Asset Management Plan: Transport	Service Level: High Traffic Sealed Roads Maintenance
Asset Overview	Council currently provides and maintains 875km of sealed road network across the local government area. 261km are classified as high traffic roads. 68km of high traffic (arterial) sealed roads provide the main linkages between town centres and areas of high development. Examples include Ocean Dr, Hastings River Dr, Lake Rd. 193km of high traffic (collector) sealed roads link access streets to major roads and provide restricted access to lots. Examples include Beechwood Rd, William St, Kennedy Dr.
Asset Value	As at 30 June 2016, Council's sealed road assets are valued at **$610.2M** current replacement cost.
Asset Backlog	657 segments of the network require immediate resealing and heavy patching, or full rehabilitation, due to the existing poor condition of the pavement and surface seal, to prevent water damage to the underlying pavement. These works are currently unfunded and represent an $81.4M infrastructure backlog, as reported in Special Schedule 7 as at 30 June 2016.
Community Engagement	Council undertakes regular community engagement on how the community feels about our region, current Council services and community expectations on levels of service. Recent engagement activity includes the February 2015 phone survey (sample over 600 people) conducted by Micromex, the October 2015 to December 2015 Your Voice Our Community face-to-face and online engagement process (sample 274 people), and the July 2016 region-wide telephone survey conducted by University of Technology Sydney (sample 800 people). These interactions have highlighted the community's continuing desire to do more when it comes to our roads. Council have listened to the priority the community place on continuing to build on the progress made over the last 5 years in prioritising funding to maintain and renew Council's road network.

Comments	Risks	Responses
Council's current asset management practice is focused on increasing the lifespan of this very significant infrastructure asset. Council's current target, made possible through the targeted utilisation of existing 4.43% SRV funding, is that sealed roads in the local government area will be resealed or rehabilitated every 12 - 14 years.	In some years this result will fluctuate as some areas comprise roads in poorer condition that require more substantial and costly rehabilitation, as opposed to lower cost resealing. Progress since 2012/13 has been totally dependent on existing 4.43% SRV funding	Existing 4.43% SRV funding is supporting the maintenance of the network at an average condition. Continuation of this funding will enable Council to continue to invest in sealed roads maintenance over time, nothing that additional funding is expected to be required to cater for network upgrades, growth, and acceptance of additional road segments from developers and Roads and Maritime Services.

Condition 1

Condition 2

Excellent / Good

Condition 3

Fair

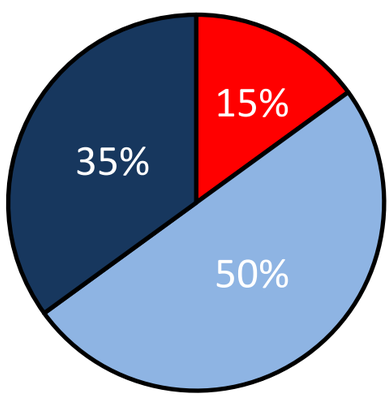
Condition 4

Condition 5

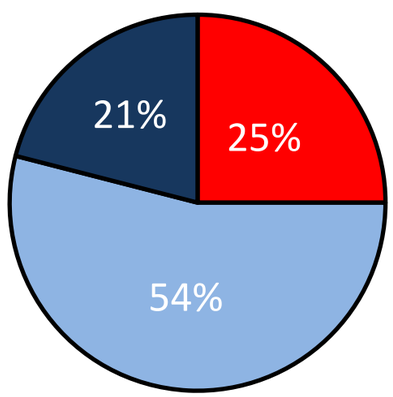
Poor / Bad

Asset Condition - High Traffic Sealed Roads

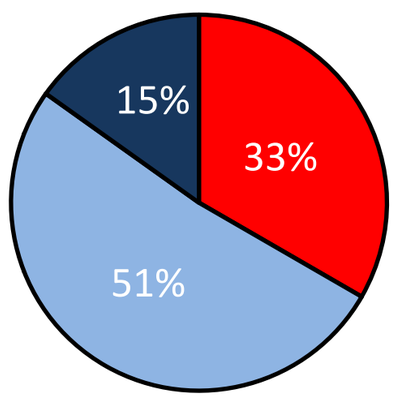
Continue SRV Funding (2024 Network Condition)



2016 Network Condition



Discontinue SRV Funding (2024 Network Condition)



Excellent / Good (Conditions 1 & 2)	Fair (Condition 3)	Poor / Bad (Conditions 4 & 5)

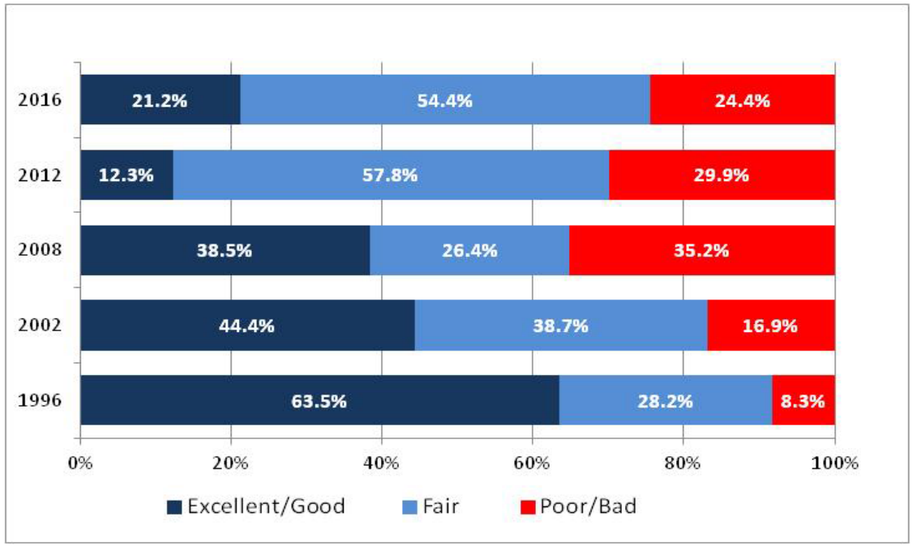
Asset Management Plan: Transport	Service Level: High Traffic Sealed Roads Maintenance

	Current - Continuation of Existing SRV Funding	Reduced - Discontinuation of SRV Funding
Asset Condition	Average condition. Significant renewal and upgrade required.	Poor and deteriorating condition. Significant renewal and upgrade required.
Level of Service	*Continuation of existing level of service.* Combination of reactive and preventative maintenance.	*Immediate decrease in level of service.* Operational focus totally reactive. No ability to undertake preventative maintenance.
Service Cost		
2016-17 General Fund Allocation	$2,494,605	$2,494,605
2016-17 SRV Allocation	$1,301,271	$ -
2016-17 Total Service Cost	**$3,795,876**	**$2,494,605**

5yr Application of Existing 4.43% SRV Funding	**Yr 1 - 2012/13:** Completion of resealing works on Randall and Cameron Street in Wauchope, on Pacific Drive and Gordon Street in Port Macquarie, on Ocean Drive in Lake Cathie and on Panorama Drive and Beech Street in Bonny Hills. **Yr 2 - 2013/14:** Completion of rehabilitation works on Bago Rd South of King Creek near Wauchope, Koala St (Kennedy to Shearer St), Lake Rd (Lake Road and Jindalee Rd), and Pacific Dr (Pacific Dr and Flynn St, and Waterview to Bangalay) in Port Macquarie, and resealing works on Livingstone Rd (entire length) and Pacific Dr (Livingstone Rd to bus bay) in Port Macquarie. **Yr 3 - 2014/15:** Completion of foam bitumen and asphalt rehabilitation works on Cameron St (High St to Bridge St) in Wauchope, Hastings River Drive (Tuffins Ln to Boundary St) and William St (Munster St to Grant St) in Port Macquarie. **Yr 4 - 2015/16:** Completion of foam bitumen and asphalt rehabilitation works on Lord St (Gordon St to Yaranbee Rd) and Kennedy Drive (Yaranbee Rd to Coral St) in Port Macquarie, and Ocean Drive (near Waterview Cr) in West Haven. **Yr 5 - 2016/17:** Completion of rehabilitation works on Camden Head Rd (east of Bell Street) in Camden Haven, Captain Cook Bicentennial Dr (south of Ocean Dr) in West Haven, Glen Haven Dr (Valley View Rd to Ocean Dr) near Kew, Sarah Cres (west of Warrew Cr) in King Creek, Stoney Creek Rd (south of Hursley Rd) in Batar Creek, Rollands Plains Rd (near Doyles Road), and Diamond Head Rd (south of The Boulevard), in Diamond Head.

Impact of Maintenance Funding on Sealed Road Network

The sealed road network condition in 2008 was the result of insufficient resources which saw a significant decline in condition since 1996.
Council's targeted utilisation of existing 4.43% SRV funding has resulted in an overall improvement in the condition of the sealed road network over the last 5 years.



Key Outcomes

1. A loss of the SRV in 2017/18 would halt then reverse the critical progress made in recent years. Council would no longer be in a financial position to strategically manage its sealed road assets, and the condition of the network would deteriorate year on year.
2. Council would be forced to revert to a reactive approach to roads maintenance.
3. Resealing and rejuvenation works would once again be predominantly replaced by reactive jet patching works.
4. Sealed roads in the local government area would only be able to be resealed or rehabilitated every 25 years.
5. There would be a significant decrease in the level of service provided to residents by these assets.

PORT MACQUARIE
HASTINGS
COUNCIL

Port Macquarie-Hastings Council
Sealed Road Resurfacing
Forward Works Programme

Revision 1.0 January 2017

Contents

SEALED ROAD RESURFACING FORWARD WORKS PROGRAMME

1 PURPOSE

Our roads are one of our most critical assets, which is why Council continues to prioritise their maintenance.

The purpose of the Sealed Roads Resurfacing Forward Works Programme is to provide guidance in the creation of the annual resurfacing programme implemented by Council for its sealed roads.

This programme documents Council's adopted approach to programmed road resurfacing works which will guide the development and implementation of the annual programme for re-sealing, rejuvenation and minor rehabilitation works, subject to the available budget allocated each financial year by Council through the annual Operational Plan.

ARRB were commissioned in late 2013 to review Council's maintenance and construction practices and processes. One area highlighted by ARRB and responded to by Council was the need to undertake much more routine "proactive" maintenance on our network to ensure that those roads currently not in disrepair, remain so, and thus reduce the level of reactive maintenance such as pothole filling and more serious works such as heavy patching or pavement rehabilitation that is required.

