340	0.37	60,576	0.14
Deadmans/Gravelly	65,732	0.05	622	0.02	766	0.03	5,140	0.07	26,481	0.03	32,724	0.08
Forresters	92,280	0.06	873	0.02	1,075	0.04	6,861	0.10	75,503	0.09	7,967	0.02
Frazer Park	172,794	0.12	1,635	0.04	2,013	0.08	13,511	0.19	69,611	0.08	86,024	0.20
Gravelly/Pebbly	82,875	0.06	784	0.02	966	0.04	6,580	0.09	52,786	0.06	21,759	0.05
Iron Ladder	104,546	0.07	989	0.03	1,218	0.05	7,435	0.10	77,507	0.09	17,397	0.04
Jenny Dixons	85,122	0.06	805	0.02	992	0.04	6,758	0.09	55,752	0.06	20,815	0.05
Killcare	198,976	0.14	1,883	0.05	2,318	0.09	14,150	0.20	151,825	0.18	28,800	0.07
Lakes	132,593	0.09	1,255	0.03	1,545	0.06	10,452	0.14	74,763	0.09	44,579	0.10
Lakes South/Hargraves	79,536	0.06	753	0.02	927	0.04	6,306	0.09	52,119	0.06	19,431	0.05
Little	85,020	0.06	804	0.02	991	0.04	6,046	0.08	64,873	0.07	12,306	0.03
Little Bay	159,496	0.11	1,509	0.04	1,858	0.08	13,072	0.18	117,764	0.14	25,292	0.06
Little Birdie	65,880	0.05	623	0.02	768	0.03	5,151	0.07	26,540	0.03	32,798	0.08
Little Patonga	98,113	0.07	928	0.03	1,143	0.05	6,446	0.09	74,156	0.09	15,439	0.04
Little Tallow	128,831	0.09	1,219	0.03	1,501	0.06	9,162	0.13	95,511	0.11	21,438	0.05
Little/Ghosties	78,014	0.05	738	0.02	909	0.04	6,100	0.08	31,428	0.04	38,838	0.09
Lobster	99,539	0.07	942	0.03	1,160	0.05	7,079	0.10	73,794	0.09	16,564	0.04
MacMasters	711,321	0.50	6,730	0.18	8,288	0.34	50,585	0.70	542,761	0.63	102,956	0.24
Magenta	75,104	0.05	711	0.02	875	0.04	6,048	0.08	53,116	0.06	14,354	0.03
Maitland Bay	125,150	0.09	1,184	0.03	1,458	0.06	8,900	0.12	95,494	0.11	18,114	0.04
Middle Head	99,013	0.07	937	0.03	1,154	0.05	6,506	0.09	77,980	0.09	12,438	0.03
Moonee	95,169	0.07	900	0.02	1,109	0.05	7,377	0.10	39,647	0.05	46,136	0.11
Norah Head/Lighthouse	96,660	0.07	915	0.02	1,126	0.05	7,674	0.11	61,567	0.07	25,378	0.06
Noraville/Cabbage Tree Harbour	102,886	0.07	973	0.03	1,199	0.05	8,169	0.11	65,533	0.08	27,013	0.06
North Avoca	285,545	0.20	2,702	0.07	3,327	0.14	20,876	0.29	232,629	0.27	26,012	0.06

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Ocean	428,273	0.30	4,052	0.11	4,990	0.20	28,139	0.39	351,929	0.41	39,162	0.09
Patonga	99,474	0.07	941	0.03	1,159	0.05	6,536	0.09	75,184	0.09	15,654	0.04
Pearl	115,983	0.08	1,097	0.03	1,351	0.06	7,621	0.11	91,344	0.11	14,569	0.03
Putty	115,716	0.08	1,095	0.03	1,348	0.06	8,229	0.11	88,295	0.10	16,749	0.04
Red Ochre	88,863	0.06	841	0.02	1,035	0.04	6,955	0.10	37,885	0.04	42,146	0.10
Shelly	299,683	0.21	2,836	0.08	3,492	0.14	24,562	0.34	227,557	0.26	41,237	0.10
Soldiers	693,286	0.49	6,560	0.18	8,078	0.33	55,043	0.76	417,050	0.48	206,555	0.48
Spoon Bay	101,163	0.07	957	0.03	1,179	0.05	7,522	0.10	80,040	0.09	11,465	0.03
Tallow	103,561	0.07	980	0.03	1,207	0.05	7,365	0.10	76,776	0.09	17,233	0.04
Terrigal	640,407	0.45	6,059	0.16	7,462	0.30	46,806	0.65	521,730	0.60	58,349	0.14
Terrigal Haven	116,638	0.08	1,104	0.03	1,359	0.06	8,525	0.12	95,023	0.11	10,627	0.02
The Entrance	505,389	0.35	4,782	0.13	5,889	0.24	41,422	0.57	373,155	0.43	80,141	0.19
Timber	73,969	0.05	700	0.02	862	0.04	5,784	0.08	29,799	0.03	36,825	0.09
Toowoon Bay	294,053	0.21	2,782	0.08	3,426	0.14	24,101	0.33	217,115	0.25	46,629	0.11
Tuggerah/Magenta	33,293	0.02	315	0.01	388	0.02	2,682	0.04	24,679	0.03	5,229	0.01
Tuggerah/North Entrance	51,328	0.04	486	0.01	598	0.02	4,173	0.06	37,996	0.04	8,074	0.02
Umina	1,040,653	0.73	9,846	0.27	12,125	0.49	68,376	0.95	855,147	0.99	95,159	0.22
Wamberal	220,746	0.15	2,089	0.06	2,572	0.10	15,980	0.22	179,950	0.21	20,156	0.05
Waterfall	88,868	0.06	841	0.02	1,035	0.04	6,956	0.10	37,888	0.04	42,149	0.10
Clarence Valley LGA												
Angourie/Spooky	195,834	0.14	1,853	0.05	2,282	0.09	7,548	0.10	6,850	0.01	177,301	0.41
Angourie Point	172,497	0.12	1,632	0.04	2,010	0.08	6,648	0.09	6,034	0.01	156,173	0.36
Back Angourie	43,263	0.03	409	0.01	504	0.02	1,667	0.02	1,513	0.00	39,169	0.09
Barcoongere Rocks North	24,905	0.02	236	0.01	290	0.01	869	0.01	1,682	0.00	21,828	0.05
Barcoongere Rocks South	27,704	0.02	262	0.01	323	0.01	967	0.01	1,871	0.00	24,280	0.06
Barri	43,901	0.03	415	0.01	512	0.02	1,692	0.02	1,536	0.00	39,747	0.09
Brooms Head Main	77,766	0.05	736	0.02	906	0.04	3,027	0.04	2,422	0.00	70,675	0.16
Caves	26,093	0.02	247	0.01	304	0.01	1,016	0.01	813	0.00	23,714	0.06
Convent	30,004	0.02	284	0.01	350	0.01	1,156	0.02	1,049	0.00	27,165	0.06

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Diggers Camp	35,309	0.02	334	0.01	411	0.02	1,233	0.02	2,385	0.00	30,945	0.07
Diggers Camp North/Where Ever	33,281	0.02	315	0.01	388	0.02	1,162	0.02	2,248	0.00	29,169	0.07
Frazer Reef	37,466	0.03	354	0.01	437	0.02	1,426	0.02	1,554	0.00	33,694	0.08
Freshwater	22,201	0.02	210	0.01	259	0.01	483	0.01	1,473	0.00	19,777	0.05
Green Point Cove	31,505	0.02	298	0.01	367	0.01	1,214	0.02	1,102	0.00	28,523	0.07
Hatchcover	22,370	0.02	212	0.01	261	0.01	871	0.01	189	0.00	20,838	0.05
Illaroo South	26,288	0.02	249	0.01	306	0.01	918	0.01	1,776	0.00	23,040	0.05
Iluka	57,947	0.04	548	0.01	675	0.03	2,206	0.03	2,404	0.00	52,114	0.12
Iluka Bluff	81,178	0.06	768	0.02	946	0.04	3,091	0.04	3,368	0.00	73,006	0.17
Iluka Wall/Wave Trap	27,881	0.02	264	0.01	325	0.01	1,061	0.01	1,157	0.00	25,074	0.06
Jones	46,271	0.03	438	0.01	539	0.02	1,615	0.02	3,126	0.00	40,553	0.09
Little Pebbly	22,454	0.02	212	0.01	262	0.01	874	0.01	189	0.00	20,917	0.05
Little Shelly	23,140	0.02	219	0.01	270	0.01	892	0.01	809	0.00	20,950	0.05
Minnie Water Back	30,908	0.02	292	0.01	360	0.01	1,079	0.01	2,088	0.00	27,089	0.06
Minnie Water Main	35,862	0.03	339	0.01	418	0.02	1,252	0.02	2,423	0.00	31,430	0.07
Moriartys Wall	35,106	0.02	332	0.01	409	0.02	1,337	0.02	1,456	0.00	31,572	0.07
North Sandon	35,664	0.02	337	0.01	416	0.02	1,388	0.02	301	0.00	33,221	0.08
Pebbly	23,373	0.02	221	0.01	272	0.01	910	0.01	197	0.00	21,773	0.05
Pipers Hill/Boat Harbour	41,406	0.03	392	0.01	482	0.02	1,445	0.02	2,797	0.00	36,289	0.08
Pippi	264,642	0.19	2,504	0.07	3,084	0.13	10,200	0.14	9,257	0.01	239,598	0.56
Plumbago	39,326	0.03	372	0.01	458	0.02	1,531	0.02	1,225	0.00	35,740	0.08
Red Cliff	29,288	0.02	277	0.01	341	0.01	1,140	0.02	912	0.00	26,617	0.06
Rocky Point	24,653	0.02	233	0.01	287	0.01	861	0.01	1,665	0.00	21,606	0.05
Sandon/Illaroo	23,104	0.02	219	0.01	269	0.01	807	0.01	1,561	0.00	20,249	0.05
Sandon River	20,816	0.01	197	0.01	243	0.01	810	0.01	176	0.00	19,391	0.05
Shark Bay	33,042	0.02	313	0.01	385	0.02	1,177	0.02	3,062	0.00	28,106	0.07
Shelly	47,975	0.03	454	0.01	559	0.02	1,849	0.03	1,678	0.00	43,435	0.10
Stony	24,842	0.02	235	0.01	289	0.01	867	0.01	1,678	0.00	21,772	0.05

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Ten Mile	47,677	0.03	451	0.01	556	0.02	1,677	0.02	6,186	0.01	38,807	0.09
Tree Point 1	56,763	0.04	537	0.01	661	0.03	1,982	0.03	3,835	0.00	49,749	0.12
Tree Point 2	63,615	0.04	602	0.02	741	0.03	2,221	0.03	4,297	0.00	55,753	0.13
Tree Point 3	61,946	0.04	586	0.02	722	0.03	2,162	0.03	4,185	0.00	54,291	0.13
Turners	128,769	0.09	1,218	0.03	1,500	0.06	4,963	0.07	4,504	0.01	116,583	0.27
Whiting	34,761	0.02	329	0.01	405	0.02	1,340	0.02	1,216	0.00	31,472	0.07
Wilsons/Bare	24,021	0.02	227	0.01	280	0.01	839	0.01	1,623	0.00	21,053	0.05
Woody Back	34,263	0.02	324	0.01	399	0.02	1,304	0.02	1,734	0.00	30,501	0.07
Woody Bay	25,586	0.02	242	0.01	298	0.01	974	0.01	1,295	0.00	22,777	0.05
Wooli	26,360	0.02	249	0.01	307	0.01	920	0.01	1,781	0.00	23,103	0.05
Yamba Main	150,849	0.11	1,427	0.04	1,758	0.07	5,814	0.08	5,276	0.01	136,574	0.32
Coffs Harbour LGA												
Arrawarra Beach	39,419	0.03	373	0.01	459	0.02	2,331	0.03	1,445	0.00	34,811	0.08
Boambee	44,792	0.03	424	0.01	522	0.02	2,435	0.03	1,329	0.00	40,082	0.09
Bonville/Bongil/Bundagen	36,167	0.03	342	0.01	421	0.02	1,581	0.02	759	0.00	33,064	0.08
Cabins/South Mullaway	39,739	0.03	376	0.01	463	0.02	2,350	0.03	1,457	0.00	35,093	0.08
Campbells	86,130	0.06	815	0.02	1,004	0.04	4,693	0.07	2,707	0.00	76,911	0.18
Charlesworth Bay	35,972	0.03	340	0.01	419	0.02	2,034	0.03	1,105	0.00	32,074	0.07
Corindi	98,199	0.07	929	0.03	1,144	0.05	5,785	0.08	3,743	0.00	86,599	0.20
Corindi North	38,151	0.03	361	0.01	445	0.02	2,246	0.03	1,462	0.00	33,638	0.08
Diggers North	49,473	0.03	468	0.01	576	0.02	2,798	0.04	1,519	0.00	44,112	0.10
Diggers South/Little Diggers	99,088	0.07	938	0.03	1,155	0.05	5,604	0.08	3,030	0.00	88,361	0.21
Emerald	98,635	0.07	933	0.03	1,149	0.05	6,093	0.08	3,314	0.00	87,145	0.20
Fiddamans	51,758	0.04	490	0.01	603	0.02	3,075	0.04	1,802	0.00	45,788	0.11
Gallows	32,724	0.02	310	0.01	381	0.02	1,847	0.03	984	0.00	29,202	0.07
Hearnes Lake	58,104	0.04	550	0.01	677	0.03	3,452	0.05	2,022	0.00	51,404	0.12
Hills North	115,327	0.08	1,091	0.03	1,344	0.05	6,223	0.09	3,615	0.00	103,054	0.24
Hills/Opal Cove	98,775	0.07	935	0.03	1,151	0.05	5,253	0.07	3,083	0.00	88,353	0.21
Jetty	66,286	0.05	627	0.02	772	0.03	3,742	0.05	1,995	0.00	59,149	0.14

