



Howe Region

Rate Your Road

March 2021

Director's address

In January 2019, the NRMA launched a report revealing a \$2.2 billion council funding backlog to maintain local roads across NSW. Alongside the report, 'Rate Your Road' was born – a state-wide survey that called on NRMA Members and the community to rate the condition and safety of their local roads.

Within weeks, Rate Your Road attracted more than 23,000 responses, making it the largest transport survey in the state's history. Promising news shortly followed, with the NRMA's policies to address the local roads funding backlog adopted by both sides of politics prior to the 2019 NSW State Election. The NRMA's policies were designed to elevate the condition of local roads across the state to at least a satisfactory level to improve safety and assist in stimulating local economies.

In March 2019, the NSW Government committed \$1 billion to help clear the council funding backlog, replace NSW's worst timber bridges, and transfer up to 15,000 kilometres of council-owned regional roads to the state to lessen the financial burden on councils. In May 2020, the Federal Government announced a \$1.8 billion commitment to provide a much needed boost to road infrastructure focusing on regional roads as part of their COVID recovery package, proving our advocacy has a real impact on Government decision making.

This report presents the results of the Rate Your Road survey for the Howe Region, which incorporates 13 Local Government Areas across Sydney's northern suburbs, the Central Coast and the Hunter. Aside from gaining some intriguing insights, the full and public release of the NRMA's survey results will assist in guiding government investment.

If you were one of the tens of thousands who participated in Rate Your Road, thank you for contributing to this outcome.

Dr Kirsten Molloy
Director – Howe Region

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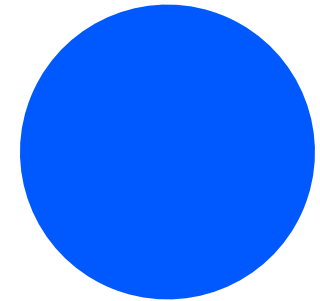
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Introduction

The NRMA is a national leader in advocating for safer roads and better transport outcomes for NSW and the ACT. Prior to the 2019 NSW State Election, the NRMA undertook a comprehensive survey with the public, asking them to rate roads in their local area against a number of characteristics including safety, congestion, condition and public transport.

The rate your road survey was developed by the NRMA as a platform for the public to identify key roads for improvement. The basis of the survey was that 'no one knows the roads you use like you do' and the analysis may be considered to support all levels of government in guiding funding commitments.

We want to thank NRMA Members and the public for taking the time to respond to the survey. The responses we received were extensive and from right across the state, from Parramatta Road in Sydney, to Billybingbone Road in Gongolgon, The Snowy River Way in Dalgety, and Dolgelly Road in Garah.

About the NRMA

Better transport infrastructure has been a core focus of the NRMA since 1920 when our founders lobbied for improvements to the condition of Parramatta Road in Sydney. Independent advocacy was the foundation activity of the organisation and remains critical to who we are 100 years later.

The NRMA has grown to one of the largest tourism and transport companies in Australia, representing over 2.6 million Australians principally from NSW and the ACT. We provide motoring, transport and tourism services to our Members and the community.

Today, we work with policy makers and industry leaders to advocate for transport solutions that help solve key pain points such as congestion, access and affordability and connect people and communities. We're passionate about facilitating travel across Australia, recognising the vital role tourism plays in supporting regional communities.

By working together with all levels of government to deliver integrated transport and tourism options we can provide for the future growth of our communities and continue to keep people moving for generations to come.

Background

Regional and Local roads are the backbone of our transport system, making up approximately 80% of the national road network.

In 2019, the NRMA released its Funding Local Roads report which sought to address and quantify the infrastructure backlog on regional and local roads in NSW. Under the national funding system, local government is largely responsible for funding, upgrading and maintaining thousands of kilometres of roadways. The local government tends to fund road infrastructure through payable rates, and though there are grants from the state and federal government, a significant shortfall remains.

Passenger, and in particular freight traffic, has sharply increased in recent times, and the damage to the road tends to be exponentially correlated with the volume and weight of vehicles. The poor condition of roads increases wear and tear to vehicles, increasing servicing costs to the public, and further, poor roads can lead

to relatively hazardous driving conditions, potentially leading to higher crash rates, leading to property damage, injury and deaths.

In recent years, interstate and intrastate rail freight services have considerably declined due to competitiveness pressures, and with the ongoing drought, water and fodder are increasingly being moved on regional roads to support regional areas.

The NRMA's Funding Local Roads report outlined that in recent years, the funding backlog increased by almost 30% from \$1.73 billion in 2014-15, to \$2.2 billion in 2016-17, with regional Councils responsible for approximately 75% of the backlog.