This programme has thus been developed to specifically provide a long term forward works programme for road resurfacing based on the following parameters:

- Utilising up to date road condition data - a scientific approach.
- Reducing our overall reactive maintenance and remove potential reactive maintenance burden.
- Better manage our lower trafficked roads.
- Looking at coverage across the entire LGA.
- Greatest dollar value - e.g. working in zones or areas to reduce establishment costs and undertake works on lower trafficked roads in the vicinity of programmed works on our high priority roads.
- Managing the expectations of the community, as far as wanting/expecting works and being able to provide a forward program of when they might see works in their part of the LGA.
- To have an ongoing programme that forms part of our legislated IPR Asset Management Planning and can be followed long into the future.

2 PROGRAMME OBJECTIVES & BENEFITS

The objectives of the Sealed Road Resurfacing Forward Works programme are:

- To renew the wearing surface of the sealed roads within the LGA to ensure road user safety and to extend the asset life.
- To treat low traffic areas that would not normally be rated a high risk but do require attention.

- To reach a state where by flush sealed roads are resealed every 12 years and AC is rejuvenated every 6 years - or AC surfaces are milled and filled or have an AC overlay every 12 years with the reseal, depending on the surface condition. This objective includes all road classes.
- Determine a zone based program that will equate to a 12 year cycle and is based on appropriate road condition data. Creating a long term pro-active maintenance regime.
- To distribute resources appropriately across the network, whilst also achieving cost benefits by undertaking works in zones or areas.
- To provide a more enjoyable use of our sealed roads every day, for both local residents and visitors to the area.

Resurfacing our road network is a preventative maintenance process as opposed to reactive maintenance or reconstruction works. It is intended to be completed on road segments where the existing wearing surface is still in a reasonable condition and is adequately protecting the pavement from water ingress, or where minor road repair works can be effected on a small section(s) of a segment to then allow resurfacing to occur. It is imperative that we focus on this method of seal maintenance management in an effort to limit the damage and reduce irreversible damage that requires significant reconstruction to our road network

Providing protection to the pavement by having a good wearing surface that isn't cracked prevents water ingress which is a significant factor in pavements deteriorating and potholes and other deformations forming. If a road wearing surface (AC or flush seal) develops surface cracks, water can enter the road pavement base (gravel) material. When vehicles pass over the saturated base, water and finely graded base materials (small particles) are forced out. This repeated action leads to the base softening, the creation of air voids, and ultimately the surface breaking up and potholes forming.

Depending on the road function and the intensity of traffic flows, ideally and theoretically resealing on flush sealed roads should occur every 8 years on very high traffic roads to 12 years on lower trafficked roads, for lower levels of service this can be altered. With Asphaltic Concrete (AC) surfaced roads, the AC requires a rejuvenation seal to be applied every 6 to 8 years, AC left beyond the 8 years will not be able to be rejuvenated and will thus oxidise and potentially crack allowing water penetration. AC beyond the 8 year age may be treated through a mill and fill with new AC or an AC overlay.

This programme identifies that our annual resurfacing works are developed in an attempt to meet the requirements of resealing our flush seals every 12 years and rejuvenating AC every 6 years, OR the AC may be left and managed through to a 12 year life when a mill and fill or overlay of the AC wearing surface will be undertaken.

It should be noted that our reactive maintenance is predominately driven by Customer Requests from the public and issues identified by our inspection officers and other members of staff. Reactive maintenance is assessed against Council's road hierarchy and risk rating management systems and will always continue in this manner. The process of routine maintenance and upkeep is to undertake works across the entire network to significantly reduce the need for reactive maintenance. The more routine maintenance that can be undertaken, the less reactive maintenance that is required.

3 ZONE BASED PROGRAMMING

The intention is to create a rolling programme of resurfacing works to better manage the network, so that works are well planned and scheduled into a maintenance regime ensuring that routine “proactive” maintenance works are completed prior to the asset failing. This will be managed through dissecting the LGA into a number of zones that can then be managed and priortised according asset condition and criticality of works.

Higher priority roads may be selected outside of the zone programme for works based on immediacy of need of repair.

The need to manage lower trafficked roads has formed a significant part of building an ongoing program of work that creates the zone type format in which the lower trafficked roads can be managed through routine maintenance. Whilst not all roads in any particular zone will be in a condition to reseal or rejuvenate most low traffic roads will be suited to resurfacing and those that aren’t may only require minimal preparation work, any roads that are in need of significant rehabilitation or reconstruction can be identified and programmed for future capital works.

The zonal type system also has the advantage of being able to re-program our resurfacing for a whole locality into the future. As such for the areas completed in any one year can be reprogrammed so that similar works are completed in approximately 12 years fro resealing or AC replacement or for AC rejuvenations we should be returning in 6 years.

There is also a significant community outcome available in that residents within a work zone see a significant amount of “their rates at work” in their specific area.

The Zones for the Port Macquarie-Hastings LGA are as follows:

Zone ID	Area Covered
A	Northeast - Thrumster, Fernbank Creek, North Shore
B	Port Macquarie East
C	Port Macquarie West
D	Lake Cathie/Bonny Hills
E	Laurieton - Camden Haven
F	Southwest - Long Flat, Comboyne, Lorne
G	Wauchope
H	Central - Herons Creek, Bago, King Creek, Sancrox, Rawdon Island
I	Northwest - Rollands Plains, Bellangry

These zones can also be found in map form in Appendix A2

4 BUDGET

Council, in recent years has taken significant steps to increase the level of funding to the maintenance of Council’s road assets in an attempt to reduce the level of network deterioration and slow the accumulation of the network backlog of works.

The introduction of the SRV (4.43% 5 yr) funding has seen an increase in the level of road maintenance being undertaken on our roads. This funding has for the most part been allocated to higher priority roads within the adopted road hierarchy that have required rehabilitation as well as resurfacing. This work as been a mixture of mostly reactive maintenance - works where pavements have fallen into some level of disrepair, and some routine or "proactive" maintenance - where pavements are resealed prior to falling into disrepair to remove the need for reactive maintenance.

The single most important controlling matter for the future resurfacing programme is the level of funding that can be expected. Planning of future programs is heavily dependent on the level of funding that can be expected in any one year.

The below table indicates the current funding streams allocated to resurfacing works and their limit of continuation.

Funding Source *	2014-15	2015-16	2016-17	2017-18	2018-19
Proactive Road Maintenance (ARRB)	$921,500	$1,000,000	$375,000**	*$1,000,000*	*$0*
High Traffic Road Resurfacing (4.43 SRV)	$848,720	$874,181	$900,407	*$0*	*$0*
Pavement Rejuvenation Treatments (4.43 SRV)	$212,180	$218,545	$225,101	*$0*	*$0*
Resealing Budget	$1,900,000	$1,900,000	$2,000,000	*$2,000,000*	*$ 2,000,000*
Total Funding	**$3,882,400**	**$3,992,726**	**$3,500,508**	***$3,000,000***	***$ 2,000,000***

* This table should be updated annually to confirm the yearly allocation and expected future years.

**The ARRB funding for 2016-17 was not originally allocated however as funding becomes available through organisation savings funds have been allocated to this area.

Currently the 4.43 SRV will expire on 30 June 2017, the ability to meet the objective of this programme of 12year resurfacing across the entire network hinges specifically upon this funding.

Should this funding cease and not be replaced with other funding the annual resurfacing programme will be significantly reduced. As the need to manage risk dictates that the higher priority roads receive greater consideration for works, the level of resurfacing works undertaken on the lower trafficked roads will thus need to be reduced. This will mean that one of the key objectives of the Sealed Roads Resurfacing Forward Works Programme will not be achieved.

5 CONDITION DATA ASSESSMENT

Council will regularly undertake condition assessments of the sealed road network. This will be undertaken using a mixture of visual inspection and automated data collection and analysis - generally laser survey and video assessment.

This data will assist in managing the network and understanding rates of deterioration. Utilising current and historic data, the order in which zones will be resurfaced can be forecast and decision made in respect to higher priority road works. Having data across the entire network allows for an holistic approach to network management such that the best outcome is achieved for the entire LGA rather than ad-hoc works that provide limited overall net benefit.

As new data is available the Asset Conditions Maps continued is Appendix A2 will be updated and utilised to inform the future years programming. The most recent data collection has been based upon automated data with a full visual assessment. The process is designed to ensure that the most practicable and cost effective maintenance treatment is applied or programmed for each segment of road.

Road condition is categorised as follows, and includes the type of applicable treatment:

Score	Condition	Treatment	Action
1	Excellent	Nil	Proactive Maintenance
2	Good	Resurfacing	Proactive Maintenance
3	Fair	Resurfacing with minor pavement repairs	Reactive & Proactive
4	Poor	Rehabilitation	Reactive
5	Bad	Reconstruction	Reactive

Roads in a condition of 1-2 can be easily resurfaced as required, whilst a condition 3 will require some level of pre treatment such as minor heavy patching or kerb replacement, once a road deteriorates into a condition 4 or 5 it will require full rehabilitation or reconstruction.

From a cost perspective managing condition 1-3 roads is far cheaper and cost effective compared to cost for managing condition 4 or 5 roads. Therefore undertaking a well designed proactive resurfacing programme is key to managing the road assets effective and efficiently.

The methodology applied to the most recent condition data survey is contained in Appendix A3

6 ADMINISTRATION

The Sealed Road Resurfacing Forward Programme is to be updated annually to reflect the following:

- Previous year's works
- Detail the upcoming year planned works, and revised projected works.
- Any new asset data.

This information is to be recorded in:

- Appendix A1 - Current & Future Year's Programme, and
- Appendix A2 - Condition Data Maps.
- Appendix A3 - Condition Data Management
- Appendix A4 - Summary of Completed Year's Programmes

7 TIMING OF WORKS

The majority of reseal and pavement rejuvenations are programmed to occur in the warmer months between October and March when the existing wearing surface temp is best to achieve the necessary bind between the old and new surfaces.

8 COMMUNITY NOTIFICATION

As part of the annual program of resurfacing works Council will provide general notification at least 1 month in advance that works will be occurring in the identified area(s). Following this the resurfacing contract will be obliged to notify residents/businesses at least 2 days in advance of the works occurring. Council may provide additional notification where required.