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Korora	42,655	0.03	404	0.01	497	0.02	2,248	0.03	1,328	0.00	38,178	0.09
Little	38,469	0.03	364	0.01	448	0.02	2,261	0.03	1,035	0.00	34,361	0.08
Macauleys Headland	35,020	0.02	331	0.01	408	0.02	1,981	0.03	1,071	0.00	31,229	0.07
Moonee	48,302	0.03	457	0.01	563	0.02	2,989	0.04	1,584	0.00	42,709	0.10
Mullaway	68,368	0.05	647	0.02	797	0.03	4,042	0.06	2,506	0.00	60,375	0.14
Mullaway Head	41,563	0.03	393	0.01	484	0.02	2,458	0.03	1,524	0.00	36,704	0.09
Murrays/Sawtell	396,904	0.28	3,755	0.10	4,625	0.19	19,627	0.27	11,508	0.01	357,388	0.83
Oceanview	49,704	0.03	470	0.01	579	0.02	2,939	0.04	1,822	0.00	43,894	0.10
Park North	110,461	0.08	1,045	0.03	1,287	0.05	6,234	0.09	3,340	0.00	98,554	0.23
Park South/North Wall	86,835	0.06	822	0.02	1,012	0.04	4,901	0.07	2,621	0.00	77,480	0.18
Pebbly	31,747	0.02	300	0.01	370	0.02	1,853	0.03	944	0.00	28,280	0.07
Pelican/Nautilus	86,425	0.06	818	0.02	1,007	0.04	4,784	0.07	2,729	0.00	77,088	0.18
Red Rock	23,314	0.02	221	0.01	272	0.01	1,370	0.02	627	0.00	20,824	0.05
Riecks Point	113,081	0.08	1,070	0.03	1,318	0.05	6,334	0.09	3,583	0.00	100,776	0.23
Safety/Darkhum	65,864	0.05	623	0.02	767	0.03	3,894	0.05	2,415	0.00	58,164	0.14
Sandy	62,188	0.04	588	0.02	725	0.03	3,823	0.05	2,126	0.00	54,927	0.13
Sapphire	35,212	0.02	333	0.01	410	0.02	1,972	0.03	1,116	0.00	31,380	0.07
Shelly	72,351	0.05	685	0.02	843	0.03	4,469	0.06	2,431	0.00	63,923	0.15
Station Creek	45,136	0.03	427	0.01	526	0.02	2,634	0.04	1,343	0.00	40,207	0.09
Woolgoolga	202,519	0.14	1,916	0.05	2,360	0.10	12,011	0.17	7,189	0.01	179,044	0.42
Woolgoolga Back	52,571	0.04	497	0.01	613	0.02	3,118	0.04	1,863	0.00	46,480	0.11
Eurobodalla LGA												
Acheron Ledge	54,172	0.04	513	0.01	631	0.03	1,562	0.02	5,735	0.01	45,731	0.11
Acheron Ledge North	45,146	0.03	427	0.01	526	0.02	1,302	0.02	4,779	0.01	38,112	0.09
Bar	91,518	0.06	866	0.02	1,066	0.04	4,780	0.07	10,587	0.01	74,218	0.17
Barlings	43,802	0.03	414	0.01	510	0.02	1,783	0.02	4,751	0.01	36,343	0.08
Barunga Point	29,383	0.02	278	0.01	342	0.01	1,519	0.02	3,422	0.00	23,821	0.06
Batehaven/Caseys	48,218	0.03	456	0.01	562	0.02	1,539	0.02	5,230	0.01	40,431	0.09
Beagle Bay/Mills	51,259	0.04	485	0.01	597	0.02	1,378	0.02	5,297	0.01	43,502	0.10

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Bengello/South Broulee/South	111,895	0.08	1,059	0.03	1,304	0.05	4,970	0.07	12,137	0.01	92,425	0.22
Bingie	25,311	0.02	239	0.01	295	0.01	1,339	0.02	2,775	0.00	20,663	0.05
Bingie Bingie Point	38,637	0.03	366	0.01	450	0.02	2,043	0.03	4,236	0.00	31,542	0.07
Black	48,111	0.03	455	0.01	561	0.02	1,959	0.03	5,219	0.01	39,918	0.09
Blackfellows Point	51,482	0.04	487	0.01	600	0.02	2,708	0.04	5,776	0.01	41,911	0.10
Bogola Head	35,412	0.02	335	0.01	413	0.02	1,828	0.03	4,142	0.00	28,695	0.07
Brou	43,491	0.03	412	0.01	507	0.02	2,280	0.03	4,949	0.01	35,343	0.08
Broulee	41,161	0.03	389	0.01	480	0.02	1,800	0.02	4,465	0.01	34,027	0.08
Broulee Spit	72,716	0.05	688	0.02	847	0.03	3,230	0.04	7,888	0.01	60,064	0.14
Bullengella	43,883	0.03	415	0.01	511	0.02	2,269	0.03	5,111	0.01	35,576	0.08
Burrewarra Point 1	127,168	0.09	1,203	0.03	1,482	0.06	5,178	0.07	13,794	0.02	105,511	0.25
Burrewarra Point 2	45,398	0.03	430	0.01	529	0.02	1,848	0.03	4,924	0.01	37,666	0.09
Burrewarra Point 3/Little Paddock	34,945	0.02	331	0.01	407	0.02	1,423	0.02	3,791	0.00	28,994	0.07
Burrewarra Point 4	75,072	0.05	710	0.02	875	0.04	3,057	0.04	8,143	0.01	62,288	0.15
Cape Dromedary South 1	28,898	0.02	273	0.01	337	0.01	1,484	0.02	3,402	0.00	23,402	0.05
Cape Dromedary South 2	33,583	0.02	318	0.01	391	0.02	1,725	0.02	3,953	0.00	27,196	0.06
Cape Dromedary South 3	33,315	0.02	315	0.01	388	0.02	1,711	0.02	3,922	0.00	26,979	0.06
Carters	51,455	0.04	487	0.01	600	0.02	2,689	0.04	5,941	0.01	41,739	0.10
Chain Bay	45,829	0.03	434	0.01	534	0.02	1,322	0.02	4,852	0.01	38,688	0.09
Circuit	48,499	0.03	459	0.01	565	0.02	1,656	0.02	5,261	0.01	40,558	0.09
Coila Bar	54,686	0.04	517	0.01	637	0.03	2,888	0.04	6,034	0.01	44,610	0.10
Coila South/Stonesys	32,500	0.02	308	0.01	379	0.02	1,716	0.02	3,586	0.00	26,512	0.06
Congo	60,042	0.04	568	0.02	700	0.03	3,175	0.04	6,583	0.01	49,017	0.11
Congo Point South 1	28,374	0.02	268	0.01	331	0.01	1,501	0.02	3,111	0.00	23,164	0.05
Congo Point South 2	36,394	0.03	344	0.01	424	0.02	1,925	0.03	3,990	0.00	29,711	0.07
Corrigans	64,476	0.05	610	0.02	751	0.03	2,058	0.03	6,994	0.01	54,063	0.13
Corunna Point/Billies	48,884	0.03	463	0.01	570	0.02	2,511	0.03	5,755	0.01	39,587	0.09
Cullendulla	49,557	0.03	469	0.01	577	0.02	1,508	0.02	5,349	0.01	41,654	0.10

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Dalmeny	57,961	0.04	548	0.01	675	0.03	3,035	0.04	6,632	0.01	47,070	0.11
Dark	48,728	0.03	461	0.01	568	0.02	1,310	0.02	5,035	0.01	41,353	0.10
Denhams	47,520	0.03	450	0.01	554	0.02	1,641	0.02	5,155	0.01	39,721	0.09
Duesburys	39,534	0.03	374	0.01	461	0.02	2,068	0.03	4,542	0.01	32,089	0.07
Durras	41,913	0.03	397	0.01	488	0.02	1,127	0.02	4,331	0.00	35,570	0.08
Durras South/Cookies	40,636	0.03	384	0.01	473	0.02	1,092	0.02	4,199	0.00	34,486	0.08
Emily Miller	51,053	0.04	483	0.01	595	0.02	1,373	0.02	5,276	0.01	43,327	0.10
Fuller North	36,374	0.03	344	0.01	424	0.02	1,878	0.03	4,254	0.00	29,474	0.07
Fuller South	37,236	0.03	352	0.01	434	0.02	1,922	0.03	4,359	0.01	30,169	0.07
Garden Bay	48,269	0.03	457	0.01	562	0.02	1,724	0.02	5,236	0.01	40,291	0.09
Glass House Rocks North	34,328	0.02	325	0.01	400	0.02	1,789	0.02	3,997	0.00	27,817	0.06
Glass House Rocks South 1	31,445	0.02	298	0.01	366	0.01	1,639	0.02	3,661	0.00	25,481	0.06
Glass House Rocks South 2	48,780	0.03	462	0.01	568	0.02	2,522	0.03	5,682	0.01	39,546	0.09
Guerilla Bay	57,131	0.04	541	0.01	666	0.03	2,326	0.03	6,197	0.01	47,401	0.11
Guerilla Bay North	45,131	0.03	427	0.01	526	0.02	1,838	0.03	4,895	0.01	37,445	0.09
Handkerchief	35,634	0.02	337	0.01	415	0.02	1,843	0.03	4,151	0.00	28,889	0.07
Honeysuckle	48,692	0.03	461	0.01	567	0.02	1,404	0.02	5,155	0.01	41,104	0.10
Jemisons	38,930	0.03	368	0.01	454	0.02	2,048	0.03	4,368	0.01	31,692	0.07
Jimmies Island	45,259	0.03	428	0.01	527	0.02	1,843	0.03	4,909	0.01	37,551	0.09
Joshs	32,069	0.02	303	0.01	374	0.02	1,678	0.02	3,678	0.00	26,035	0.06
Kellys Lake	36,398	0.03	344	0.01	424	0.02	1,925	0.03	3,990	0.00	29,714	0.07
Kianga	37,182	0.03	352	0.01	433	0.02	1,944	0.03	4,280	0.00	30,173	0.07
Kianga South	35,206	0.02	333	0.01	410	0.02	1,840	0.03	4,065	0.00	28,558	0.07
Koonwarra/Meringo South	36,433	0.03	345	0.01	425	0.02	1,927	0.03	3,994	0.00	29,743	0.07
Lilli Pilli	41,891	0.03	396	0.01	488	0.02	1,462	0.02	4,544	0.01	35,001	0.08
Little Lake	35,358	0.02	335	0.01	412	0.02	1,804	0.03	4,206	0.00	28,601	0.07
Loader	35,012	0.02	331	0.01	408	0.02	1,807	0.03	4,098	0.00	28,367	0.07
Long	46,697	0.03	442	0.01	544	0.02	1,347	0.02	4,944	0.01	39,421	0.09
Long North 1	45,535	0.03	431	0.01	531	0.02	1,313	0.02	4,821	0.01	38,440	0.09