Whilst this is part of a broader discussion, subsequent reviews into road use have highlighted that the current road funding environment is unsustainable. Most recently, Infrastructure Australia has stated that 'road use, funding and expenditure is not adequately linked', highlighting that the current status is 'inequitable', 'inefficient', 'unsustainable' and 'not transparent'.

The NRMA is committed to advocating on behalf of Members for a fairer funding and financing system for all road and transport users which is sustainable over the long term.

Bureau of Infrastructure, Transport and Regional Economics (BITRE)

The Bureau of Infrastructure, Transport and Regional Economics (BITRE) provides economic analysis, research and statistics on infrastructure, transport and regional development issues to inform government policy development.

In the 2018 yearbook produced by BITRE, the following is a summary of the road network, and the demands we place upon it.

In 2017-18, it is estimated that NSW drivers drove a collective 80 billion kilometres, up from approximately 30 billion kilometres in the early 1970s. ACT drivers drove a collective 4.2 billion kilometres in 2017-18, up from 900 million kilometres in the early 1970s.

The freight task of the roads has grown significantly faster. In the early-to-mid 1970s, the freight task was approximately 10 billion tonne kilometres in NSW and

0.2 billion tonne kilometres in the ACT. By 2015-16, BITRE estimated NSW had a road freight task of 62.8 billion tonne kilometres, and the ACT, 0.6 billion tonne kilometres in the ACT.

In 2015, it was estimated that NSW had a collective 207,187km of public road, of which 201,397km was paved. Similarly, in 2015, the ACT had 3,448km of roads, of which 3,348km are paved.

BITRE estimates that road funding in NSW increased from an average of approximately \$6 billion annually during the 2010s, to an average of approximately \$8 billion in recent years. The ACT had road funding of approximately \$200 to \$250 million annually across the last 15 years.

The headline and per capita fatality rate on the roads has steeply declined since the 1970s. In 1971, NSW recorded 1,249 road fatalities, decreasing to 392 in 2017. On a per capita basis, the fatality rate dropped from 26.4 fatalities/100,000 population to five fatalities/100,000 population. Similarly, in the ACT, in 1971, the fatality rate was approximately 15 fatalities/100,000 population, decreasing to 2.5 fatalities/100,000 population during the 2010s.

NRMA regions

NRMA has divided NSW and the ACT into six regions, with each region represented by an NRMA Director.

Region	Area	Area (km ²)	Population
Cox	Western Sydney and the Blue Mountains	2,718	1,801,605
Harbour	Sydney's metropolitan north, the Eastern Suburbs and the Inner West	599	1,522,003
Hoddle	Sydney's metropolitan south, the Illawarra and the South Coast	18,894	1,221,800
Howe	Sydney's northern suburbs, the Central Coast and the Hunter	30,104	1,385,792
Mann	ACT and southern regional and rural NSW	244,497	1,056,053
Townsend	Northern regional and rural NSW, including Northern Tablelands, North Coast and Far North West NSW	498,144	858,429

Howe



Howe overview

Central Coast

Cessnock

Dungog

Hawkesbury

Hornsby

Lake Macquarie

Maitland

Mid-Coast

Muswellbrook

Newcastle

Port Stephens

Singleton

The Hills Shire

Cumulatively, these regions cover an area of 30,104 square kilometres and are home to 1,385,792 residents as of the 2016 census. For the purposes of this report, a 'pin' is a point that a survey respondent identified for the purposes of completing the survey. Nearly 6,000 pins were dropped in the Howe region

Centre for Road Safety

Based on the Centre for Road Safety, the following table identifies the number and types of crashes for the LGAs between the beginning of 2014 and the end of 2018 within the Howe region:

LGA	2014-2018 Crash History			
	Fatal Crashes	Injury Crashes	Non-injury Crashes	Total Crashes
Central Coast	73	3,481	2,628	9,663
Cessnock	18	689	362	1,758
Dungog	4	115	51	285
Hawkesbury	26	936	694	2,592
Hornsby	23	1,334	861	3,552
Lake Macquarie	47	1,669	1,066	4,451
Maitland	9	551	280	1,391
Mid-Coast	43	996	586	2,621
Muswellbrook	11	167	99	444
Newcastle	24	1,955	1,213	5,147
Port Stephens	24	648	312	1,632
Singleton	27	327	172	853
The Hills Shire	17	1,307	964	3,595
Total Howe	346	14,175	9,288	37,984

The above table is a staggering reminder of the societal cost of road trauma. In the Howe region, 346 people crashes resulted in someone losing their life, and there were more than 14,100 crashes resulting in injury. The economic cost of these accidents is also significant, in 2019, TfNSW estimated that the economic cost of a

fatal crash in NSW was \$8.586 million, a serious injury resulting in hospitalisation cost approximately \$500,000, a moderate/minor injury crash cost approximately \$90,000 and a property damage only crash cost \$10,000. Based on this, in the harbour region, the cost of road trauma aggregated to more than \$6.5 billion.