As part of the initial notification Council shall provide the Road Resealing brochure attached as Appendix 5

APPENDICES

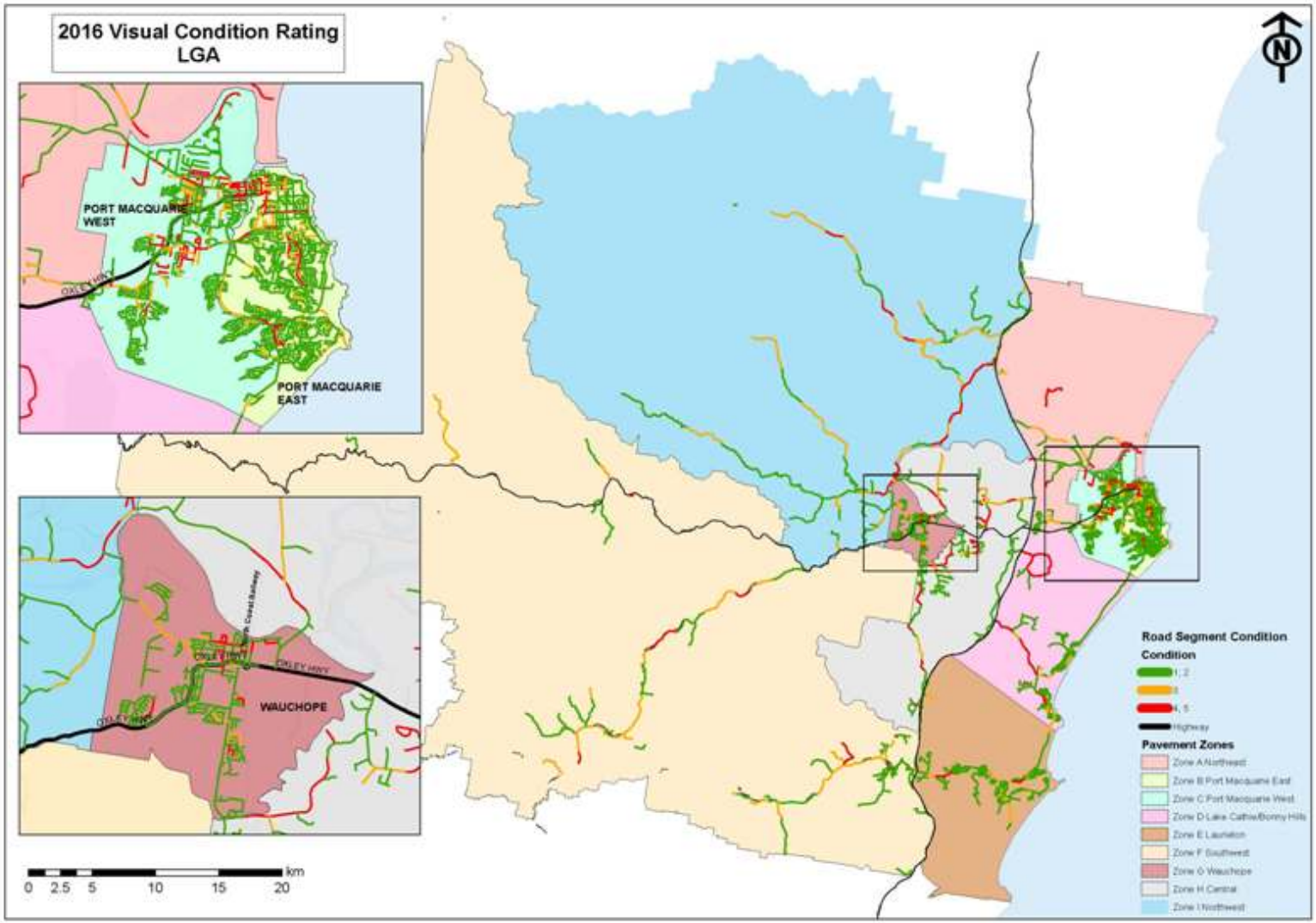
A1 CURRENT & FUTURE YEAR'S PROGRAMMES

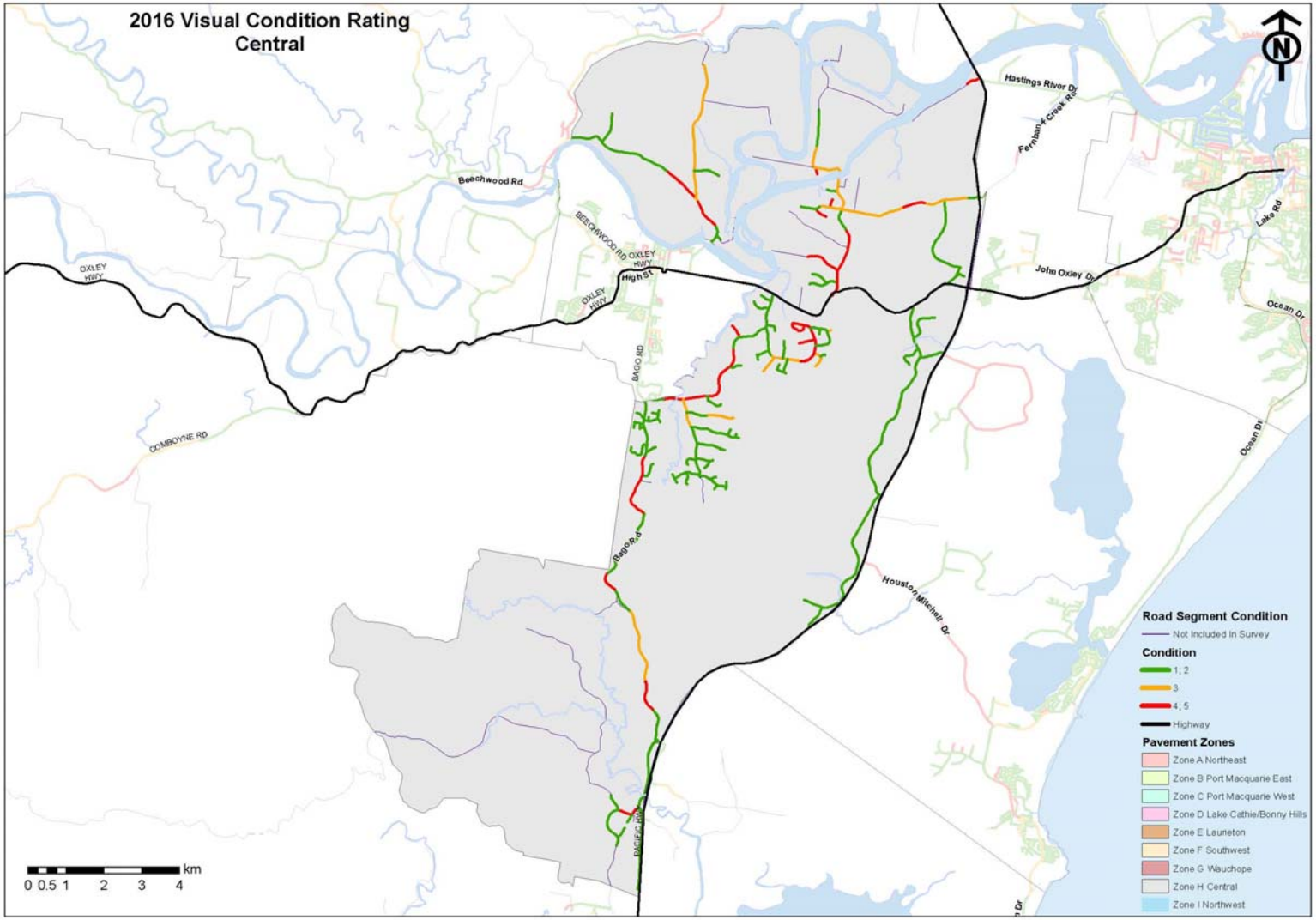
Current Year 2016-17 - Work Zone Wauchope (and some surrounding roads from Central Zone and Northwest Zone).

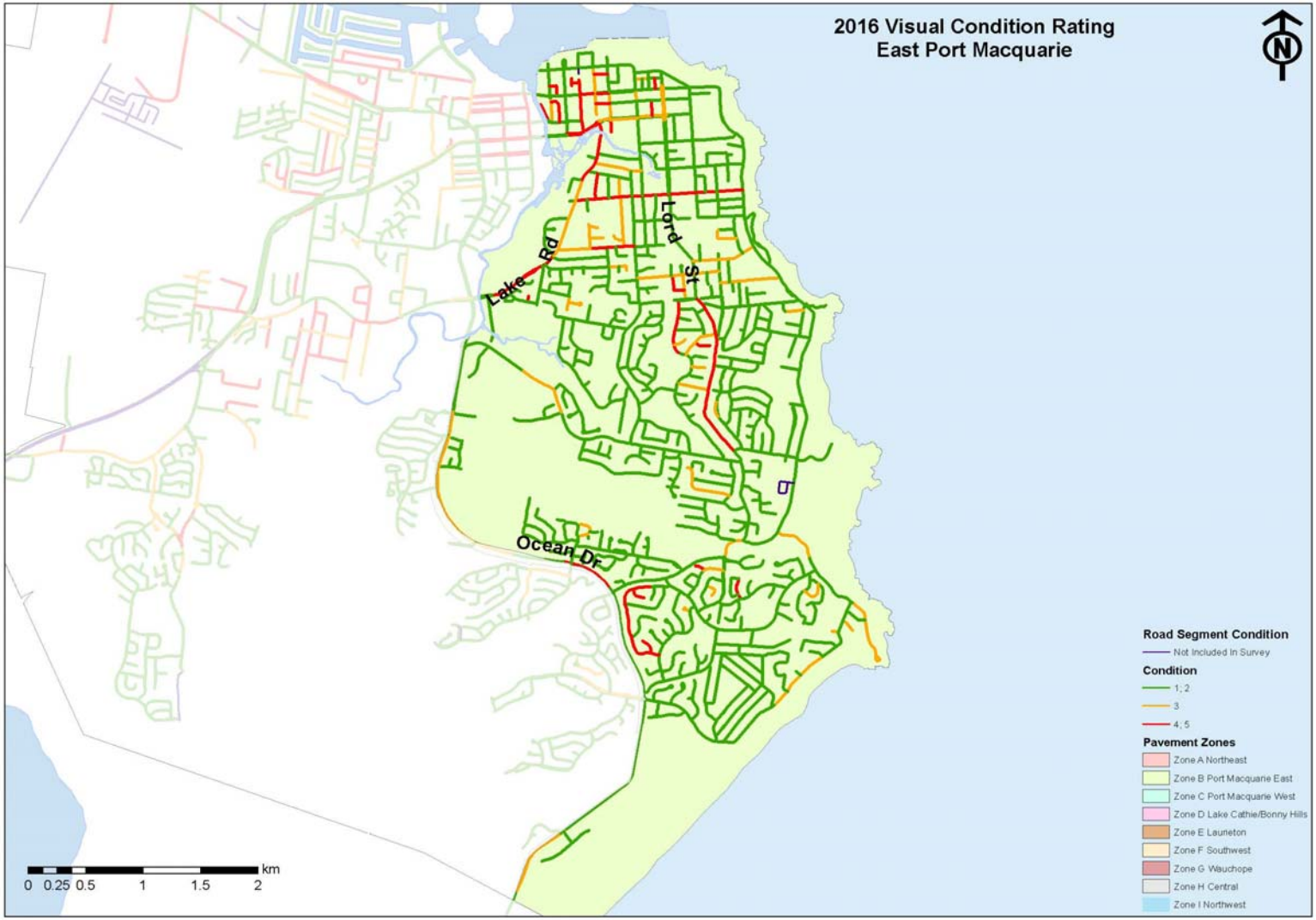
This table contains the forward planned works