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LGA/beach	Total	%	Inter-national	%	Inter-state	%	Within LGA	%	Intra LGA < 2 hours	%	Intra LGA > 2 hours	%
Long North 2	44,191	0.03	418	0.01	515	0.02	1,274	0.02	4,678	0.01	37,306	0.09
Maloneys	51,426	0.04	487	0.01	599	0.02	1,483	0.02	5,444	0.01	43,413	0.10
Malua Bay	51,554	0.04	488	0.01	601	0.02	1,876	0.03	5,592	0.01	42,997	0.10
McKenzies	41,788	0.03	395	0.01	487	0.02	1,558	0.02	4,533	0.01	34,815	0.08
Meringo	36,444	0.03	345	0.01	425	0.02	1,927	0.03	3,995	0.00	29,751	0.07
Moruya/Heads	12,040	0.01	114	0.00	140	0.01	638	0.01	1,309	0.00	9,839	0.02
Moruya Heads 1	47,075	0.03	445	0.01	549	0.02	2,494	0.03	5,118	0.01	38,469	0.09
Moruya Heads 2	47,252	0.03	447	0.01	551	0.02	2,503	0.03	5,137	0.01	38,613	0.09
Mosquito Bay	48,484	0.03	459	0.01	565	0.02	1,709	0.02	5,259	0.01	40,492	0.09
Mullimburra Point/Family/Honeymoon	52,522	0.04	497	0.01	612	0.02	2,778	0.04	5,758	0.01	42,877	0.10
Mullimburra Point South 1	32,527	0.02	308	0.01	379	0.02	1,720	0.02	3,566	0.00	26,554	0.06
Mullimburra Point South 2	34,463	0.02	326	0.01	402	0.02	1,823	0.03	3,778	0.00	28,134	0.07
Mullimburra Point South 3	43,314	0.03	410	0.01	505	0.02	2,291	0.03	4,749	0.01	35,361	0.08
Myrtle	51,199	0.04	484	0.01	597	0.02	1,376	0.02	5,291	0.01	43,451	0.10
Mystery Bay	27,867	0.02	264	0.01	325	0.01	1,431	0.02	3,280	0.00	22,567	0.05
Narooma	23,392	0.02	221	0.01	273	0.01	1,221	0.02	2,718	0.00	18,960	0.04
North Head	65,001	0.05	615	0.02	757	0.03	1,875	0.03	6,881	0.01	54,873	0.13
North Head/Airport	31,586	0.02	299	0.01	368	0.02	1,583	0.02	3,426	0.00	25,909	0.06
Nuns	48,061	0.03	455	0.01	560	0.02	1,957	0.03	5,213	0.01	39,876	0.09
Oaky	42,196	0.03	399	0.01	492	0.02	1,134	0.02	4,361	0.01	35,811	0.08
One Tree	77,714	0.05	735	0.02	906	0.04	4,104	0.06	8,575	0.01	63,395	0.15
Pedro	41,620	0.03	394	0.01	485	0.02	2,205	0.03	4,525	0.01	34,011	0.08
Piccaninny	38,434	0.03	364	0.01	448	0.02	2,022	0.03	4,312	0.00	31,288	0.07
Potato	43,457	0.03	411	0.01	506	0.02	2,286	0.03	4,876	0.01	35,378	0.08
Pretty Point Bay	45,353	0.03	429	0.01	528	0.02	1,679	0.02	4,919	0.01	37,797	0.09
Richmond	39,561	0.03	374	0.01	461	0.02	1,064	0.01	4,088	0.00	33,574	0.08
Rosedale	40,170	0.03	380	0.01	468	0.02	1,636	0.02	4,357	0.01	33,329	0.08
Rosedale North	44,915	0.03	425	0.01	523	0.02	1,747	0.02	4,872	0.01	37,347	0.09

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Shelly	44,305	0.03	419	0.01	516	0.02	2,347	0.03	4,817	0.01	36,205	0.08
Smugglers Cove	54,605	0.04	517	0.01	636	0.03	2,850	0.04	6,340	0.01	44,262	0.10
South Myrtle	45,659	0.03	432	0.01	532	0.02	1,228	0.02	4,718	0.01	38,749	0.09
South Tuross	47,938	0.03	454	0.01	559	0.02	2,522	0.03	5,379	0.01	39,026	0.09
Sunshine Cove	47,760	0.03	452	0.01	556	0.02	1,572	0.02	5,181	0.01	39,998	0.09
Surf	47,188	0.03	446	0.01	550	0.02	1,629	0.02	5,119	0.01	39,444	0.09
Surfside	55,479	0.04	525	0.01	646	0.03	1,712	0.02	6,019	0.01	46,576	0.11
Surfside South	45,563	0.03	431	0.01	531	0.02	1,413	0.02	4,943	0.01	38,244	0.09
Tarandore Point/Plantation	52,006	0.04	492	0.01	606	0.02	2,746	0.04	5,738	0.01	42,423	0.10
Tilba Tilba	37,636	0.03	356	0.01	439	0.02	1,933	0.03	4,430	0.01	30,478	0.07
Tilba Tilba Head	31,632	0.02	299	0.01	369	0.02	1,614	0.02	3,763	0.00	25,587	0.06
Tilba Tilba North	37,751	0.03	357	0.01	440	0.02	1,939	0.03	4,444	0.01	30,571	0.07
Tomakin	39,400	0.03	373	0.01	459	0.02	1,604	0.02	4,274	0.00	32,690	0.08
Tomakin Cove	56,824	0.04	538	0.01	662	0.03	2,314	0.03	6,164	0.01	47,147	0.11
Tuross Entrance	78,585	0.06	744	0.02	916	0.04	4,150	0.06	8,671	0.01	64,105	0.15
Tuross Head	57,345	0.04	543	0.01	668	0.03	3,028	0.04	6,327	0.01	46,779	0.11
Wagonga Inlet/Bar South	51,940	0.04	491	0.01	605	0.02	2,713	0.04	6,011	0.01	42,120	0.10
Wallaga Lake	31,519	0.02	298	0.01	367	0.01	1,599	0.02	3,778	0.00	25,475	0.06
Wimbie	57,405	0.04	543	0.01	669	0.03	1,982	0.03	6,227	0.01	47,984	0.11
Yabbara	45,293	0.03	429	0.01	528	0.02	2,370	0.03	5,204	0.01	36,763	0.09
Jervis Bay Territory												
Blackharbour	51,176	0.04	484	0.01	596	0.02		0.00	6,083	0.01	44,013	0.10
Bristol Point	39,652	0.03	375	0.01	462	0.02		0.00	4,713	0.01	34,102	0.08
Captains	42,244	0.03	400	0.01	492	0.02		0.00	5,021	0.01	36,331	0.08
Cave	55,975	0.04	530	0.01	652	0.03		0.00	6,653	0.01	48,140	0.11
Greenpatch/Iluka	40,932	0.03	387	0.01	477	0.02		0.00	4,865	0.01	35,203	0.08
Hyams	76,041	0.05	719	0.02	886	0.04		0.00	9,038	0.01	65,397	0.15
Kittys	39,683	0.03	375	0.01	462	0.02		0.00	4,717	0.01	34,128	0.08
Kittys North	81,211	0.06	768	0.02	946	0.04		0.00	9,653	0.01	69,844	0.16

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Mary Cove	58,872	0.04	557	0.02	686	0.03		0.00	6,997	0.01	50,631	0.12
Murrays	38,324	0.03	363	0.01	447	0.02		0.00	4,555	0.01	32,960	0.08
Scottish Rocks	35,916	0.03	340	0.01	418	0.02		0.00	4,269	0.00	30,888	0.07
Steamers	55,415	0.04	524	0.01	646	0.03		0.00	6,587	0.01	47,659	0.11
Summercloud Bay	51,720	0.04	489	0.01	603	0.02		0.00	6,147	0.01	44,480	0.10
The Wall/Hole in the Wall	37,523	0.03	355	0.01	437	0.02		0.00	4,460	0.01	32,270	0.08
Whiting	49,574	0.03	469	0.01	578	0.02		0.00	5,892	0.01	42,635	0.10
Whiting North	49,497	0.03	468	0.01	577	0.02		0.00	5,883	0.01	42,568	0.10
Whiting South	51,100	0.04	483	0.01	595	0.02		0.00	6,074	0.01	43,947	0.10
Kempsey LGA												
Back	32,615	0.02	309	0.01	380	0.02	567	0.01	1,850	0.00	29,509	0.07
Barries	42,858	0.03	406	0.01	499	0.02	700	0.01	2,355	0.00	38,897	0.09
Big Hill 2/The Rock	39,121	0.03	370	0.01	456	0.02	639	0.01	2,150	0.00	35,506	0.08
Cobble	70,561	0.05	668	0.02	822	0.03	1,226	0.02	4,003	0.00	63,842	0.15
Connors	29,501	0.02	279	0.01	344	0.01	515	0.01	1,655	0.00	26,708	0.06
Delicate Nobby	43,148	0.03	408	0.01	503	0.02	705	0.01	2,371	0.00	39,161	0.09
Front/South West Rocks	68,553	0.05	649	0.02	799	0.03	1,191	0.02	3,889	0.00	62,026	0.14
Gap (Arakoon)	52,691	0.04	499	0.01	614	0.03	916	0.01	2,989	0.00	47,674	0.11
Gap (Hat Head)	30,240	0.02	286	0.01	352	0.01	527	0.01	1,697	0.00	27,378	0.06
Goolawah/Back	27,147	0.02	257	0.01	316	0.01	444	0.01	1,492	0.00	24,638	0.06
Grassy Head	90,949	0.06	861	0.02	1,060	0.04	1,550	0.02	7,275	0.01	80,205	0.19
Hat Head	81,712	0.06	773	0.02	952	0.04	1,425	0.02	4,584	0.01	73,977	0.17
Horseshoe Bay	227,071	0.16	2,149	0.06	2,646	0.11	3,946	0.05	12,881	0.01	205,449	0.48
Killick North	33,159	0.02	314	0.01	386	0.02	542	0.01	1,822	0.00	30,095	0.07
Killick South	153,232	0.11	1,450	0.04	1,785	0.07	2,504	0.03	8,421	0.01	139,072	0.32
Killick/Crescent Head/Front	58,700	0.04	555	0.02	684	0.03	902	0.01	3,256	0.00	53,303	0.12
Little Bay	74,099	0.05	701	0.02	863	0.04	1,288	0.02	4,204	0.00	67,043	0.16
Middle Head	67,391	0.05	638	0.02	785	0.03	1,145	0.02	5,426	0.01	59,397	0.14
North Smoky 1	32,349	0.02	306	0.01	377	0.02	562	0.01	1,835	0.00	29,269	0.07

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North Smoky 2	43,667	0.03	413	0.01	509	0.02	759	0.01	2,477	0.00	39,509	0.09
North Smoky 3	43,016	0.03	407	0.01	501	0.02	748	0.01	2,440	0.00	38,920	0.09
Pebbly/Shelly	61,568	0.04	583	0.02	717	0.03	1,006	0.01	3,383	0.00	55,879	0.13
Racecourse/Sunset	40,991	0.03	388	0.01	478	0.02	670	0.01	2,253	0.00	37,203	0.09
South Smoky 1	67,327	0.05	637	0.02	784	0.03	1,172	0.02	3,800	0.00	60,934	0.14
South Smoky 2	71,119	0.05	673	0.02	829	0.03	1,240	0.02	3,990	0.00	64,387	0.15
Stuarts Point	21,061	0.01	199	0.01	245	0.01	362	0.01	1,604	0.00	18,651	0.04
Third	28,039	0.02	265	0.01	327	0.01	489	0.01	1,573	0.00	25,385	0.06
Trial Bay Goal	35,333	0.02	334	0.01	412	0.02	614	0.01	2,004	0.00	31,968	0.07
Kiama LGA												
Black	160,797	0.11	1,521	0.04	1,874	0.08	1,858	0.03	90,282	0.10	65,263	0.15
Easts	158,240	0.11	1,497	0.04	1,844	0.08	1,811	0.03	81,637	0.09	71,451	0.17
Gerringong Harbour/Boat Harbour	77,029	0.05	729	0.02	898	0.04	877	0.01	29,159	0.03	45,368	0.11
Gerroa/Seven Mile	422,251	0.30	3,995	0.11	4,920	0.20	4,785	0.07	106,853	0.12	301,698	0.70
Jones/Boyds	34,878	0.02	330	0.01	406	0.02	375	0.01	23,866	0.03	9,901	0.02
Kendalls	147,691	0.10	1,397	0.04	1,721	0.07	1,731	0.02	70,945	0.08	71,897	0.17
Kiama/Bombo	113,460	0.08	1,074	0.03	1,322	0.05	1,287	0.02	67,070	0.08	42,708	0.10
Loves Bay	123,229	0.09	1,166	0.03	1,436	0.06	1,409	0.02	59,245	0.07	59,972	0.14
Seven Mile Beach	24,773	0.02	234	0.01	289	0.01	279	0.00	5,601	0.01	18,371	0.04
Surf	197,952	0.14	1,873	0.05	2,306	0.09	2,286	0.03	107,761	0.12	83,726	0.20
The Boneyard/Cathederal Rocks	78,664	0.06	744	0.02	917	0.04	882	0.01	46,510	0.05	29,611	0.07
Walkers	66,045	0.05	625	0.02	770	0.03	751	0.01	24,482	0.03	39,418	0.09
Werri	149,613	0.10	1,416	0.04	1,743	0.07	1,705	0.02	56,627	0.07	88,122	0.21
Lake Macquarie LGA												
Blacksmiths/Nine Mile	158,173	0.11	1,497	0.04	1,843	0.08	8,136	0.11	37,456	0.04	109,242	0.25
Catherine Hill Bay/Middle Camp	295,179	0.21	2,793	0.08	3,439	0.14	14,259	0.20	131,690	0.15	142,997	0.33