Rate Your Road data collection

Data collection ran for approximately one month between January 2019 and February 2019 with members and the broader public encouraged to participate through NRMA media and communication channels. The survey was run through a dedicated website www.rateyourroad.com.au, with more than 23,000 surveys fully completed.

The survey asked respondents for their residential postcode, the road they wanted to rate, the condition, congestion, safety and public transport on the basis of

very poor, poor, average, good or excellent. The survey also allowed people the opportunity to input a free text comment. Finally, the survey asked respondents to identify their age bracket.

Survey Participation

In terms of summarising participation in the survey on an area and per capita basis, the following table shows a summary.

LGA	Area km ²	Population (2016 census)	Density (ppl/km ²)	Road length (sealed & unsealed)	Pins	Pins/100 km ²	Pins / 1,000 population	Pins/popn/area X 1,000,000	Pins/100 km of road
Central Coast	1,681	327,736	194.9	3,371.6	1,353	80.49	4.13	2.46	40.1
Cessnock	1,966	55,560	28.2	1,392.6	267	13.58	4.81	2.44	19.2
Dungog	2,251	8,975	3.9	751.2	187	8.31	20.84	9.26	24.9
Hawkesbury	2,793	64,592	23.1	1,294.0	255	9.13	3.95	1.41	19.7
Hornsby	455	142,667	313.5	893.8	240	52.75	1.68	3.70	26.9
Lake Macquarie	648	197,371	304.5	1,898.5	513	79.17	2.60	4.01	27.0
Maitland	392	77,305	197.2	860.4	217	55.36	2.81	7.16	25.2
Mid-Coast	10,053	90,303	8.9	4,942.9	886	8.81	9.81	0.98	17.9
Muswellbrook	3,405	16,086	4.7	914.7	60	1.76	3.73	1.10	6.6
Newcastle	187	155,411	831.0	1,114.0	414	221.39	2.66	14.25	37.2
Port Stephens	979	69,556	71.0	1,124.1	386	39.43	5.55	5.67	34.3
Singleton	4,893	22,987	4.7	1,518.3	108	2.21	4.70	0.96	7.1
The Hills Shire	401	157,243	392.1	1,140.8	869	216.71	5.53	13.78	76.2

Newcastle, the Hills Shire and Dungog and Maitland had relatively strong levels of responses on a population and area metric. The Central Coast had a high number

of responses based on road network size. In contrast, areas such as Muswellbrook and Singleton had relatively few responses.

LGA assessment

To commence with a strategic assessment, the specific location of the pin was disregarded and considered only by the Local Government Area that pin was

located in. This allows a broad comparison between the various local government areas. The results are as follows:

LGA	Condition Score	Condition Ratings	Congestion Score	Congestion Ratings	Safety Score	Safety Ratings
Central Coast	47.00	1,150	51.82	1,052	43.15	1,072
Cessnock	38.12	217	48.52	230	36.89	230
Dungog	27.90	133	37.64	164	27.82	155
Hawkesbury	44.04	196	50.02	206	41.86	204
Hornsby	63.18	218	54.93	189	53.93	207
Lake Macquarie	53.90	406	50.27	416	45.84	426
Maitland	48.97	168	50.32	164	44.66	168
Mid-Coast	36.82	742	48.49	751	37.02	766
Muswellbrook	39.33	59	43.90	52	41.30	52
Newcastle	53.82	361	47.67	338	51.11	360
Port Stephens	47.30	349	50.37	323	45.33	335
Singleton	47.76	82	54.83	96	41.74	87
The Hills Shire	57.57	770	47.96	748	51.23	759
Howe Region Average	48.01	4,851	49.67	4,729	43.97	4,821
Survey Average	48.92	22,580	49.54	21,521	44.92	21,955

The LGAs in the Howe region with the roads in the best perceived condition include Hornsby, Newcastle and Port Macquarie. Dungog, Mid-Coast and Muswellbrook are the LGAs with the roads in the poorest perceived condition.

There appears to be an overall sound correlation between condition and safety which is described later in the report.