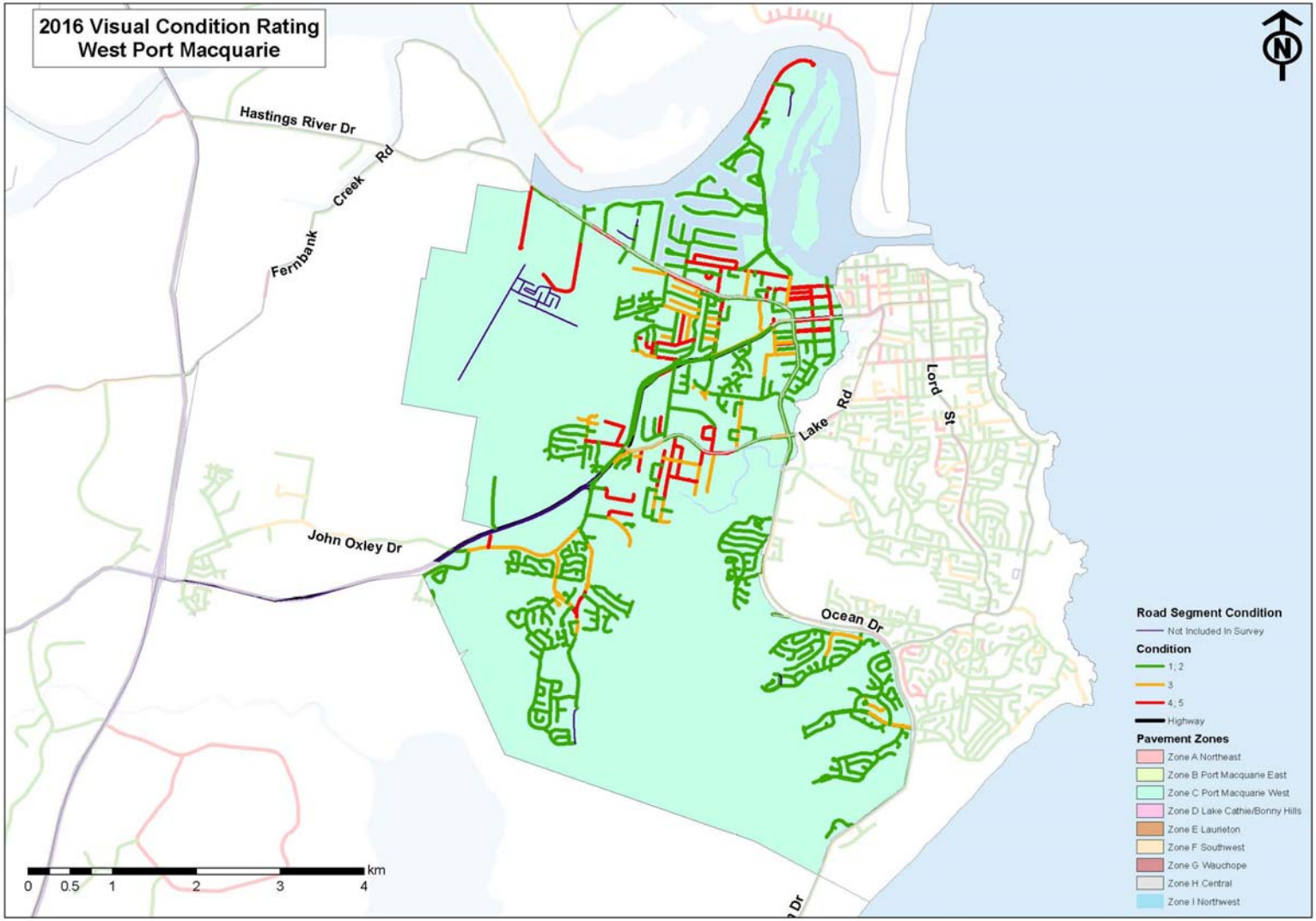
Cycle	Programme Year	Zones Proposed for works
1	2017-18	Wauchope
2	2018-19	Port Macquarie (East / West)
3	2019-20	Port Macquarie (East / West)
4	2020-21	Southwest
5	2021-22	Northwest
6	2022-23	Central
7	2023-24	North East
8	2024-25	Port Macquarie (East / West)
9	2025-26	Port Macquarie (East / West)
10	2026-27	Wauchope
11	2027-28	Lake Cathie / Bonny Hills
12	2028-29	Laurieton