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Catherine Hill Bay South/Little	84,211	0.06	797	0.02	981	0.04	4,068	0.06	37,570	0.04	40,795	0.10
Caves	707,551	0.50	6,695	0.18	8,244	0.34	33,684	0.47	166,292	0.19	492,637	1.15
Crabbes	67,293	0.05	637	0.02	784	0.03	3,204	0.04	15,815	0.02	46,853	0.11
Dudley	64,571	0.05	611	0.02	752	0.03	3,918	0.05	12,040	0.01	47,250	0.11
Hams	69,440	0.05	657	0.02	809	0.03	3,306	0.05	16,320	0.02	48,348	0.11
Pinny	70,672	0.05	669	0.02	823	0.03	3,364	0.05	16,610	0.02	49,206	0.11
Quarry	137,207	0.10	1,298	0.04	1,599	0.07	6,532	0.09	32,247	0.04	95,531	0.22
Redhead/Nine Mile	1,402,597	0.98	13,271	0.36	16,343	0.67	81,449	1.13	252,137	0.29	1,039,397	2.42
Stinky Point	155,513	0.11	1,471	0.04	1,812	0.07	7,403	0.10	36,549	0.04	108,277	0.25
Swansea Heads	273,326	0.19	2,586	0.07	3,185	0.13	13,012	0.18	64,238	0.07	190,305	0.44
Swansea Wall/Belmont	93,309	0.07	883	0.02	1,087	0.04	4,442	0.06	21,930	0.03	64,967	0.15
Mid-Coast LGA												
Bennetts/Dark Point/White Sands/Lemon Tree/The Baskets/Lovers Walk	27,409	0.02	259	0.01	319	0.01	290	0.00	5,162	0.01	21,378	0.05
Black Head	54,387	0.04	515	0.01	634	0.03	2,469	0.03	2,312	0.00	48,458	0.11
Blueys	61,862	0.04	585	0.02	721	0.03	1,767	0.02	2,437	0.00	56,352	0.13
Boat	68,762	0.05	651	0.02	801	0.03	1,548	0.02	2,640	0.00	63,123	0.15
Boomerang	116,883	0.08	1,106	0.03	1,362	0.06	3,402	0.05	4,616	0.01	106,398	0.25
Burgess	47,456	0.03	449	0.01	553	0.02	2,156	0.03	1,996	0.00	42,302	0.10
Cape Hawke North	45,450	0.03	430	0.01	530	0.02	2,065	0.03	1,912	0.00	40,515	0.09
Cape Hawke South	48,212	0.03	456	0.01	562	0.02	2,190	0.03	2,028	0.00	42,976	0.10
Crowdy Head	31,025	0.02	294	0.01	361	0.01	1,391	0.02	1,591	0.00	27,388	0.06
Dark Point North	73,801	0.05	698	0.02	860	0.04	1,013	0.01	9,845	0.01	61,384	0.14
Diamond/Back Saltwater/Back	31,156	0.02	295	0.01	363	0.01	1,413	0.02	1,346	0.00	27,739	0.06
Diamond Reef	72,259	0.05	684	0.02	842	0.03	3,281	0.05	3,072	0.00	64,382	0.15
Diamond South	35,254	0.02	334	0.01	411	0.02	1,601	0.02	1,499	0.00	31,411	0.07
Elizabeth	123,421	0.09	1,168	0.03	1,438	0.06	3,671	0.05	4,887	0.01	112,258	0.26

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Forster Main	169,912	0.12	1,608	0.04	1,980	0.08	7,718	0.11	7,146	0.01	151,460	0.35
Harrington	32,827	0.02	311	0.01	382	0.02	1,471	0.02	1,683	0.00	28,979	0.07
Hawks Nest	247,920	0.17	2,346	0.06	2,889	0.12	2,621	0.04	50,399	0.06	189,665	0.44
Janies Corner	47,204	0.03	447	0.01	550	0.02	2,144	0.03	1,985	0.00	42,078	0.10
Kylie	70,167	0.05	664	0.02	818	0.03	3,113	0.04	4,303	0.00	61,269	0.14
Lighthouse	110,895	0.08	1,049	0.03	1,292	0.05	2,496	0.03	4,258	0.00	101,800	0.24
Lindeman Cove	49,207	0.03	466	0.01	573	0.02	1,498	0.02	1,954	0.00	44,716	0.10
Manning Point	25,222	0.02	239	0.01	294	0.01	1,136	0.02	1,210	0.00	22,343	0.05
McBrides	64,629	0.05	612	0.02	753	0.03	2,936	0.04	2,718	0.00	57,610	0.13
Mungo	18,381	0.01	174	0.00	214	0.01	296	0.00	2,452	0.00	15,245	0.04
Nine Mile	14,852	0.01	141	0.00	173	0.01	675	0.01	625	0.00	13,239	0.03
Number Five	79,334	0.06	751	0.02	924	0.04	1,786	0.02	3,046	0.00	72,828	0.17
Number Four	66,896	0.05	633	0.02	779	0.03	1,506	0.02	2,568	0.00	61,409	0.14
Number One	68,878	0.05	652	0.02	803	0.03	1,550	0.02	2,644	0.00	63,229	0.15
Number Six	75,221	0.05	712	0.02	876	0.04	1,693	0.02	2,888	0.00	69,052	0.16
Number Three	59,242	0.04	561	0.02	690	0.03	1,333	0.02	2,275	0.00	54,384	0.13
Number Two	55,162	0.04	522	0.01	643	0.03	1,241	0.02	2,118	0.00	50,638	0.12
Old Bar	34,131	0.02	323	0.01	398	0.02	1,543	0.02	1,551	0.00	30,315	0.07
One Mile	84,406	0.06	799	0.02	983	0.04	3,834	0.05	3,550	0.00	75,240	0.18
Pebbly (Black Head)	60,914	0.04	576	0.02	710	0.03	2,767	0.04	2,562	0.00	54,299	0.13
Pebbly (Forster)	49,557	0.03	469	0.01	577	0.02	2,250	0.03	2,106	0.00	44,154	0.10
Saltwater/Badges	52,840	0.04	500	0.01	616	0.03	2,389	0.03	2,402	0.00	46,934	0.11
Saltwater/Wallabi	39,203	0.03	371	0.01	457	0.02	1,772	0.02	1,782	0.00	34,821	0.08
Sandbar/Cellito	39,902	0.03	378	0.01	465	0.02	1,062	0.01	1,559	0.00	36,438	0.08
Seven Mile	29,425	0.02	278	0.01	343	0.01	1,337	0.02	1,238	0.00	26,230	0.06
Shelly (Red Head)	59,789	0.04	566	0.02	697	0.03	1,778	0.02	2,367	0.00	54,381	0.13
Shelly (Elizabeth Beach)	54,957	0.04	520	0.01	640	0.03	2,495	0.03	2,336	0.00	48,966	0.11
Submarine/Fiona/Yagon	46,580	0.03	441	0.01	543	0.02	1,048	0.01	1,788	0.00	42,760	0.10
Treachery	78,576	0.05	743	0.02	916	0.04	1,768	0.02	3,017	0.00	72,131	0.17

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Tuncurry	33,553	0.02	317	0.01	391	0.02	1,524	0.02	1,411	0.00	29,910	0.07
Tuncurry Rock Pool	52,916	0.04	501	0.01	617	0.03	2,404	0.03	2,226	0.00	47,169	0.11
Winda Woppa	43,000	0.03	407	0.01	501	0.02	455	0.01	8,098	0.01	33,540	0.08
Mosman LGA												
Ashton Reserve	220,200	0.15	2,083	0.06	2,566	0.10	3,084	0.04	203,135	0.23	9,332	0.02
Athol	349,351	0.24	3,305	0.09	4,071	0.17	4,893	0.07	322,277	0.37	14,805	0.03
Balmoral	1,534,405	1.07	14,518	0.39	17,878	0.73	21,556	0.30	1,415,488	1.63	64,964	0.15
Bradleys Head	215,406	0.15	2,038	0.06	2,510	0.10	3,017	0.04	198,713	0.23	9,129	0.02
Chinamans	361,437	0.25	3,420	0.09	4,211	0.17	5,036	0.07	333,486	0.38	15,284	0.04
Clifton Gardens/Chowder Bay	350,938	0.25	3,321	0.09	4,089	0.17	4,920	0.07	323,737	0.37	14,871	0.03
Cobblers	339,857	0.24	3,216	0.09	3,960	0.16	4,769	0.07	313,513	0.36	14,400	0.03
Edwards	416,663	0.29	3,942	0.11	4,855	0.20	5,852	0.08	384,376	0.44	17,637	0.04
Little Sirius Cove	348,896	0.24	3,301	0.09	4,065	0.17	4,886	0.07	321,857	0.37	14,786	0.03
Obelisk	349,709	0.24	3,309	0.09	4,075	0.17	4,907	0.07	322,601	0.37	14,818	0.03
Sirius Cove	359,342	0.25	3,400	0.09	4,187	0.17	5,011	0.07	331,511	0.38	15,234	0.04
Spit East	330,503	0.23	3,127	0.08	3,851	0.16	4,592	0.06	304,998	0.35	13,935	0.03
Taylors Bay	245,982	0.17	2,327	0.06	2,866	0.12	3,445	0.05	226,919	0.26	10,424	0.02
Whiting	347,495	0.24	3,288	0.09	4,049	0.17	4,867	0.07	320,565	0.37	14,726	0.03
Nambucca Valley LGA												
Beilbys	74,484	0.05	705	0.02	868	0.04	1,069	0.01	3,541	0.00	68,301	0.16
Entrance/Wellington	41,468	0.03	392	0.01	483	0.02	595	0.01	1,972	0.00	38,026	0.09
Forster/Scotts Head	136,623	0.10	1,293	0.04	1,592	0.06	1,723	0.02	5,526	0.01	126,489	0.29
Hyland	64,616	0.05	611	0.02	753	0.03	927	0.01	3,072	0.00	59,252	0.14
Little	41,792	0.03	395	0.01	487	0.02	527	0.01	1,690	0.00	38,692	0.09
Nambucca Main	26,845	0.02	254	0.01	313	0.01	385	0.01	1,276	0.00	24,617	0.06
Nambucca North	37,305	0.03	353	0.01	435	0.02	535	0.01	1,774	0.00	34,208	0.08
Scotts Head / Wakki	53,555	0.04	507	0.01	624	0.03	675	0.01	2,166	0.00	49,583	0.12
Shelly	44,613	0.03	422	0.01	520	0.02	640	0.01	2,121	0.00	40,910	0.10
South Valla	54,285	0.04	514	0.01	633	0.03	751	0.01	2,733	0.00	49,655	0.12

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V Wall	35,385	0.02	335	0.01	412	0.02	508	0.01	1,682	0.00	32,448	0.08
Valla Head/Walla	48,645	0.03	460	0.01	567	0.02	673	0.01	2,449	0.00	44,496	0.10
Newcastle LGA												
Bar	572,660	0.40	5,418	0.15	6,672	0.27	39,106	0.54	114,613	0.13	406,850	0.95
Dixon Park	538,220	0.38	5,093	0.14	6,271	0.26	36,756	0.51	107,721	0.12	382,379	0.89
Glenrock/Burwood	130,911	0.09	1,239	0.03	1,525	0.06	8,931	0.12	26,311	0.03	92,905	0.22
Horseshoe	80,553	0.06	762	0.02	939	0.04	5,507	0.08	16,045	0.02	57,300	0.13
Little Park	94,170	0.07	891	0.02	1,097	0.04	6,650	0.09	19,079	0.02	66,452	0.15
Merewether	614,834	0.43	5,817	0.16	7,164	0.29	41,966	0.58	123,303	0.14	436,584	1.02
Newcastle	1,021,396	0.71	9,664	0.26	11,901	0.49	69,842	0.97	203,366	0.23	726,624	1.69
Newcastle Bight/Stockton	204,366	0.14	1,934	0.05	2,381	0.10	14,432	0.20	41,405	0.05	144,214	0.34
Nobbys	701,717	0.49	6,640	0.18	8,176	0.33	47,961	0.66	139,948	0.16	498,993	1.16
Nobbys Head	386,550	0.27	3,657	0.10	4,504	0.18	26,428	0.37	76,996	0.09	274,964	0.64
Stockton	254,903	0.18	2,412	0.07	2,970	0.12	18,001	0.25	51,644	0.06	179,876	0.42
Susan Gilmour	62,094	0.04	588	0.02	723	0.03	4,241	0.06	12,417	0.01	44,124	0.10
The Gulf	62,309	0.04	590	0.02	726	0.03	4,252	0.06	12,508	0.01	44,234	0.10
The Gulf South	81,557	0.06	772	0.02	950	0.04	5,564	0.08	16,390	0.02	57,881	0.13
Northern Beaches LGA												
Avalon	351,966	0.25	3,330	0.09	4,101	0.17	28,742	0.40	294,570	0.34	21,222	0.05
Bilgola	226,607	0.16	2,144	0.06	2,640	0.11	18,505	0.26	189,654	0.22	13,663	0.03
Bonnie Doon	201,026	0.14	1,902	0.05	2,342	0.10	16,026	0.22	168,500	0.19	12,256	0.03
Bungan	74,757	0.05	707	0.02	871	0.04	6,105	0.08	63,013	0.07	4,061	0.01
Butter Box	180,296	0.13	1,706	0.05	2,101	0.09	13,620	0.19	153,429	0.18	9,440	0.02
Castle Rock	161,141	0.11	1,525	0.04	1,878	0.08	10,722	0.15	140,182	0.16	6,835	0.02
Clareville	198,437	0.14	1,878	0.05	2,312	0.09	16,205	0.22	166,078	0.19	11,965	0.03
Clontarf Beach	260,890	0.18	2,468	0.07	3,040	0.12	17,358	0.24	226,957	0.26	11,066	0.03
Collaroy	471,013	0.33	4,457	0.12	5,488	0.22	35,922	0.50	400,396	0.46	24,751	0.06
Collins Flat	169,538	0.12	1,604	0.04	1,975	0.08	11,238	0.16	146,524	0.17	8,196	0.02
Currawong	124,557	0.09	1,179	0.03	1,451	0.06	10,171	0.14	104,246	0.12	7,510	0.02