Road specific

Road	Condition Score	Congestion Score	Safety Score
Carters Road	46.4	24.8	26.7
Clarence Town Road	36.5	54.2	34.6
Del Monte Place	26.3	30.3	22.5
Dowling Street	22.7	46.1	32.0
Main Road	65.7	42.2	53.9
Memorial Avenue	39.4	40.0	39.6
Myall Way	41.8	55.0	41.4
Nelson Bay Road	51.1	45.1	44.1
New England Highway	55.1	42.4	43.8
Newcastle Inner City Bypass	52.6	45.6	56.2
Newcastle Road	65.9	35.4	56.7
Ocean Beach Road	55.0	50.0	54.5
Old Bar Road	31.1	47.0	29.7
Old Northern Road	47.0	34.6	45.3
Old Windsor Road	76.9	38.1	67.3
Pacific Highway	57.9	43.6	54.6
Pennant Hills Road	54.9	32.1	50.3
Pennant Hills Trail	56.5	28.9	52.0
Raymond Terrace Road	47.0	43.8	35.4
Showground Road	53.4	41.1	48.8
Terrigal Drive	47.5	29.5	43.3
The Bucketts Way	33.8	51.1	31.5
The Entrance Road	55.0	45.7	44.3
The Lakes Way	37.8	44.3	38.0
Windsor Road	62.2	31.7	58.5
Wollombi Road	27.6	54.0	37.2
Woy Woy Road	51.8	43.2	37.8
Average of all Howe Responses	48.0	49.7	44.0

Whilst a high level assessment is beneficial in that it allows a macro-comparison, the survey allowed individuals to highlight and rate a specific section of road. 7 roads received at least 100 votes, accounting for 21% of votes. Roads which received at least 30 votes are outlined below (accounting for 38% of votes in the region).

Del Monte Place, Dowling Street Old Bar Road, the Bucketts Way and Wollombi Road are a small selection of roads within the Howe region which are perceived to be in comparatively poor condition. Roads such as Old Windsor Road, Newcastle Road and Main Road are roads which are perceived as being in comparatively good condition.

Other assessments

Determining whether there are patterns in the outputs may support the validity of the data. The condition, congestion, safety and public transport scores were tested for their correlation to determine if there are underlying relationships between the outputs. The r-squared was calculated for the relationships between the categories.

This is reported as a number between 0 and 1. 0 indicates that there is an absence of a relationship between data points, whilst a value of 1 means that there is a perfect relationship between data points.

	Condition	Congestion	Safety	Public Transport
Condition				
Congestion	0.0007			
Safety	0.559	0.028		
Public Transport	0.0017	0.0461	0.0179	

There is a moderate correlation between the perceived condition of a road, and its perceived safety (0.559). In other words, where the condition of the road is perceived as poor, its safety will also be perceived poorly. In contrast, where the

condition of the road is perceived as good, its safety will also be perceived as good. In simplistic terms, the 0.559 output means that 55.9% of variation in the perceived safety of the road can be explained by (attributed to) its condition.

Local streets

It is acknowledged the public did take time to nominate issues that they have with their local streets. As a result of this, the following table highlights a small random selection of local roads and the qualitative comments which were made with them.

Street	Suburb	Comment, verbatim
Park Avenue	Kotara	<ul style="list-style-type: none"> • The area near the school oval and railway station is patched pot holed and just a very poor road surface. The road carries a lot of traffic and should be better. • The volume of traffic and the bottleneck of Westfield & the traffic lights can frequently cause a queue 2km in length.
Grandview Road	Rankin Park	<ul style="list-style-type: none"> • There are no footpaths and school children and mothers use it daily and they have to walk on the road and it is very dangerous • The council has approved significant housing at the intersection at the end with no changes in traffic flow and there are no lights and it is at a main road and it is appalling
George Booth Dr	Seahampton	<ul style="list-style-type: none"> • George Boorh Drive leads to Mt Sugarloaf which is quite popular with cyclists however there is no shoulder from Seahampton to the entry to Mt Sugarloaf which is hazardous for cyclists
Wollombi Road	Cessnock	<ul style="list-style-type: none"> • This road is only one lane each side and is not keeping up with the population in the area. There are new housing developments around the area and the traffic is getting worse due to it being the only main road into Cessnock from Wollombi. In the very near future with the influx of the growing population Wollombi Road will be very congested and as it stands it is a very rough patchy road surface and it is amazing there haven't been many more accidents occurring.
Walker Street	Maitland	<ul style="list-style-type: none"> • Roundabout needs traffic signals or another flyover to ease congestion • Flyover constructed west to east works well need another flyover to fix the congestion east to west
Golden Highway	Singleton	<ul style="list-style-type: none"> • Corner of New England hwy and golden hwy is very very dangerous and needs to be 4 lanes two lanes in each way on New England hwy and golden hwy