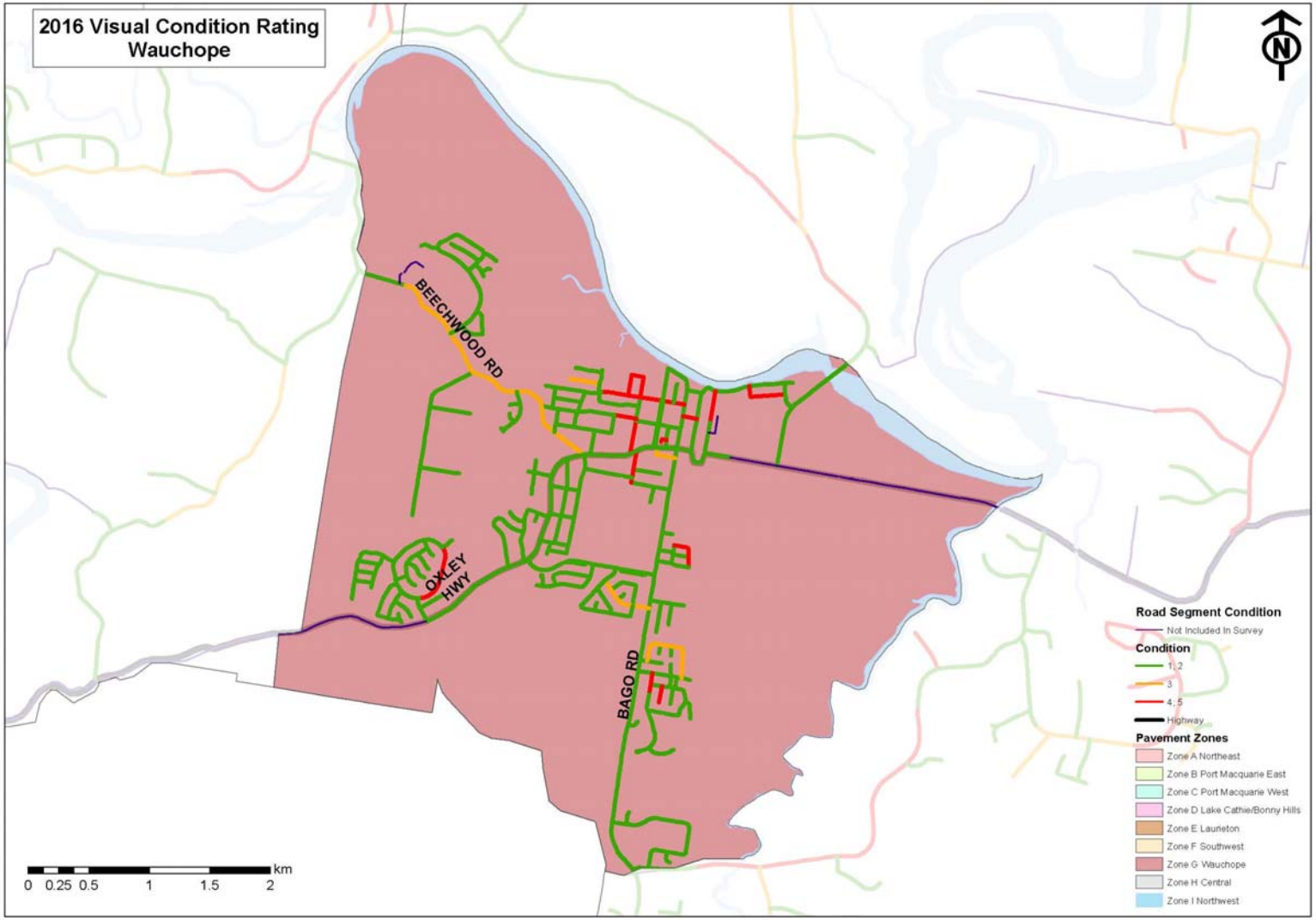
A2 CONDITION DATA MAPS

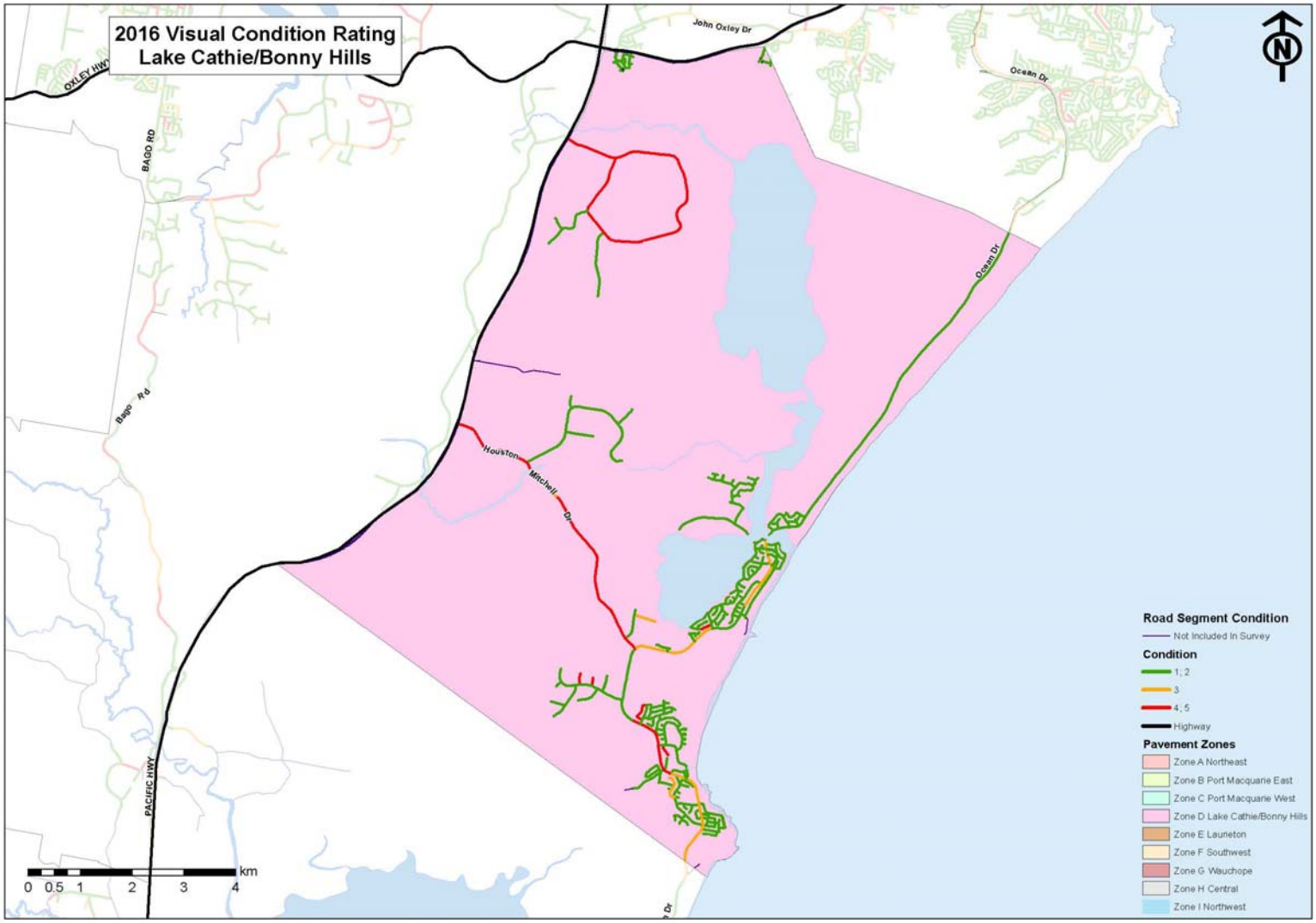


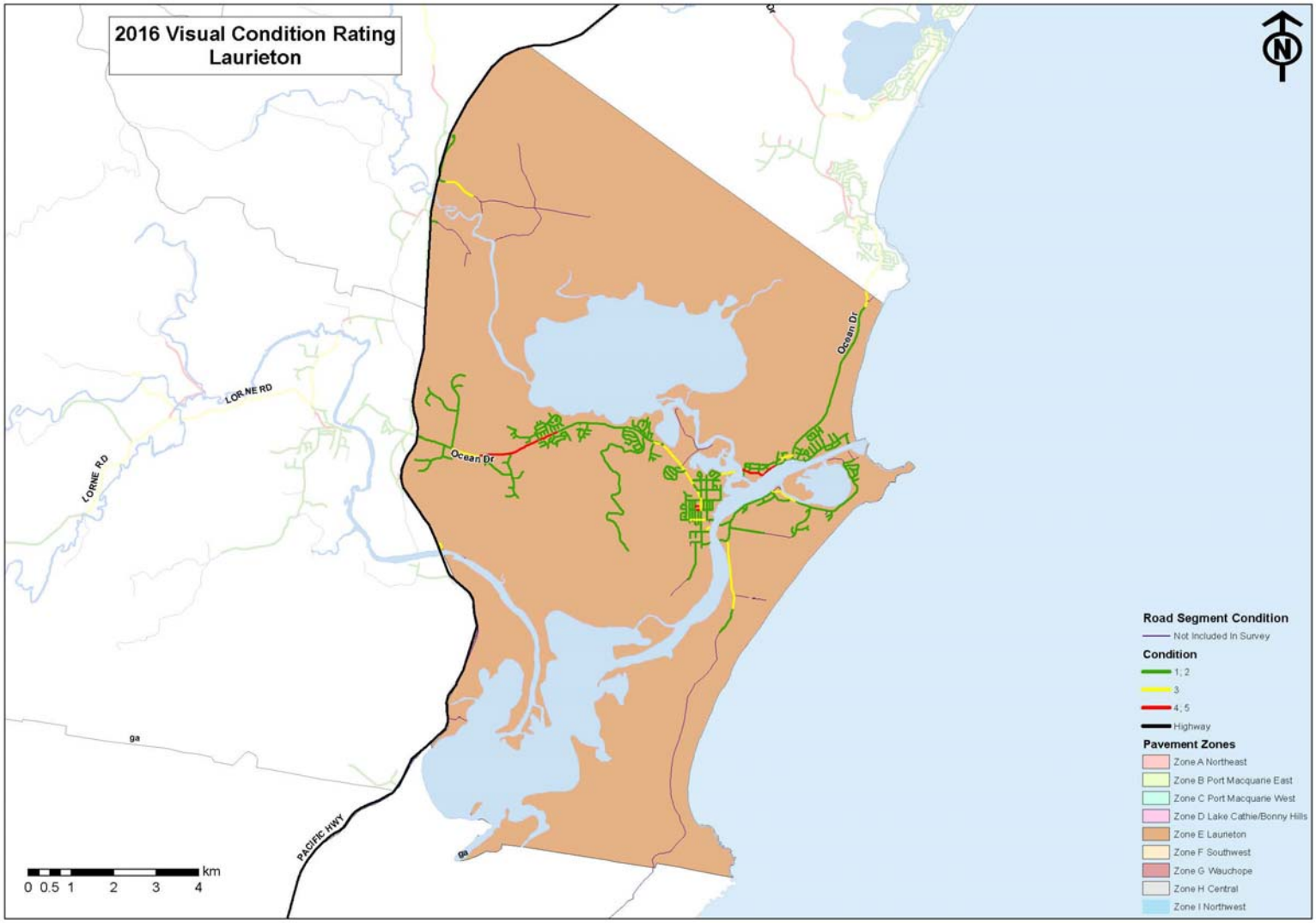

2016 Visual Condition Rating
Central
Beechwood Rd
BEECHWOOD RD
OXLEY HWY
High ST
OXLEY HWY
OXLEY HWY
BAGO RD
COMBOYNE RD
Bago Rd
Hastings River Dr
Fernbank Creek Rd
Lake Rd
John Oxley Dr
Ocean Dr
Ocean Dr
Houston Mitchell Dr
Road Segment Condition
Not Included In Survey
Condition
1, 2
3
4, 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest
km
0 0.5 1 2 3 4

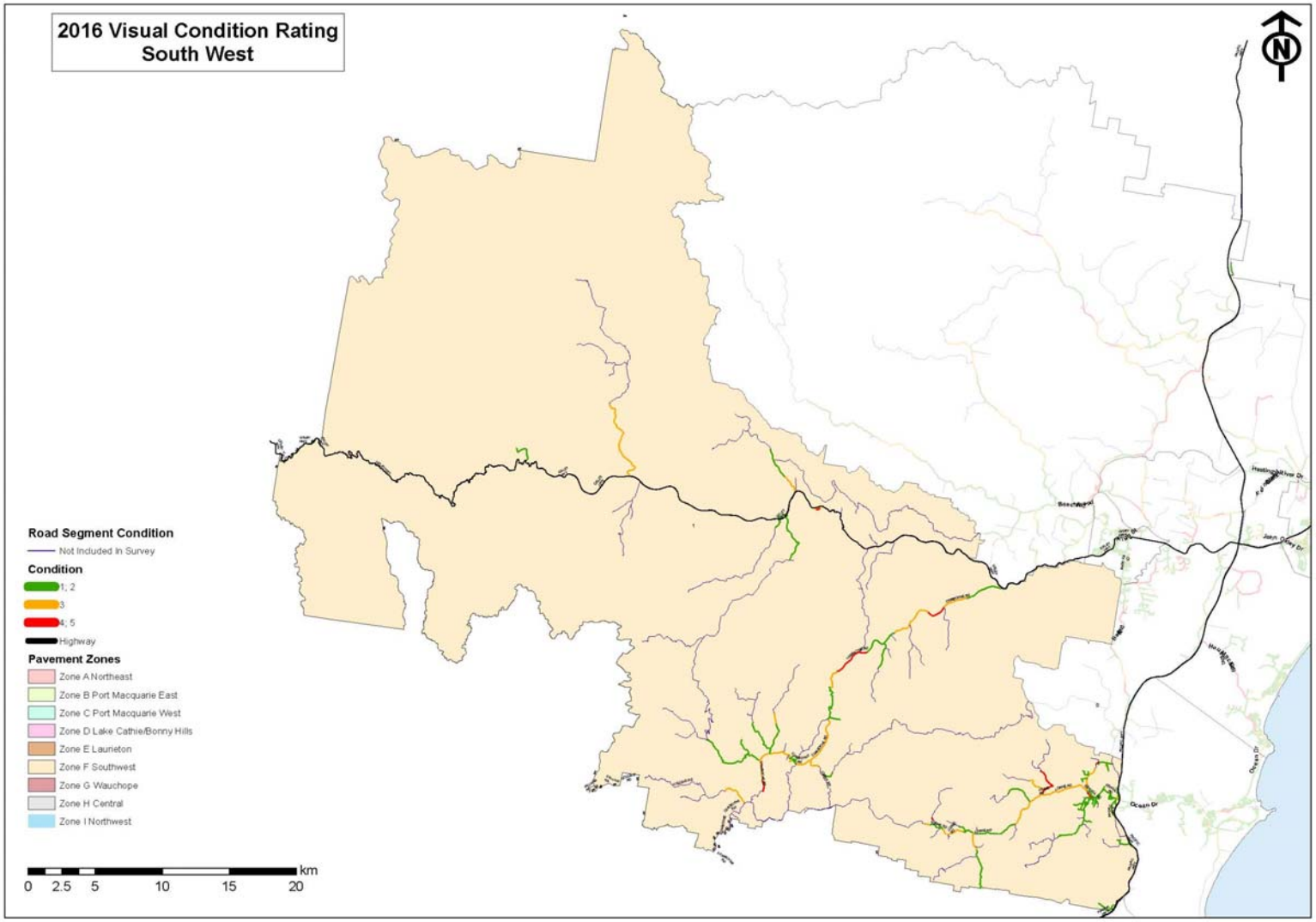

2016 Visual Condition Rating
East Port Macquarie
N
Lake Rd
Lord St
Ocean Dr
0 0.25 0.5 1 1.5 2 km
Road Segment Condition
Not Included In Survey
Condition
1; 2
3
4; 5
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest