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Dee Why	1,318,950	0.92	12,480	0.34	15,368	0.63	95,532	1.32	1,126,275	1.30	69,296	0.16
Delwood	246,265	0.17	2,330	0.06	2,869	0.12	16,325	0.23	214,313	0.25	10,428	0.02
East Esplanade/Manly Cove	266,379	0.19	2,520	0.07	3,104	0.13	17,658	0.24	231,817	0.27	11,280	0.03
Esplanade	251,289	0.18	2,378	0.06	2,928	0.12	16,658	0.23	218,684	0.25	10,641	0.02
Fairlight	253,802	0.18	2,401	0.07	2,957	0.12	16,824	0.23	220,871	0.25	10,748	0.03
Fairy Bower	262,820	0.18	2,487	0.07	3,062	0.12	17,422	0.24	228,720	0.26	11,129	0.03
Fishermans	498,786	0.35	4,719	0.13	5,812	0.24	37,680	0.52	424,460	0.49	26,115	0.06
Flannel Flower	301,556	0.21	2,853	0.08	3,514	0.14	24,041	0.33	252,764	0.29	18,385	0.04
Flint and Steel	212,534	0.15	2,011	0.05	2,476	0.10	16,944	0.23	178,145	0.21	12,957	0.03
Forty Baskets	254,952	0.18	2,412	0.07	2,971	0.12	16,900	0.23	221,872	0.26	10,796	0.03
Freshwater	961,253	0.67	9,095	0.25	11,200	0.46	65,842	0.91	824,562	0.95	50,553	0.12
Great Mackerel	121,967	0.09	1,154	0.03	1,421	0.06	9,724	0.13	102,233	0.12	7,436	0.02
Hungry	203,125	0.14	1,922	0.05	2,367	0.10	16,194	0.22	170,259	0.20	12,384	0.03
Little Manly	261,501	0.18	2,474	0.07	3,047	0.12	17,335	0.24	227,572	0.26	11,074	0.03
Long Reef	582,186	0.41	5,509	0.15	6,783	0.28	43,672	0.61	495,722	0.57	30,500	0.07
Long Reef Head	180,025	0.13	1,703	0.05	2,098	0.09	13,600	0.19	153,199	0.18	9,426	0.02
Manly	6,257,279	4.38	990,000	26.91	387,189	15.80	330,472	4.58	4,338,508	5.01	211,111	0.49
Mona Vale	407,491	0.29	3,856	0.10	4,748	0.19	33,276	0.46	343,477	0.40	22,134	0.05
Narrabeen	138,662	0.10	1,312	0.04	1,616	0.07	10,925	0.15	117,400	0.14	7,409	0.02
Newport	513,562	0.36	4,859	0.13	5,984	0.24	41,938	0.58	432,885	0.50	27,896	0.07
North Curl Curl	732,395	0.51	6,930	0.19	8,534	0.35	50,914	0.71	627,429	0.72	38,588	0.09
North Narrabeen	606,346	0.42	5,737	0.16	7,065	0.29	47,827	0.66	513,301	0.59	32,416	0.08
North Palm	292,457	0.20	2,767	0.08	3,408	0.14	23,882	0.33	244,766	0.28	17,634	0.04
North Steyne	1,500,350	1.05	14,196	0.39	17,482	0.71	101,104	1.40	1,303,558	1.50	64,010	0.15
Old Wharf	190,320	0.13	1,801	0.05	2,218	0.09	15,542	0.22	159,284	0.18	11,476	0.03
Palm	939,919	0.66	8,893	0.24	10,952	0.45	76,755	1.06	786,645	0.91	56,673	0.13
Paradise	201,292	0.14	1,905	0.05	2,345	0.10	16,438	0.23	168,467	0.19	12,137	0.03
Pickering Point	250,989	0.18	2,375	0.06	2,924	0.12	16,962	0.24	218,009	0.25	10,719	0.02
Portuguese	128,612	0.09	1,217	0.03	1,499	0.06	10,503	0.15	107,639	0.12	7,755	0.02

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Quarantine	1,071,789	0.75	10,141	0.28	12,488	0.51	71,047	0.98	922,342	1.06	55,770	0.13
Queenscliff	1,117,615	0.78	10,575	0.29	13,022	0.53	75,578	1.05	970,683	1.12	47,758	0.11
Reef	159,231	0.11	1,507	0.04	1,855	0.08	10,555	0.15	138,571	0.16	6,743	0.02
Resolute	126,822	0.09	1,200	0.03	1,478	0.06	10,111	0.14	106,302	0.12	7,732	0.02
Sandy	193,740	0.14	1,833	0.05	2,257	0.09	15,821	0.22	162,147	0.19	11,682	0.03
Sandy Bay	249,287	0.17	2,359	0.06	2,905	0.12	16,586	0.23	216,863	0.25	10,574	0.02
Shelly	375,656	0.26	3,554	0.10	4,377	0.18	24,902	0.35	324,663	0.37	18,160	0.04
Snapperman	190,840	0.13	1,806	0.05	2,224	0.09	15,584	0.22	159,720	0.18	11,507	0.03
South Curl Curl	538,708	0.38	5,097	0.14	6,277	0.26	37,229	0.52	461,694	0.53	28,410	0.07
South Narrabeen	65,862	0.05	623	0.02	767	0.03	5,159	0.07	55,820	0.06	3,493	0.01
Station/Barrenjoey	177,512	0.12	1,680	0.05	2,068	0.08	14,496	0.20	148,565	0.17	10,703	0.02
Store	152,322	0.11	1,441	0.04	1,775	0.07	10,097	0.14	131,083	0.15	7,926	0.02
Taylors	198,403	0.14	1,877	0.05	2,312	0.09	16,202	0.22	166,049	0.19	11,963	0.03
The Basin	250,016	0.17	2,366	0.06	2,913	0.12	20,417	0.28	210,740	0.24	13,580	0.03
The Basin	196,797	0.14	1,862	0.05	2,293	0.09	15,689	0.22	164,955	0.19	11,998	0.03
Turimetta/Little Narrabeen	229,867	0.16	2,175	0.06	2,678	0.11	18,233	0.25	194,481	0.22	12,299	0.03
Warriewood	205,756	0.14	1,947	0.05	2,397	0.10	16,625	0.23	173,676	0.20	11,111	0.03
Washaway	157,823	0.11	1,493	0.04	1,839	0.08	10,501	0.15	137,295	0.16	6,694	0.02
West Esplanade/Manly Cove	260,861	0.18	2,468	0.07	3,039	0.12	17,292	0.24	227,015	0.26	11,046	0.03
Whale	132,925	0.09	1,258	0.03	1,549	0.06	10,855	0.15	111,249	0.13	8,015	0.02
Port Macquarie-Hastings												
Bartletts/Sponys Bay	62,324	0.04	590	0.02	726	0.03	2,283	0.03	3,066	0.00	55,660	0.13
Boat Ramp	37,195	0.03	352	0.01	433	0.02	1,370	0.02	1,830	0.00	33,210	0.08
Dunbogan	32,407	0.02	307	0.01	378	0.02	1,083	0.02	1,571	0.00	29,069	0.07
Flynns	321,320	0.22	3,040	0.08	3,744	0.15	14,494	0.20	2,453	0.00	297,589	0.69
Lake Cathie	69,139	0.05	654	0.02	806	0.03	2,748	0.04	427	0.00	64,504	0.15
Lighthouse	113,359	0.08	1,073	0.03	1,321	0.05	4,667	0.06	741	0.00	105,558	0.25
Middle Rock	39,648	0.03	375	0.01	462	0.02	1,576	0.02	245	0.00	36,991	0.09
Miners North	83,908	0.06	794	0.02	978	0.04	3,786	0.05	627	0.00	77,723	0.18

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Miners South	87,418	0.06	827	0.02	1,019	0.04	3,947	0.05	627	0.00	80,998	0.19
Nobbys/The Dog	88,873	0.06	841	0.02	1,036	0.04	4,010	0.06	670	0.00	82,317	0.19
North Haven/Grants	71,943	0.05	681	0.02	838	0.03	2,394	0.03	3,521	0.00	64,509	0.15
North Shore	21,356	0.01	202	0.01	249	0.01	963	0.01	164	0.00	19,777	0.05
Oxley	95,519	0.07	904	0.02	1,113	0.05	4,309	0.06	729	0.00	88,464	0.21
Pandanus Cove	75,993	0.05	719	0.02	885	0.04	3,429	0.05	568	0.00	70,391	0.16
Pebbly	81,796	0.06	774	0.02	953	0.04	2,733	0.04	3,965	0.00	73,370	0.17
Pelican Point/North Breakwall/Pilot	57,143	0.04	541	0.01	666	0.03	2,577	0.04	439	0.00	52,920	0.12
Pilot	82,514	0.06	781	0.02	961	0.04	2,757	0.04	4,000	0.00	74,015	0.17
Point Plomer/Fingers	53,921	0.04	510	0.01	628	0.03	2,695	0.04	1,149	0.00	48,938	0.11
Queens Head	39,566	0.03	374	0.01	461	0.02	1,978	0.03	843	0.00	35,910	0.08
Rainbow/Bonny Hills	106,043	0.07	1,003	0.03	1,236	0.05	3,926	0.05	5,219	0.01	94,659	0.22
Rocky	83,464	0.06	790	0.02	973	0.04	3,765	0.05	637	0.00	77,300	0.18
Shark	80,794	0.06	764	0.02	941	0.04	2,878	0.04	3,968	0.00	72,242	0.17
Shelly	75,934	0.05	718	0.02	885	0.04	3,426	0.05	572	0.00	70,332	0.16
Tacking Point/Lighthouse	124,599	0.09	1,179	0.03	1,452	0.06	5,626	0.08	894	0.00	115,449	0.27
Tacking Point North/Little Bay	85,377	0.06	808	0.02	995	0.04	3,855	0.05	612	0.00	79,107	0.18
Town	480,516	0.34	4,547	0.12	5,599	0.23	21,675	0.30	3,668	0.00	445,028	1.04
Wash House	92,752	0.06	878	0.02	1,081	0.04	3,099	0.04	4,496	0.01	83,198	0.19
Port Stephens LGA												
Bagnalls	49,538	0.03	469	0.01	577	0.02	1,493	0.02	8,773	0.01	38,226	0.09
Birubi Point	590,810	0.41	5,590	0.15	6,884	0.28	17,810	0.25	104,632	0.12	455,893	1.06
Boat Harbour	73,612	0.05	697	0.02	858	0.03	2,219	0.03	13,037	0.02	56,802	0.13
Boulder	64,125	0.04	607	0.02	747	0.03	1,933	0.03	11,357	0.01	49,482	0.12
Box	68,508	0.05	648	0.02	798	0.03	2,065	0.03	12,133	0.01	52,864	0.12
Corlette	51,686	0.04	489	0.01	602	0.02	1,558	0.02	9,154	0.01	39,883	0.09
Dutchmans	50,860	0.04	481	0.01	593	0.02	1,533	0.02	9,007	0.01	39,246	0.09
Fingal	474,423	0.33	4,489	0.12	5,528	0.23	14,302	0.20	84,020	0.10	366,085	0.85

			Visits from outside NSW				Visits from within NSW					
LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Fishermans Bay	41,037	0.03	388	0.01	478	0.02	1,237	0.02	7,268	0.01	31,666	0.07
Fly Roads	59,583	0.04	564	0.02	694	0.03	1,796	0.02	10,552	0.01	45,977	0.11
Jimmys	53,800	0.04	509	0.01	627	0.03	1,646	0.02	8,381	0.01	42,637	0.10
Kingsley	43,349	0.03	410	0.01	505	0.02	1,307	0.02	7,677	0.01	33,450	0.08
Little Kingsley	38,592	0.03	365	0.01	450	0.02	1,163	0.02	6,835	0.01	29,779	0.07
Little/Little Nelson Bay	53,397	0.04	505	0.01	622	0.03	1,610	0.02	9,457	0.01	41,203	0.10
Nelson Bay	51,211	0.04	485	0.01	597	0.02	1,544	0.02	9,069	0.01	39,516	0.09
Nelson Bay Marina	51,144	0.04	484	0.01	596	0.02	1,542	0.02	9,058	0.01	39,465	0.09
One Mile/Anna Bay	449,015	0.31	4,248	0.12	5,232	0.21	13,536	0.19	79,520	0.09	346,479	0.81
Samurai	88,564	0.06	838	0.02	1,032	0.04	2,670	0.04	15,685	0.02	68,339	0.16
Shark Bay	33,852	0.02	320	0.01	394	0.02	1,020	0.01	5,995	0.01	26,121	0.06
Shoal Bay	52,821	0.04	500	0.01	615	0.03	1,592	0.02	9,355	0.01	40,759	0.10
Soldiers Point	51,323	0.04	486	0.01	598	0.02	1,547	0.02	9,089	0.01	39,603	0.09
Soldiers Point South	52,650	0.04	498	0.01	613	0.03	1,587	0.02	9,324	0.01	40,627	0.09
Wanda	34,727	0.02	329	0.01	405	0.02	1,047	0.01	6,150	0.01	26,797	0.06
Wreck	65,131	0.05	616	0.02	759	0.03	1,963	0.03	11,535	0.01	50,258	0.12
Wreck North	40,587	0.03	384	0.01	473	0.02	1,223	0.02	7,188	0.01	31,319	0.07
Zenith	64,276	0.04	608	0.02	749	0.03	1,938	0.03	11,383	0.01	49,598	0.12
Randwick LGA												
Clovelly	3,183,797	2.23	30,124	0.82	37,097	1.51	158,227	2.19	2,834,416	3.27	123,933	0.29
Congwong/La Perouse	152,314	0.11	1,441	0.04	1,775	0.07	7,730	0.11	135,484	0.16	5,884	0.01
Coogee	3,966,727	2.78	37,532	1.02	46,219	1.89	198,679	2.75	3,529,970	4.07	154,326	0.36
Frenchmans Bay North	210,037	0.15	1,987	0.05	2,447	0.10	10,619	0.15	186,866	0.22	8,117	0.02
Frenchmans Bay South	195,786	0.14	1,852	0.05	2,281	0.09	9,936	0.14	174,153	0.20	7,563	0.02
Gordons Bay	241,025	0.17	2,281	0.06	2,808	0.11	11,972	0.17	214,579	0.25	9,385	0.02
Little Bay 1	241,521	0.17	2,285	0.06	2,814	0.11	12,387	0.17	214,716	0.25	9,318	0.02
Little Bay 2	240,535	0.17	2,276	0.06	2,803	0.11	12,336	0.17	213,840	0.25	9,280	0.02
Little Congwong	141,917	0.10	1,343	0.04	1,654	0.07	7,202	0.10	126,236	0.15	5,482	0.01
Malabar	293,780	0.21	2,780	0.08	3,423	0.14	15,189	0.21	261,066	0.30	11,321	0.03