Street	Suburb	Comment, verbatim
Lord Street	Dungog	<ul style="list-style-type: none"> The road is made of potholes.
Wybong Road	Muswellbrook	<ul style="list-style-type: none"> Increasingly used by mining traffic including heavy vehicles.
Mary Street	Dungog	<ul style="list-style-type: none"> This section of road leading into Dungog has been patched so many times it is hard to tell if there is any original road left.
Vernon Road	Umina Beach	<ul style="list-style-type: none"> Whenever it rains the road becomes potholed. The Council workers just patched them with asphalt and the next rain the holes becomes larger and create more potholes. This is Veron Road in Umina Beach.

Cost of road trauma

Costs of road trauma were analysed using Centre for Road Safety data and Economic Parameter values established by Transport for NSW.

The Centre for Road Safety statistics are reported by LGA and cover the 5 years from the beginning of 2014 to the end of 2018. It is important to be cognisant that these figures represent only the reported crashes, and that over the years, reporting requirements around minor crashes have evolved.

The Economic Parameter Values handbook, aggregates the total economic costs of different types of road crashes, and includes all costs associated with an accident

including (for example), emergency response, hospital care, rehabilitation costs and crash accident research reporting and loss of economic productivity. The costs are generally summarised as follows:

• Fatal Accident	\$8,586,767
• Serious Injury Accident	\$574,265
• Moderate Injury Accident	\$97,512
• Minor Injury Accident	\$89,313
• Non-Injury Accident (Towaway only)	\$10,338

LGA	Deaths	Serious Injury	Moderate Injury	Minor Injury	Towaway	Cost of Trauma (\$)	Cost of Trauma/person (\$)	Cost of Trauma/km (\$)	Cost of trauma/person/km (\$)
Central Coast	73	1,086	1,663	732	2,628	1,505,193,617	4,593	493,344	1.51
Cessnock	18	250	340	99	362	343,866,479	6,189	246,931	4.44
Dungog	4	55	51	9	51	72,235,810	8,049	96,164	10.71
Hawkesbury	26	317	434	185	694	471,315,632	7,297	364,245	5.64
Hornsby	23	421	519	394	861	533,960,274	3,743	597,430	4.19
Lake Macquarie	47	538	743	388	1,066	830,657,787	4,209	437,543	2.22
Maitland	9	142	301	108	280	200,718,089	2,596	233,279	3.02
Mid-Coast	43	349	501	146	586	637,600,744	7,061	128,993	1.43
Muswellbrook	11	60	88	19	99	140,211,802	8,716	153,292	9.53

LGA	Deaths	Serious Injury	Moderate Injury	Minor Injury	Towaway	Cost of Trauma (\$)	Cost of Trauma/person (\$)	Cost of Trauma/km (\$)	Cost of trauma/person/km (\$)
Newcastle	24	516	897	542	1,213	650,819,052	4,188	584,210	3.76
Port Stephens	24	241	281	126	312	386,360,039	5,555	343,707	4.94
Singleton	27	115	166	46	172	319,956,710	13,919	210,731	9.17
The Hills Shire	17	377	463	467	964	459,296,003	2,921	402,614	2.56

The headline cost of trauma varies in the Howe region from over \$1.5 billion in the Central Coast LGA, to around \$70 million in Dungog. There is significant variance of these due to the population and size of the road network of the respective LGAs. But on average, the cost of road trauma is approximately \$500 million per LGA.

When adjusted per head of population, each LGA is in a much narrower band of approximately \$3,000 to \$8,000 per person, with Singleton an outlier with a cost of nearly \$14,000 per person. It is also important to remember that LGAs such as Mid-Coast have a significant tourism thoroughfare who transit through it, but might not be a resident for the purposes of population.

Some LGAs might have a disproportionately large or small road network, and a road trauma cost/km may be beneficial. Depending on the LGA, each kilometre of road network has approximately \$100,000 to \$500,000 of road trauma.

Adjusting for both population and road network size might be considered a pseudo-equitable outcome. On this specific metric, the Mid-Coast LGA represents the 'safest' LGA in the NRMA Howe region, with a road trauma cost of \$1.43/person/km. In contrast, Dungog is the 'least safe' LGA, with a road trauma cost of \$10.71/person/km. This means that even after accounting for the significantly higher population and road network of the Mid-Coast Council area, the Dungog LGA has approximately seven-and-a-half times more road trauma on a normalised basis.