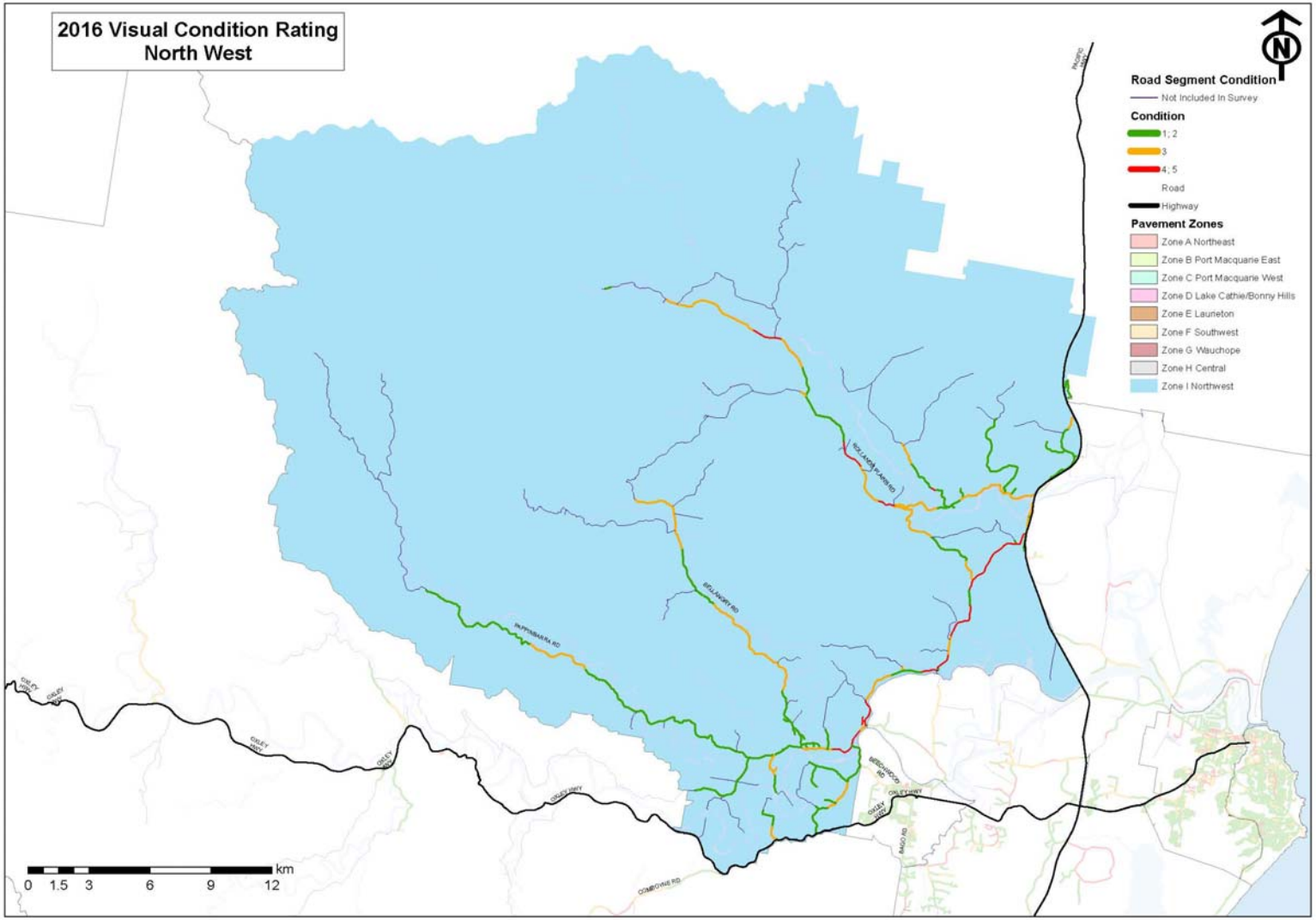

2016 Visual Condition Rating
West Port Macquarie
Hastings River Dr
Fernbank Creek Rd
John Oxley Dr
Lake Rd
Lord St
Ocean Dr
0 0.5 1 2 3 4 km
Road Segment Condition
Not Included In Survey
Condition
1; 2
3
4; 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest

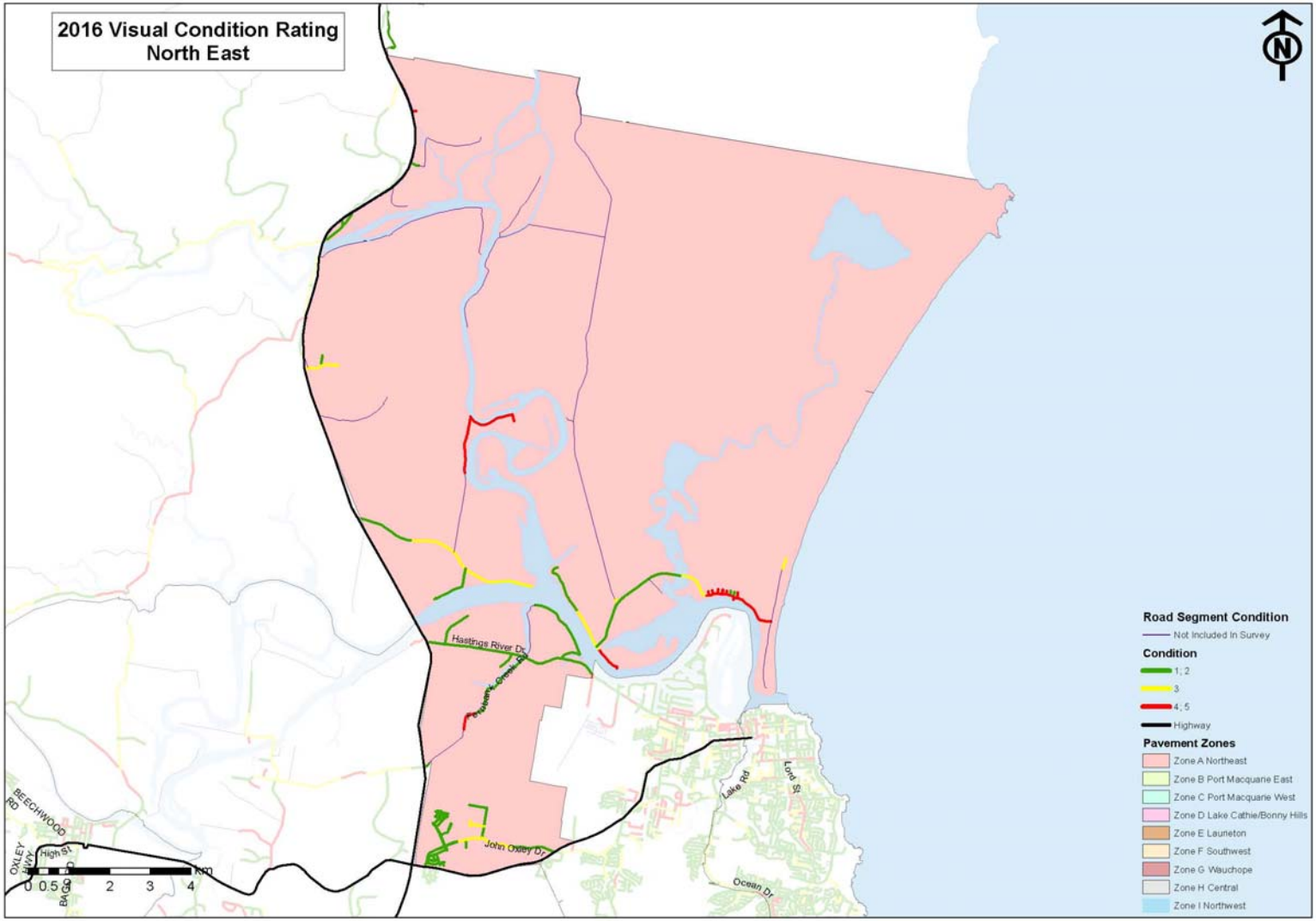

2016 Visual Condition Rating
Wauchope
BEECHWOOD RD
OXLEY HWY
BAGO RD
0 0.25 0.5 1 1.5 2 km
Road Segment Condition
Not Included In Survey
Condition
1, 2
3
4, 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest


2016 Visual Condition Rating
Lake Cathie/Bonny Hills
John Oxley Dr
Ocean Dr
BAGO RD
Houston
Mitchell Dr
PACIFIC HWY
km
0 0.5 1 2 3 4
Road Segment Condition
Not Included In Survey
Condition
1; 2
3
4; 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest


2016 Visual Condition Rating
Laurieton
LORNE RD
LORNE RD
Ocean Dr
Ocean Dr
PACIFIC HWY
km
0 0.5 1 2 3 4
Road Segment Condition
Not Included In Survey
Condition
1; 2
3
4; 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest


2016 Visual Condition Rating
South West
Road Segment Condition
Not Included In Survey
Condition
1, 2
3
4, 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest
0 2.5 5 10 15 20
km
N


2016 Visual Condition Rating
North West
Road Segment Condition
Not Included In Survey
Condition
1; 2
3
4; 5
Road
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest
km
0 1.5 3 6 9 12


2016 Visual Condition Rating
North East
N
Road Segment Condition
Not Included In Survey
Condition
1, 2
3
4, 5
Highway
Pavement Zones
Zone A Northeast
Zone B Port Macquarie East
Zone C Port Macquarie West
Zone D Lake Cathie/Bonny Hills
Zone E Laurieton
Zone F Southwest
Zone G Wauchope
Zone H Central
Zone I Northwest
Hastings River Dr
Oxley Hwy
Beechwood Rd
High St
Bago Rd
John Oxley Dr
Lake Rd
Lord St
Ocean Dr
0 0.5 1 2 3 4 KM

A3 CONDITION DATA MANAGEMENT

Introduction.

Visual road pavement faults and distress assessments were undertaken over the entire sealed road network late in 2016. The results of these assessments produced recommended pre-treatments for each road segment prior to its resealing or resurfacing to return the segment to a satisfactory condition.

The aim firstly of the analysis of these pre-treatment listings was to use the data to estimate each pavements condition rating within a common rating from 1 to 5 by using scores assigned to each pre-treatment type. Summation of the scores for each pre-treatment for each segment would produce a de-facto pavement condition index (PCI). The PCI's position within PCI groupings would then establish the 1 to 5 condition rating.

Methodology used in the Condition Rating analysis.

Due to a very restricted time period being made available it was not considered possible to undertake the type of road pavement condition assessment carried out in previous years. The strategy this time used a number of skilled and experienced road construction and maintenance engineering staff to visit each road segment and to assess and record the required pre-treatments for the segment prior to resealing or resurfacing.

It was recognised that there can be a large variance in the types of pre-treatments available so to simplify the process only the following three (3) basic categories were used.

- General patching and crack filling followed by sweeping the surface.
- Heavy patching.
- Rehabilitation.

The inspection estimated, based on the segment pavement area and the pavement area exhibiting distress, the percentage of pre-treatment required for each of the three (3) categories.

To derive a de-facto pavement condition index (PCI) for each road segment a table of scores for 21 groupings of the percentages of pre-treatments was produced as shown in figure 1 below.

Linear relationships as shown in figure 2 were adopted for the scores following a process that tested and revised the scores for a selected sample of roads. The road segment samples used in the testing process where selected at random. However they were segments where it was understood either that no visible change had occurred in the condition since the last condition rating or where it was understood due to the level of distress that the segment should be rated as poor or bad. The process was repeated a number of times until the results generally produced answers that matched the previous condition within the 1 to 5 rating for the sample.