			Visits from outside NSW				Visits from within NSW					
LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Maroubra	3,570,214	2.50	33,781	0.92	41,599	1.70	184,841	2.56	3,172,538	3.66	137,456	0.32
Maroubra South	495,892	0.35	4,692	0.13	5,778	0.24	25,754	0.36	440,554	0.51	19,114	0.04
Yarra Bay	217,776	0.15	2,061	0.06	2,537	0.10	11,023	0.15	193,739	0.22	8,415	0.02
Richmond Valley LGA												
Airforce	48,894	0.03	463	0.01	570	0.02	726	0.01	5,649	0.01	41,487	0.10
Broadwater	28,603	0.02	271	0.01	333	0.01	445	0.01	3,787	0.00	23,767	0.06
Chinamans North	40,429	0.03	383	0.01	471	0.02	601	0.01	4,645	0.01	34,330	0.08
Chinamans South	37,782	0.03	357	0.01	440	0.02	561	0.01	4,341	0.01	32,082	0.07
Evans Head	126,519	0.09	1,197	0.03	1,474	0.06	1,878	0.03	14,617	0.02	107,353	0.25
New Zealand	28,681	0.02	271	0.01	334	0.01	426	0.01	3,295	0.00	24,354	0.06
Razorback/Shark Bay/Little	35,757	0.03	338	0.01	417	0.02	531	0.01	4,108	0.00	30,363	0.07
Red Hill	27,975	0.02	265	0.01	326	0.01	416	0.01	3,214	0.00	23,755	0.06
Shellharbour LGA												
Bushrangers Bay	68,801	0.05	651	0.02	802	0.03	2,152	0.03	50,532	0.06	14,664	0.03
Killalea/The Farm	522,646	0.37	4,945	0.13	6,090	0.25	17,535	0.24	366,657	0.42	127,419	0.30
Maloneys	78,248	0.05	740	0.02	912	0.04	2,448	0.03	58,897	0.07	15,250	0.04
Minnamurra/Mystics	71,556	0.05	677	0.02	834	0.03	2,392	0.03	47,332	0.05	20,321	0.05
Shellharbour/Boatharbour	99,326	0.07	940	0.03	1,157	0.05	3,073	0.04	74,804	0.09	19,352	0.05
Shellharbour North/Nuns	151,099	0.11	1,430	0.04	1,761	0.07	4,617	0.06	113,863	0.13	29,429	0.07
Shellharbour South	167,845	0.12	1,588	0.04	1,956	0.08	5,183	0.07	126,418	0.15	32,701	0.08
The Jetty/Shallows	50,052	0.04	474	0.01	583	0.02	1,566	0.02	37,674	0.04	9,755	0.02
The Middy/Redsands	69,380	0.05	656	0.02	808	0.03	2,170	0.03	52,223	0.06	13,522	0.03
Warilla	105,639	0.07	1,000	0.03	1,231	0.05	3,158	0.04	83,684	0.10	16,567	0.04
Warilla North	80,357	0.06	760	0.02	936	0.04	2,392	0.03	63,669	0.07	12,600	0.03
Warilla South	71,772	0.05	679	0.02	836	0.03	2,172	0.03	54,111	0.06	13,973	0.03
Shoalhaven LGA												
Abrahams Bosom	59,315	0.04	561	0.02	691	0.03	3,028	0.04	3,443	0.00	51,591	0.12
Avenue	53,699	0.04	508	0.01	626	0.03	3,306	0.05	2,471	0.00	46,788	0.11
Bangalay	51,644	0.04	489	0.01	602	0.02	3,339	0.05	2,054	0.00	45,160	0.11

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Barfleur	57,527	0.04	544	0.01	670	0.03	3,544	0.05	6,926	0.01	45,842	0.11
Bawley	62,997	0.04	596	0.02	734	0.03	3,878	0.05	2,899	0.00	54,890	0.13
Bendalong/Inyadda	60,372	0.04	571	0.02	703	0.03	3,903	0.05	2,402	0.00	52,792	0.12
Berrara/Kirbys	44,610	0.03	422	0.01	520	0.02	2,891	0.04	2,533	0.00	38,244	0.09
Berrara Point	89,329	0.06	845	0.02	1,041	0.04	5,781	0.08	5,067	0.01	76,595	0.18
Berrara South	47,745	0.03	452	0.01	556	0.02	3,090	0.04	2,708	0.00	40,939	0.10
Bherwerre	26,316	0.02	249	0.01	307	0.01	1,621	0.02	1,507	0.00	22,632	0.05
Bindijine	59,493	0.04	563	0.02	693	0.03	3,037	0.04	3,453	0.00	51,746	0.12
Blenheim	68,757	0.05	651	0.02	801	0.03	4,236	0.06	8,278	0.01	54,792	0.13
Boat Harbour	71,375	0.05	675	0.02	832	0.03	4,614	0.06	2,839	0.00	62,415	0.15
Boat Ramp	39,315	0.03	372	0.01	458	0.02	2,398	0.03	1,955	0.00	34,132	0.08
Bream Creek/Boat Harbour	43,644	0.03	413	0.01	509	0.02	2,228	0.03	2,533	0.00	37,961	0.09
Buckleys	52,307	0.04	495	0.01	609	0.02	3,340	0.05	1,132	0.00	46,731	0.11
Bull Pup	59,709	0.04	565	0.02	696	0.03	3,676	0.05	2,748	0.00	52,024	0.12
Burns Bay	35,979	0.03	340	0.01	419	0.02	2,136	0.03	2,171	0.00	30,912	0.07
Burrill	55,710	0.04	527	0.01	649	0.03	3,527	0.05	750	0.00	50,257	0.12
Cabbage Tree	71,526	0.05	677	0.02	833	0.03	3,651	0.05	4,152	0.00	62,213	0.15
Callala	70,648	0.05	668	0.02	823	0.03	3,639	0.05	8,618	0.01	56,900	0.13
Callala Bay	65,026	0.05	615	0.02	758	0.03	3,323	0.05	7,937	0.01	52,394	0.12
Cat and Kitten	56,833	0.04	538	0.01	662	0.03	3,499	0.05	2,615	0.00	49,519	0.12
Chinamans/Hare Bay	82,288	0.06	779	0.02	959	0.04	4,201	0.06	10,044	0.01	66,305	0.15
Chinamans/Hyams Beach	70,300	0.05	665	0.02	819	0.03	4,331	0.06	4,025	0.00	60,459	0.14
Collers	41,572	0.03	393	0.01	484	0.02	2,648	0.04	921	0.00	37,125	0.09
Collingwood	81,120	0.06	768	0.02	945	0.04	4,889	0.07	9,765	0.01	64,753	0.15
Comerong Island	52,234	0.04	494	0.01	609	0.02	2,448	0.03	6,416	0.01	42,267	0.10
Conjola	46,644	0.03	441	0.01	543	0.02	3,004	0.04	2,296	0.00	40,359	0.09
Cormorant	55,760	0.04	528	0.01	650	0.03	3,433	0.05	2,566	0.00	48,584	0.11
Crookhaven/Culburra	46,700	0.03	442	0.01	544	0.02	2,292	0.03	5,718	0.01	37,704	0.09
Cudmirrah	48,749	0.03	461	0.01	568	0.02	3,159	0.04	2,768	0.00	41,792	0.10

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Cunjurong Point	71,212	0.05	674	0.02	830	0.03	4,604	0.06	2,833	0.00	62,272	0.15
Currarong	62,679	0.04	593	0.02	730	0.03	3,200	0.04	7,651	0.01	50,505	0.12
Dawson Island North	40,350	0.03	382	0.01	470	0.02	2,458	0.03	2,028	0.00	35,012	0.08
Dawson Island South	34,926	0.02	330	0.01	407	0.02	2,128	0.03	1,756	0.00	30,305	0.07
Dee	89,708	0.06	849	0.02	1,045	0.04	5,800	0.08	3,569	0.00	78,446	0.18
Depot	41,757	0.03	395	0.01	487	0.02	2,459	0.03	2,656	0.00	35,760	0.08
Durras North	49,973	0.03	473	0.01	582	0.02	2,943	0.04	3,179	0.00	42,797	0.10
Figtree Inlet	55,538	0.04	525	0.01	647	0.03	2,835	0.04	3,224	0.00	48,307	0.11
Flat Rock	150,928	0.11	1,428	0.04	1,759	0.07	9,757	0.14	6,004	0.01	131,980	0.31
Gannet	49,343	0.03	467	0.01	575	0.02	3,038	0.04	2,271	0.00	42,993	0.10
Golf Course Reef	39,724	0.03	376	0.01	463	0.02	2,530	0.04	880	0.00	35,476	0.08
Greenfield	92,385	0.06	874	0.02	1,076	0.04	5,692	0.08	5,289	0.01	79,454	0.19
Hare Bay	62,917	0.04	595	0.02	733	0.03	3,212	0.04	7,680	0.01	50,696	0.12
Honeymoon Bay	68,154	0.05	645	0.02	794	0.03	3,479	0.05	3,956	0.00	59,279	0.14
Huskisson	60,799	0.04	575	0.02	708	0.03	3,588	0.05	7,333	0.01	48,594	0.11
Hyams	291,960	0.20	2,762	0.08	3,402	0.14	17,987	0.25	16,715	0.02	251,093	0.59
Hyams Point	61,091	0.04	578	0.02	712	0.03	3,764	0.05	3,497	0.00	52,540	0.12
Kioloa	54,455	0.04	515	0.01	634	0.03	3,325	0.05	2,689	0.00	47,292	0.11
Lobster Bay	91,129	0.06	862	0.02	1,062	0.04	4,652	0.06	5,290	0.01	79,263	0.18
Long	90,847	0.06	860	0.02	1,059	0.04	4,638	0.06	5,273	0.01	79,018	0.18
Manyana	52,681	0.04	498	0.01	614	0.03	3,406	0.05	2,096	0.00	46,067	0.11
Meroo	54,068	0.04	512	0.01	630	0.03	3,357	0.05	2,305	0.00	47,265	0.11
Merry	62,588	0.04	592	0.02	729	0.03	3,815	0.05	3,132	0.00	54,319	0.13
Mid Seven Mile	46,810	0.03	443	0.01	545	0.02	1,493	0.02	9,588	0.01	34,739	0.08
Mollymook	193,501	0.14	1,831	0.05	2,255	0.09	12,325	0.17	4,283	0.00	172,807	0.40
Mollymook Mid	61,488	0.04	582	0.02	716	0.03	3,921	0.05	1,347	0.00	54,921	0.13
Mollymook North	249,997	0.17	2,365	0.06	2,913	0.12	15,943	0.22	5,475	0.01	223,301	0.52
Monument	50,249	0.04	475	0.01	585	0.02	3,249	0.05	1,999	0.00	43,940	0.10
Murramarang	50,448	0.04	477	0.01	588	0.02	3,106	0.04	2,322	0.00	43,955	0.10

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Narrawallee	155,621	0.11	1,472	0.04	1,813	0.07	9,937	0.14	3,367	0.00	139,031	0.32
Nelson	77,155	0.05	730	0.02	899	0.04	4,753	0.07	9,289	0.01	61,484	0.14
North	81,527	0.06	771	0.02	950	0.04	5,019	0.07	3,752	0.00	71,035	0.17
Nuggan Point	39,477	0.03	374	0.01	460	0.02	2,430	0.03	1,817	0.00	34,396	0.08
O'Hara South 1	40,654	0.03	385	0.01	474	0.02	2,476	0.03	2,044	0.00	35,276	0.08
O'Hara South 2	44,700	0.03	423	0.01	521	0.02	2,723	0.04	2,247	0.00	38,786	0.09
O'Hara South 3	36,274	0.03	343	0.01	423	0.02	2,210	0.03	1,823	0.00	31,475	0.07
O'hara Island	35,734	0.03	338	0.01	416	0.02	2,177	0.03	1,796	0.00	31,006	0.07
Orion	60,535	0.04	573	0.02	705	0.03	3,730	0.05	7,288	0.01	48,240	0.11
Pebbly	53,534	0.04	507	0.01	624	0.03	3,179	0.04	3,231	0.00	45,994	0.11
Pretty	48,781	0.03	462	0.01	568	0.02	2,972	0.04	2,452	0.00	42,328	0.10
Racecourse	54,799	0.04	519	0.01	639	0.03	3,374	0.05	2,522	0.00	47,747	0.11
Racecourse	50,147	0.04	474	0.01	584	0.02	3,182	0.04	644	0.00	45,262	0.11
Racecourse South	67,438	0.05	638	0.02	786	0.03	4,273	0.06	884	0.00	60,857	0.14
Red Head/One Tree	87,559	0.06	828	0.02	1,020	0.04	5,661	0.08	3,483	0.00	76,567	0.18
Rennies	47,053	0.03	445	0.01	548	0.02	2,989	0.04	596	0.00	42,475	0.10
Shark Net/Tapalla Point	62,637	0.04	593	0.02	730	0.03	3,696	0.05	7,555	0.01	50,064	0.12
Shelly	48,850	0.03	462	0.01	569	0.02	3,007	0.04	2,248	0.00	42,563	0.10
Shoalhaven Heads	43,095	0.03	408	0.01	502	0.02	1,594	0.02	8,779	0.01	31,812	0.07
Silica Cove	59,865	0.04	566	0.02	698	0.03	3,056	0.04	3,475	0.00	52,070	0.12
Singing Stones	33,307	0.02	315	0.01	388	0.02	2,029	0.03	1,674	0.00	28,900	0.07
Snake Bay North	37,354	0.03	353	0.01	435	0.02	2,227	0.03	2,193	0.00	32,144	0.07
Snake Bay South	35,165	0.02	333	0.01	410	0.02	2,097	0.03	2,065	0.00	30,261	0.07
Stokes Island	50,179	0.04	475	0.01	585	0.02	3,136	0.04	1,992	0.00	43,992	0.10
Sunburnt	53,122	0.04	503	0.01	619	0.03	3,320	0.05	2,108	0.00	46,572	0.11
Sussex Inlet	61,434	0.04	581	0.02	716	0.03	3,981	0.06	3,489	0.00	52,668	0.12
Tabourie	49,691	0.03	470	0.01	579	0.02	3,105	0.04	1,972	0.00	43,564	0.10
Target	66,935	0.05	633	0.02	780	0.03	3,417	0.05	3,885	0.00	58,219	0.14
Target North 1	36,411	0.03	345	0.01	424	0.02	1,859	0.03	2,114	0.00	31,670	0.07

			Visits from outside NSW				Visits from within NSW					
LGA/beach	Total	%	Inter-national	%	Inter-state	%	Within LGA	%	Intra LGA < 2 hours	%	Intra LGA > 2 hours	%
Target North 2	36,302	0.03	343	0.01	423	0.02	1,853	0.03	2,107	0.00	31,575	0.07
Termeil Lake	57,941	0.04	548	0.01	675	0.03	3,597	0.05	2,470	0.00	50,651	0.12
Tilbury Cove	78,054	0.05	739	0.02	909	0.04	3,832	0.05	9,556	0.01	63,018	0.15
Tranquillity Bay	35,924	0.03	340	0.01	419	0.02	2,115	0.03	2,285	0.00	30,765	0.07
Ulladulla/Bombie	106,707	0.07	1,010	0.03	1,243	0.05	6,779	0.09	1,348	0.00	96,327	0.22
Ulladulla Harbour	56,898	0.04	538	0.01	663	0.03	3,619	0.05	1,277	0.00	50,801	0.12
Ulladulla Harbour North	52,935	0.04	501	0.01	617	0.03	3,369	0.05	1,184	0.00	47,265	0.11
Ulladulla Harbour Sea Pool	54,320	0.04	514	0.01	633	0.03	3,454	0.05	676	0.00	49,042	0.11
Wairo	43,269	0.03	409	0.01	504	0.02	2,717	0.04	1,633	0.00	38,005	0.09
Warden Head North	55,394	0.04	524	0.01	645	0.03	3,521	0.05	693	0.00	50,010	0.12
Warden Head South	40,368	0.03	382	0.01	470	0.02	2,566	0.04	507	0.00	36,443	0.08
Warrain North	37,510	0.03	355	0.01	437	0.02	1,841	0.03	4,592	0.01	30,284	0.07
Warrain South	43,927	0.03	416	0.01	512	0.02	2,242	0.03	5,362	0.01	35,395	0.08
Washerwoman	85,168	0.06	806	0.02	992	0.04	5,506	0.08	3,388	0.00	74,476	0.17
Wilson	90,937	0.06	860	0.02	1,060	0.04	4,642	0.06	5,279	0.01	79,096	0.18
Sutherland Shire LGA												
Blackwoods	159,233	0.11	1,507	0.04	1,855	0.08	8,653	0.12	141,004	0.16	6,214	0.01
Boat Harbour	133,863	0.09	1,267	0.03	1,560	0.06	7,189	0.10	116,067	0.13	7,781	0.02
Bonnie Vale	136,984	0.10	1,296	0.04	1,596	0.07	8,741	0.12	115,877	0.13	9,473	0.02
Darook Park	157,050	0.11	1,486	0.04	1,830	0.07	8,535	0.12	139,071	0.16	6,129	0.01
Deeban Spit	160,690	0.11	1,520	0.04	1,872	0.08	10,254	0.14	135,931	0.16	11,113	0.03
Elouera	1,160,284	0.81	10,978	0.30	13,519	0.55	62,990	0.87	1,027,601	1.19	45,195	0.11
Garie	152,534	0.11	1,443	0.04	1,777	0.07	9,488	0.13	129,014	0.15	10,811	0.03
Green Hills	127,742	0.09	1,209	0.03	1,488	0.06	6,860	0.10	110,760	0.13	7,425	0.02
Gunnamatta Park	156,421	0.11	1,480	0.04	1,823	0.07	8,501	0.12	138,514	0.16	6,104	0.01
Gunyah	131,053	0.09	1,240	0.03	1,527	0.06	8,363	0.12	110,860	0.13	9,063	0.02
Horderns	146,076	0.10	1,382	0.04	1,702	0.07	9,321	0.13	123,569	0.14	10,102	0.02
Jibbon	148,651	0.10	1,407	0.04	1,732	0.07	9,486	0.13	125,747	0.15	10,280	0.02
Kurnell/Silver	139,667	0.10	1,321	0.04	1,627	0.07	7,501	0.10	121,099	0.14	8,118	0.02

			Visits from outside NSW				Visits from within NSW					
LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Little Marley	101,353	0.07	959	0.03	1,181	0.05	6,467	0.09	85,737	0.10	7,009	0.02
Lugano Ave	155,614	0.11	1,472	0.04	1,813	0.07	8,457	0.12	137,799	0.16	6,073	0.01
Marley	119,777	0.08	1,133	0.03	1,396	0.06	7,643	0.11	101,322	0.12	8,283	0.02
North Cronulla	2,458,006	1.72	23,257	0.63	28,640	1.17	133,578	1.85	2,176,610	2.51	95,921	0.22
Oak Park	157,764	0.11	1,493	0.04	1,838	0.08	8,574	0.12	136,675	0.16	9,185	0.02
Pelican Point	168,819	0.12	1,597	0.04	1,967	0.08	8,448	0.12	150,316	0.17	6,490	0.02
Shelly	168,433	0.12	1,594	0.04	1,963	0.08	9,153	0.13	149,150	0.17	6,573	0.02
South Cronulla	2,499,148	1.75	23,646	0.64	29,119	1.19	135,814	1.88	2,213,042	2.55	97,526	0.23
Taren Point	171,803	0.12	1,626	0.04	2,002	0.08	8,687	0.12	152,890	0.18	6,599	0.02
Taren Point South	157,485	0.11	1,490	0.04	1,835	0.07	8,290	0.11	139,818	0.16	6,052	0.01
Towra East	169,775	0.12	1,606	0.04	1,978	0.08	8,330	0.12	151,312	0.17	6,548	0.02
Towra West	173,101	0.12	1,638	0.04	2,017	0.08	8,493	0.12	154,277	0.18	6,677	0.02
Towra Point	178,680	0.13	1,691	0.05	2,082	0.08	8,767	0.12	159,249	0.18	6,892	0.02
Wanda	1,785,775	1.25	16,897	0.46	20,807	0.85	95,902	1.33	1,582,619	1.83	69,549	0.16
Wattamolla	137,823	0.10	1,304	0.04	1,606	0.07	8,791	0.12	116,583	0.13	9,539	0.02
Tweed LGA												
Cabarita	122,439	0.09	1,158	0.03	1,427	0.06	17,229	0.24	17,375	0.02	85,249	0.20
Casuarina	64,863	0.05	614	0.02	756	0.03	9,600	0.13	9,121	0.01	44,773	0.10
Cotton	46,526	0.03	440	0.01	542	0.02	6,786	0.09	6,560	0.01	32,198	0.08
Cudgera	51,107	0.04	484	0.01	595	0.02	6,613	0.09	7,350	0.01	36,065	0.08
Dreamtime	43,689	0.03	413	0.01	509	0.02	6,961	0.10	6,055	0.01	29,750	0.07
Duranbah/Flagstaff	178,800	0.13	1,692	0.05	2,083	0.09	28,490	0.39	24,780	0.03	121,754	0.28
Fingal	109,282	0.08	1,034	0.03	1,273	0.05	17,413	0.24	15,146	0.02	74,416	0.17
Hastings Point	98,316	0.07	930	0.03	1,146	0.05	12,811	0.18	14,125	0.02	69,304	0.16
Kingscliff/Cudgen	86,933	0.06	823	0.02	1,013	0.04	14,023	0.19	12,018	0.01	59,056	0.14
Letitia	43,841	0.03	415	0.01	511	0.02	6,986	0.10	6,076	0.01	29,854	0.07
Letitia Spit	44,107	0.03	417	0.01	514	0.02	7,028	0.10	6,113	0.01	30,035	0.07
Little d'bah	39,076	0.03	370	0.01	455	0.02	6,226	0.09	5,416	0.01	26,609	0.06
Maggies	46,688	0.03	442	0.01	544	0.02	6,239	0.09	6,681	0.01	32,782	0.08

			Visits from outside NSW				Visits from within NSW					
LGA/beach	**Total**	**%**	**Inter-national**	**%**	**Inter-state**	**%**	**Within LGA**	**%**	**Intra LGA < 2 hours**	**%**	**Intra LGA > 2 hours**	**%**
Mooball	65,167	0.05	617	0.02	759	0.03	8,433	0.12	9,373	0.01	45,986	0.11
Norries Head	65,016	0.05	615	0.02	758	0.03	8,941	0.12	9,261	0.01	45,441	0.11
North Kingscliff	68,668	0.05	650	0.02	800	0.03	10,942	0.15	9,517	0.01	46,760	0.11
Pottsville North	70,403	0.05	666	0.02	820	0.03	9,110	0.13	10,126	0.01	49,681	0.12
Salt	94,494	0.07	894	0.02	1,101	0.04	15,243	0.21	13,063	0.02	64,193	0.15
South Kingscliff	136,164	0.10	1,288	0.04	1,587	0.06	21,965	0.30	18,824	0.02	92,500	0.22
Wooyung	41,098	0.03	389	0.01	479	0.02	5,095	0.07	6,199	0.01	28,937	0.07
Waverley LGA												
Bondi	4,563,803	3.19	1,440,000	39.14	524,809	21.42	77,829	1.08	2,412,794	2.78	108,370	0.25
Bronte	1,081,893	0.76	10,237	0.28	12,606	0.51	31,206	0.43	985,657	1.14	42,187	0.10
North Bondi	4,737,090	3.32	44,821	1.22	55,195	2.25	138,512	1.92	4,305,188	4.97	193,374	0.45
Tamarama	1,155,408	0.81	10,932	0.30	13,462	0.55	33,557	0.47	1,052,411	1.21	45,045	0.11
Wollongong LGA												
Austinmer	330,080	0.23	3,123	0.08	3,846	0.16	19,798	0.27	279,515	0.32	23,799	0.06
Bellambi	213,339	0.15	2,019	0.05	2,486	0.10	14,275	0.20	179,049	0.21	15,511	0.04
Bellambi Point	220,186	0.15	2,083	0.06	2,566	0.10	14,733	0.20	184,795	0.21	16,009	0.04
Belmore/Wollongong Harbour/Brighton	101,311	0.07	959	0.03	1,180	0.05	7,460	0.10	83,673	0.10	8,038	0.02
Brickyard/Long Point	166,827	0.12	1,578	0.04	1,944	0.08	10,006	0.14	141,271	0.16	12,028	0.03
Bulgo	66,038	0.05	625	0.02	769	0.03	3,311	0.05	56,822	0.07	4,511	0.01
Bulli	275,227	0.19	2,604	0.07	3,207	0.13	17,357	0.24	232,259	0.27	19,799	0.05
Burning Palms	165,582	0.12	1,567	0.04	1,929	0.08	7,145	0.10	143,813	0.17	11,128	0.03
Coalcliff	73,327	0.05	694	0.02	854	0.03	3,661	0.05	63,044	0.07	5,074	0.01
Coalcliff North	164,873	0.12	1,560	0.04	1,921	0.08	8,235	0.11	141,762	0.16	11,394	0.03
Coledale	64,872	0.05	614	0.02	756	0.03	3,638	0.05	55,278	0.06	4,587	0.01
Corrimal	188,599	0.13	1,784	0.05	2,198	0.09	12,906	0.18	157,957	0.18	13,755	0.03
East Corrimal	93,393	0.07	884	0.02	1,088	0.04	6,348	0.09	78,263	0.09	6,810	0.02
Era	190,385	0.13	1,801	0.05	2,218	0.09	8,145	0.11	164,727	0.19	13,494	0.03
Fairy Meadow	194,621	0.14	1,841	0.05	2,268	0.09	13,988	0.19	161,261	0.19	15,263	0.04