The spreadsheet formulae recorded a score for each pre-treatment for the segment by referencing the score table. The three (3) scores for the segment were then averaged to produce a PCI within 1 to 100. The formulae then recorded a 1 to 5 condition rating for the segments referencing PCI groups as shown in figure 3. The PCI ranges for the groups had been established some years ago from computer road pavement modelling tools previously used by Council but which are no longer supported. This ensured consistency with previous 1 to 5 data for the segments. The results are compared with previous data in figure 4.

	Pre-Treatment 1	Score	Pre-Treatment 2	Score	Pre-Treatment 3	Score
1	Sweeping only to 5% General patching and crack filling	100	0% to 5% Heavy patching	59		
2	>5% to 10% General patching and crack filling	95	>5% to 10% Heavy patching	52		
3	>10% to 15% General patching and crack filling	90	>10% to 15% Heavy patching	45		
4	>15% to 20% General patching and crack filling	85	>15 to 20% Heavy patching	38		
5	>20% to 25% General patching and crack filling	80	>20% to 25% Heavy patching	31		
6	>25% to 30% General patching and crack filling	75	>25% to 30% Heavy patching	24		
7	>30% to 35% General patching and crack filling	70	>30% to 35% Heavy patching	17		
8	>35% to 40% General patching and crack filling	65	>35% to 40% Heavy patching	10		
9	>40% to 45% General patching and crack filling	60			5% to 10% Rehabilitation	42
10	>45% to 50% General patching and crack filling	55			>10% to 15% Rehabilitation	36
11	>50% to 55% General patching and crack filling	50			>15% to 20% Rehabilitation	30
12	>55% to 60% General patching and crack filling	45			>20% to 25% Rehabilitation	24
13	>60% to 65% General patching and crack filling	40			>25% to 30% Rehabilitation	18
14	>65% to 70% General patching and crack filling	35			>30% to 35% Rehabilitation	12
15	>70% to 75% General patching and crack filling	30			>35% to 40% Rehabilitation	6
16	>75% to 80% General patching and crack filling	25			>40% to 50% Rehabilitation	0
17	>80% to 85% General patching and crack filling	20			>50% to 60% Rehabilitation	0
18	>85% to 90% General patching and crack filling	15			>60% to 70% Rehabilitation	0
19	>90% to 95% General patching and crack filling	10			>70% to 80% Rehabilitation	0
20	>95% to 100% General patching and crack filling	5			>80% to 90% Rehabilitation	0
21					>90 to 100% Rehabilitation	0

Figure 1

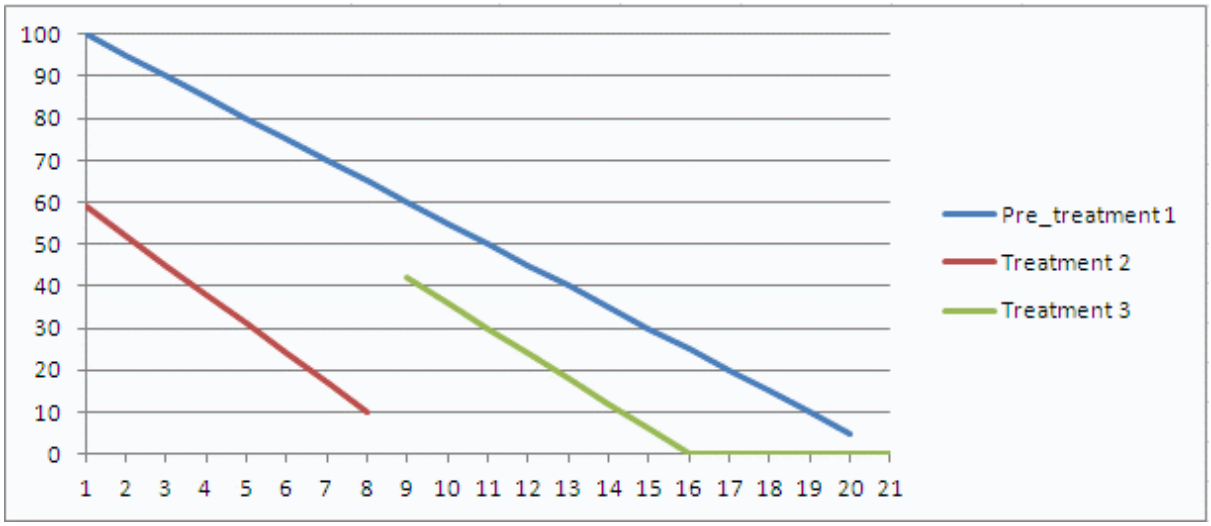
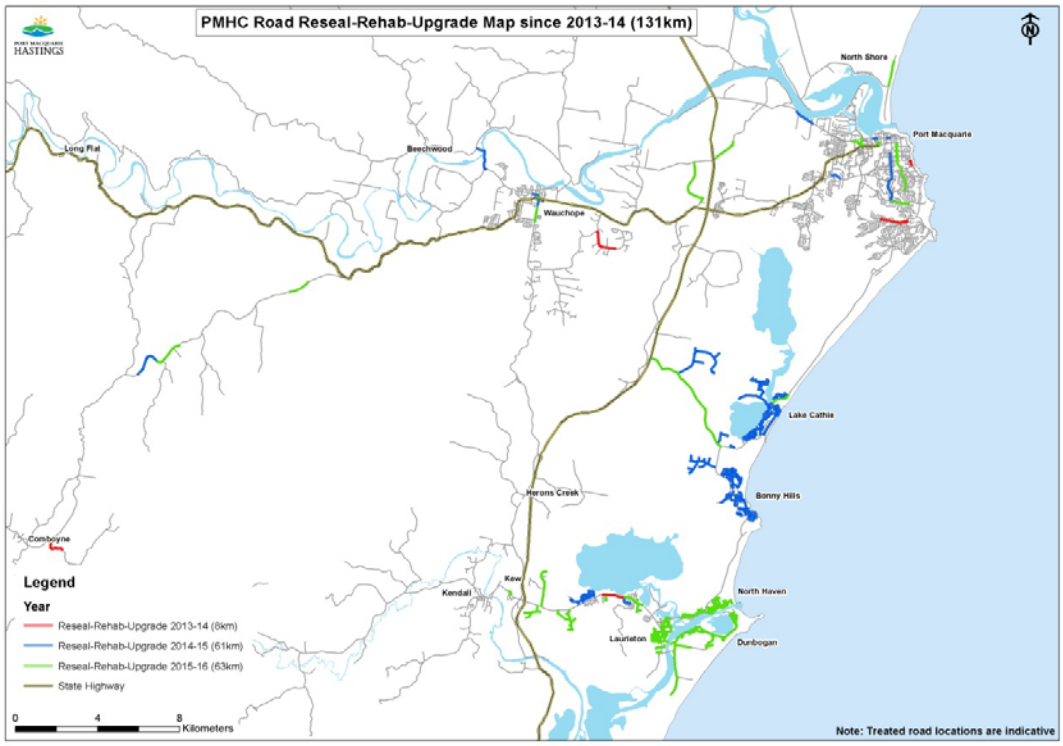


Figure 2

Road Pavement CI Groupings	Road Pavement CI Values in each Group	Road Pavement Serviceability /Condition
1	>=94	Excellent
2	< 94 >=78	Good
3	< 78 >=55	Fair
4	< 55 >=28	Poor
5	< 28	Bad
	CI Range	

Figure 3

A4 SUMMARY OF PREVIOUS YEAR'S PROGRAMMES



<u>Summary of 2015-2016 Resurfacing Programme</u>

Reseals - Value $1.6M

- Laurieton (local streets)
- North Haven (local streets)
- Dunbogan (local streets)
- Lakewood (local streets)

Pavement Reconstruction - Value $3.1M

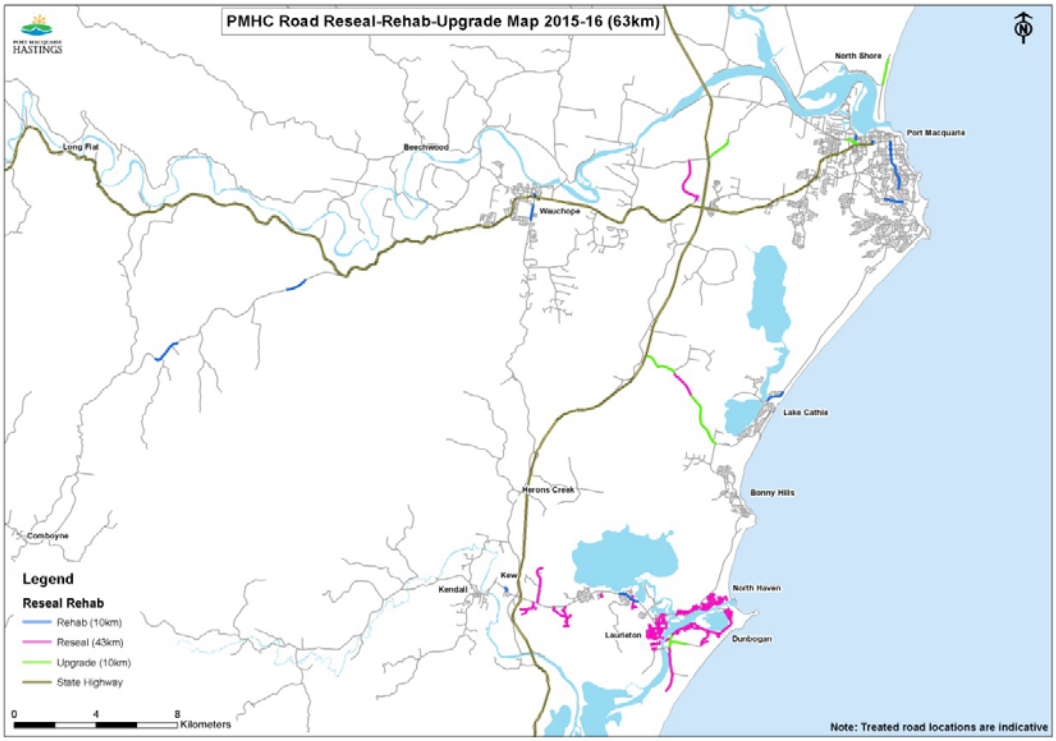
- Lord St (Gordon to Coral), Port Macquarie
- Ocean Dr (Waterview), West Haven
- Ocean Dr (Dirah to Bridge), Lake Cathie (Infra Delivery)
- Comboyne Rd (Blanches to Bulli Creek), Byabarra (Infra Delivery)
- Comboyne Rd (Green Wattle Creek), Byabarra (Infra Delivery)

Asphalt Works - Value $1.1M

- Cameron St (Bridge to Azalea), Wauchope
- Cameron St (High to Young), Wauchope
- Kendall Rd, Kew
- Horton St (Gordon to Hayward NB), Port Macquarie
- Koala St (O'Briens Rd WB), Port Macquarie

Bitumen seal - Value 160k

- Fernbank Creek Rd
- Plomer Rd



Summary of 2014-2015 Resurfacing Programme

The reseal and pavement rehabilitation programme was completed on time and on budget. The roads identified for repairs were selected from roads asset data, condition reports and high risk CRMs from councils outstanding works lists that were considered outside of TSN resourcing capabilities.