			Visits from outside NSW				Visits from within NSW					
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Fishermans	108,874	0.08	1,030	0.03	1,269	0.05	7,926	0.11	86,066	0.10	12,583	0.03
Little Austinmer	85,609	0.06	810	0.02	997	0.04	5,135	0.07	72,494	0.08	6,172	0.01
Little Garie	72,594	0.05	687	0.02	846	0.03	3,106	0.04	62,811	0.07	5,145	0.01
McCauleys	86,569	0.06	819	0.02	1,009	0.04	5,192	0.07	73,307	0.08	6,242	0.01
MM	72,469	0.05	686	0.02	844	0.03	5,305	0.07	57,415	0.07	8,219	0.02
North Era	91,752	0.06	868	0.02	1,069	0.04	3,925	0.05	79,387	0.09	6,503	0.02
North Wollongong	504,952	0.35	4,778	0.13	5,884	0.24	37,246	0.52	417,046	0.48	39,999	0.09
Perkins/Windang	46,370	0.03	439	0.01	540	0.02	3,350	0.05	36,645	0.04	5,395	0.01
Port Kembla	215,297	0.15	2,037	0.06	2,509	0.10	15,668	0.22	170,193	0.20	24,890	0.06
Port Kembla Harbour	92,921	0.07	879	0.02	1,083	0.04	6,804	0.09	73,619	0.08	10,536	0.02
Puckeys	70,625	0.05	668	0.02	823	0.03	5,075	0.07	58,521	0.07	5,539	0.01
Sandon Point	188,699	0.13	1,785	0.05	2,199	0.09	11,712	0.16	159,397	0.18	13,606	0.03
Scarborough	94,569	0.07	895	0.02	1,102	0.04	5,149	0.07	80,761	0.09	6,662	0.02
Scarborough North	172,099	0.12	1,628	0.04	2,005	0.08	9,199	0.13	147,159	0.17	12,107	0.03
Sharky	86,626	0.06	820	0.02	1,009	0.04	4,950	0.07	73,693	0.09	6,155	0.01
Stanwell Park	253,697	0.18	2,400	0.07	2,956	0.12	12,719	0.18	218,291	0.25	17,331	0.04
Thirroul	263,401	0.18	2,492	0.07	3,069	0.13	15,799	0.22	223,050	0.26	18,991	0.04
Thommos Rock	66,807	0.05	632	0.02	778	0.03	3,349	0.05	57,483	0.07	4,564	0.01
Towradgi	88,884	0.06	841	0.02	1,036	0.04	6,284	0.09	72,884	0.08	7,839	0.02
Werrong	74,518	0.05	705	0.02	868	0.04	3,736	0.05	64,118	0.07	5,091	0.01
Windang South	45,535	0.03	431	0.01	531	0.02	3,281	0.05	34,161	0.04	7,131	0.02
Wollongong City	236,183	0.17	2,235	0.06	2,752	0.11	17,390	0.24	195,066	0.23	18,740	0.04
Wollongong South	71,368	0.05	675	0.02	832	0.03	5,248	0.07	58,950	0.07	5,664	0.01
Wombarra	72,748	0.05	688	0.02	848	0.03	3,996	0.06	62,086	0.07	5,131	0.01
Woonona	134,751	0.09	1,275	0.03	1,570	0.06	8,690	0.12	113,484	0.13	9,732	0.02
Woollahra LGA												
Bellamy	479,867	0.34	4,540	0.12	5,591	0.23	13,696	0.19	437,180	0.50	18,859	0.04
Camp Cove	402,382	0.28	3,807	0.10	4,688	0.19	11,553	0.16	365,853	0.42	16,479	0.04
Carthona Ave	490,795	0.34	4,644	0.13	5,719	0.23	13,402	0.19	447,700	0.52	19,331	0.05

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Double Bay	497,757	0.35	4,710	0.13	5,800	0.24	13,920	0.19	453,752	0.52	19,575	0.05
Gibsons	417,950	0.29	3,955	0.11	4,870	0.20	12,000	0.17	380,008	0.44	17,117	0.04
Hermit	461,560	0.32	4,367	0.12	5,378	0.22	13,312	0.18	419,580	0.48	18,923	0.04
Kutti	420,640	0.29	3,980	0.11	4,901	0.20	12,078	0.17	382,454	0.44	17,227	0.04
Lady Bay	404,925	0.28	3,831	0.10	4,718	0.19	11,626	0.16	368,166	0.42	16,584	0.04
Lady Martins	460,362	0.32	4,356	0.12	5,364	0.22	13,139	0.18	418,587	0.48	18,916	0.04
Little Bay	459,249	0.32	4,345	0.12	5,351	0.22	13,245	0.18	417,478	0.48	18,828	0.04
Milk	429,123	0.30	4,060	0.11	5,000	0.20	12,377	0.17	390,093	0.45	17,593	0.04
Parsley Bay	536,285	0.38	5,074	0.14	6,249	0.25	15,475	0.21	487,491	0.56	21,997	0.05
Queens	434,569	0.30	4,112	0.11	5,063	0.21	12,534	0.17	395,043	0.46	17,817	0.04
Rose Bay	445,923	0.31	4,219	0.11	5,196	0.21	12,846	0.18	405,387	0.47	18,275	0.04
Seven Shillings	482,507	0.34	4,565	0.12	5,622	0.23	13,699	0.19	439,656	0.51	18,964	0.04
Shark	439,073	0.31	4,154	0.11	5,116	0.21	12,664	0.18	399,137	0.46	18,001	0.04
Vaucluse Park	535,224	0.37	5,064	0.14	6,236	0.25	15,444	0.21	486,523	0.56	21,957	0.05
Watsons Bay	1,737,343	1.22	16,438	0.45	20,243	0.83	49,884	0.69	1,579,626	1.82	71,152	0.17
Watsons Bay South	405,595	0.28	3,838	0.10	4,726	0.19	11,646	0.16	368,775	0.43	16,611	0.04
Total	**142,869,061**	**100**	**3,679,413**	**100**	**2,450,579**	**100**	**7,212,999**	**100**	**86,641,330**	**100**	**42,884,739**	**100**

References

ABS (2020) *Survey of motor vehicle use, Australia*, Australian Bureau of Statistics website.

ABS (2024) *Average weekly earnings, Australia*, November 2023, Australian Bureau of Statistics website.

Anderson (2011) 'The gravity model', *Annual Review of Economics* 3:133–160.

Andersson et al (2015) 'Managing congestion on Gold Coast beaches: An economic evaluation', Griffith Business School Discussion Paper No. 2015–04. Griffith University, Brisbane.

Ardeshiri A et al. (2017) *New South Wales Beach Erosion Control Valuation Study*, unpublished report.

Ardeshiri A, Swait J, Heagney EC and Kovac M (2019) 'Willingness-to-pay for coastline protection in New South Wales: Beach preservation management and decision making', *Ocean & Coastal Management* 178:104805.

Austroads (2012) *Guide to Project Evaluation Part 4: Project Evaluation Data*, Austroads Report AGPE04-12, Austroads, Sydney, NSW.

Blackwell B (2007) 'The value of a recreational beach visit: an application to Mooloolaba beach and comparisons with other outdoor recreation sites', *Economic Analysis and Policy* 37:77–98.

CEDEX (2000) 'Desarrollo de metodologia para la evaluacion de la calidad de las aguas y arenas en zonas de bano' Madrid.

DCCEEW (2024) NSW Beach Values Estimation Tool, NSW Department of Climate Change, Energy, the Environment and Water, NSW Government.

DP (2022), *Population projections*, Department of Planning, NSW Government, accessed August 2024.

DNSW (2017a) *Bondi Visitor Profile Year Ended December 2016*, Destination NSW, NSW Government, https://www.destinationnsw.com.au/insights/sydney-statistics, accessed 2017.

DNSW (2017b) *Manly Visitor Profile Year Ended December 2016*, Destination NSW, NSW Government, accessed 2017.

DNSW (2023) 'LGA visitors who said they went to the beach by origin (international, interstate or intrastate) and type (overnight stay or day trip)', Destination NSW, NSW Government, unpublished data.

DPIE (2020) *Guidelines for using cost-benefit analysis to assess coastal management options*, NSW Department of Planning, Industry and Environment.

Hynes and Greene (2013) 'A Panel Travel Cost Model Accounting for Endogenous Stratification and Truncation: A Latent Class Approach'. *Land Economics*, 89 (1):177–192.

IBISWorld (2023) *Tourism in Australia – Market Research Report (2014–2029)*, IBISWorld.

Jimenez JA, Sanchez-Arcilla A (2001) 'Estudio sobre el estado de la Platja de sa Reira', Technical Report, Laboratori d'Enginyeria Maritima, UPC, Barcelona.

Joyce J (2021) 'Bayes' Theorem' [webpage] in *Stanford Encyclopedia of Philosophy*, Fall 2021 edition, Zalta EN (ed), plato.stanford.edu/archives/fall2021/entries/bayes-theorem/.

Kinsela MA, Morris BD, Linklater M and Hanslow DJ (2017) 'Second-Pass Assessment of Potential Exposure to Shoreline changes in New South Wales, Australia, Using a Sediment Compartments Framework', *Journal of Marine Science and Engineering* 4.

NRMA (2024) *NRMA Weekly fuel report, Monday 20 August 2024*, NRMA website.

Pascoe (2019) 'Recreational beach use values with multiple activities', *Ecological Economics* 160:137–144.

Parsons GR, Chen Z and Hidrue MK (2013) 'Valuing Beach Width for Recreational Use: Combining Revealed and Stated Preference Data', *Marine Resource Economics* 28:221–241.

Pitt MW (1992) 'The value of coastal land: An application of travel cost methodology, NSW North Coast', paper presented to the 36th Annual Conference of the Australian Agricultural Economics Society, 10–12 February, Canberra.

Short AD (2007) *Beaches of the New South Wales Coast, A guide to their nature, characteristics, surf and safety*, Sydney University Press.

SLSNSW (2022) *Coastal safety report 2022*, Surf Life Saving New South Wales, www.surflifesaving.com.au/wp-content/uploads/sites/2/2022/09/2022-Surf-Life-Saving-NSW-Coastal-Safety-Report.pdf (PDF 33MB).

Tourism Research Australia (2019) *National Visitor Survey*, Tourism Research Australia, Australian Trade and Investment Commission, Australian Government, unpublished data.

Tourism Research Australia (2023a) *International Visitor Survey*, Tourism Research Australia, Australian Trade and Investment Commission, Australian Government, unpublished data.

Tourism Research Australia (2023b) *National Visitor Survey*, Tourism Research Australia, Australian Trade and Investment Commission, Australian Government, unpublished data.

Tourism Research Australia (2024) *Local Government Area profiles*, Tourism Research Australia, Australian Trade and Investment Commission, Australian Government, accessed May 2024.

TfNSW (2024a) *Adult fares*, Transport for NSW public transport website, accessed August 2024.

TfNSW (2024b) *Average distance by mode on an average weekday in 2022/23 for Sydney Region*, accessed August 2024.

TfNSW (2023) *Household Travel Survey (HTS) – Data by SA3 (2009/10-2019/20)*, Transport for NSW data and research website, accessed October 2023.

Train KE (2009) *Discrete choice methods with simulation*, 2nd edition, Cambridge University Press.

Valdermoro HI and Jimenez, JA (2006) 'The influence of Shoreline Dynamics on the Use and Exploitation of Mediterranean Tourist Beaches', *Coastal Management* 34.

Villares M (1999) 'Percepcio dels impactes estetics i mediambientals de la regeneracio de platges' (Perception of aestethics and environmental impacts of beach nourishment), PHd thesis, University of Barcelona, Barcelona, 465 pp.

Zambrano-Monserrate et al (2018) 'The economic value of natural protected areas in Ecuador: A case of Villamil Beach National Recreation Area'. *Ocean Coastal Management*, 157, 193-202.

Zhang F, Wang XH, Nunes PA and Ma C (2015) 'The recreational value of Gold Coast beaches, Australia: an application of the travel cost method'. *Ecosystem Services*, 11:106–114.

Resources

Beach attributes used in visitation preference model spreadsheet