A summary of projects undertaken are listed below:

Reseals - Value $1.7M

- Lake Cathie (All local streets)
- Bonny Hills (All local streets)
- Lakewood (local streets surrounding Sirius Dr)
- Granite St, Port Macquarie

Pavement Reconstruction - Value $1.6M

- Hastings River Drive (Boundary to Tuffins), Port Macquarie
- William St (Grant to Munster), Port Macquarie
- Cameron St (High to King), Wauchope
- Comboyne Rd, Byabarra
- Rollands Plains Rd, Rollands Plains

Asphalt Works - Value $1.1M

- Lake Rd (Toorak and Jindalee), Port Macquarie
- William St (Short St), Port Macquarie
- Kendall Rd, Kew
- Ocean Dr (Binbilla to Graham), Bonny Hills
- Young St (Cameron to Hastings), Wauchope
- Waterview Cr, Laurieton
- Boundary St, Port Macquarie
- Sherriff Way, Port Macquarie
- Clifton Shops, Port Macquarie

Summary of 2013-2014 Resurfacing Programme

The reseal and pavement rehabilitation programme was completed on time and on budget. The roads identified for repairs were selected from roads asset data, condition reports and high risk CRMs from councils outstanding works lists that were considered outside of TSN resourcing capabilities.

A summary of projects undertaken by TSN are listed below:

Reseals - Value $300k

- Ocean Drive , West Haven
- Fiona Crescent, Lake Cathie
- Ocean Drive, Lake Cathie
- Livingstone Rd, Port Macquarie
- Sarahs Crescent, King Creek
- Lorne Rd, Comboyne

Pavement Reconstruction - Value $750k

- Pacific Drive and Flynn St, Port Macquarie
- Pacific Drive, Timber Ridge to Bangalay Drive, Port Macquarie
- Sarahs Crescent, King Creek

Asphalt Works - Value $1M

- Lake Rd and Jindalee Rd, Port Macquarie
- Lake Rd and Gordon St, Port Macquarie
- Kennedy Drive and Hillcrest Ave, Port Macquarie
- Koala Street, Port Macquarie
- Bago Rd, Wauchope
- Bindi Close, Wauchope
- Cameron Street, Wauchope
- Rawdon Island Rd, Sancrox
- Burrawan Forest Drive, King Creek
- King Creek Rd, King Creek
- Jindalee Rd, Port Macquarie

A5 ROAD RESEALING BROCHURE

ROAD RESEALING

Road resealing is the process of spraying bitumen onto a road pavement and then rolling in a layer of uniformly sized stones to create a new surface.

It is the most economical method of sealed road pavement resurfacing and is the best way to maintain the life of the road surface.

The benefits of resealing roads include:

- Waterproofing of the surface
- Protecting the underlying pavement from deterioration
- Seals small cracks and imperfections
- Extends the pavement life
- Economic method of resurfacing roads
- Improved skid resistance

WHY IS MY STREET BEING RESEALED?

Resealing protects and extends the life of a road. As the upper layers of road pavement are exposed to weather and wear from traffic, the surface deteriorates and small cracks form in the surface. These cracks can allow water to penetrate the lower levels, which if left untreated can lead to potholes.

The resealing of your street is based on a series of existing surface condition factors such as cracking, patches, roughness, and the age of the pavement. This data is updated and re-analysed every 12 months to ensure that the correct roads are selected to get the most benefit from resealing. Over the next few years, Council will be focusing part of its road works budget on proactively resealing low traffic roads, consistent with the recommendations provided by the ARRB (Australian Roads Research Board) report completed for Council in 2013.

Roads containing significant pavement defects are not suitable for resealing and require more extensive and disruptive resurfacing or rehabilitation treatments.

DID YOU KNOW?

Resealing is around one tenth the cost of full reconstruction or asphalt overlays, and when done at the right time can extend the life of a road by 10 to 15 years.

WHAT TO EXPECT

- Warning signs for loose stones and reduced speed on the day of resealing.
- Short delays of around 10 mins when the stone is being spread over the bitumen.
- A street sweeper removing loose stones through the following weeks.

WHAT CAN YOU DO TO HELP?

- Please be patient during delays.
- Ensure cars are not parked on the kerb prior to works commencing.
- Please avoid using your driveway for 48 hours after resealing to reduce the risk of staining.

Port Macquarie-Hastings Council
Ph: (02) 6581 8111
Cnr Lord & Burrawan Streets
council@pmhc.nsw.gov.au
www.pmhc.nsw.gov.au

PORT MACQUARIE HASTINGS

A6 CORE SERVICES - ROADS BROCHURE

How are road repair works prioritised?

Council uses the Roads Hierarchy together with a detailed inspection process to prioritise road repair works.

The Roads Hierarchy is a foundation document for the prioritisation of works across the LGA. It categorises all roads within the LGA based on traffic volumes, regional/local significance, speed limit, heavy vehicle volumes, pedestrian movements, proximity to schools and places of public interest, bus routes etc.

The Roads Hierarchy ranks the highest 140 roads within the LGA in priority order and further categorises the remaining roads as either through or no-through roads.

The top 10 within the Roads Hierarchy receive the highest priority weighting for maintenance resources. All unsealed roads are included in the Roads Hierarchy, but have also been prioritised as a separate sub-group for the purpose of the maintenance grading programs prioritisation.

Risk Score	Description
1 (Lowest Priority)	Cul-de-sacs (outside of Top 140), Local Access - urban streets.
2	Through roads (outside Top 120), Collector - urban streets.
3	Roads ranked 51 – 140 in the Top 140, Distributors.
4	Roads ranked 11 – 50 in the Top 140, Sub Arterial.
5 (Highest Priority)	Top 10 roads across LGA, Highest Rated Road.

Why do some roads get repaired quickly and not others?

Following customer reporting a hazard or requesting works on a road (e.g. a pothole or loose gravel, slashing etc.), an inspection is carried out by a Council roads inspections officer. The inspection considers and scores the hazard across three specific criteria:

1. The location of the defect within the roadway (scored out of 5), i.e. in the travel lane, adjoining the road, parking lane etc;
2. The ranking of the road within the Roads Hierarchy (scored out of 10); and
3. The severity/potential risk of the defect to the community (scored out of 5).

A total score out of 20 is then calculated and the service standard for the repair works identified in accordance with the following Table:

Risk Rating	Priority	Control Mechanism	Response Time
4 or less	Low	Monitor	N/A
5 – 9	Low	Programmed into maintenance works	As resources permit. Within 6 months.
10 – 14	Medium	Programmed into maintenance works	As resources permit. Within 3 months.
15 – 18	High	Inspect Made safe	Within 24 hours Within 2 working weeks.
>18	High	Inspect Made safe	Within 4 hours Within 2 working days.

This process is developed from the current Best Practise Guidelines published by Council's Public Liability Insurer and seeks to recognise and address potential hazards to road users which can result in public liability claims or injuries. It assists in minimising these potential hazards and helps deliver a safe road network for the community.

The unsealed roads grading program and the Roads Hierarchy can be found on Port Macquarie-Hastings Council's website at:

www.pmhc.nsw.gov.au

Port Macquarie-Hastings Council

Core Services: ROADS

Maintenance & Repair

PORT MACQUARIE HASTINGS

There are more than 1400 roads within the Port Macquarie-Hastings Council (PMHC) Local Government Area (LGA), covering more than 1300km. These include single lane unsealed roads servicing very few rural properties to high traffic arterial roads with more than 15,000 vehicle movements per day.

Road maintenance is a 'core service' for Port Macquarie-Hastings Council.

Resource constraints and a significant backlog of roads maintenance and renewal works often result in customer requests for roads maintenance activities not being undertaken immediately. Council prioritises works based on risk and public safety.

DID YOU KNOW?

- There are more than 1400 roads in the Port Macquarie-Hastings roads network.
- Together, the roads cover a distance of more than 1300km.
- Some of our busiest roads encounter more than 15,000 traffic movements every day.

What is 'Roads Maintenance'?

Roads maintenance includes much more than just pothole patching. PMHC, as the Roads Authority for the over 1300km network, is responsible for:

Sealed road surface repairs:

- Inspections,
- Pothole patching, and
- Jetpatching.

Sealed road pavement repairs including:

- Heavy patching,
- Deep lift asphalt patching,
- Bitumen resealing, and
- Hotmix resurfacing.

Unsealed road maintenance

- Maintenance grading, and
- Gravel resheeting.

Bridges and Culverts

Road Drainage

- Kerb and gutter,
- Stormwater pipes and pits,
- Open drains, and
- Shoulder grading.

Roadside vegetation

- Roadside slashing,
- Outreach mowing,
- Weed control,
- Tree management, and
- Mowing and trimming.

Roadside furnishings including:

- Road signage (STOP, Giveway etc.),
- Line marking,
- Guardrails,
- Guideposts,
- Bus shelters, and
- Street seats and handrails.

HOW DO I REPORT A ROAD PROBLEM?

Customers are able to report road issues to Council by either:

- Contacting the Council Call Centre on (02) 6581 8111
- Via email to info@pmhc.nsw.gov.au
- In person at any Council office
- In writing to PO Box 84, Port Macquarie NSW 2444
- Using Mobile/Smartphone applications e.g. *Snap-Send-Solve*

PORT MACQUARIE HASTINGS

A7 ROAD HIERARCHY

TOP 145 NUMERICAL ORDER

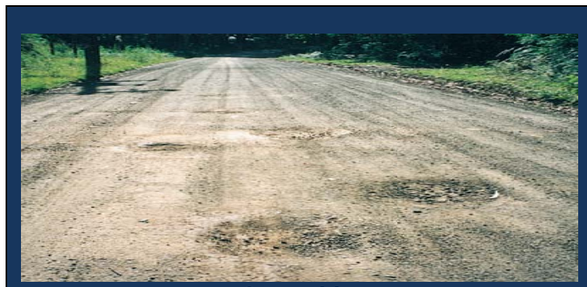
Rank	Road Description
1	Ocean Drive - Port Macquarie (Gordon to Mathew Flinders)
1	Ocean Drive - Port Macquarie (Mathew Flinders to Lake Cathie)
1	Ocean Drive (lake Cathie to Kew)
2	Lake Road - Ocean Drv to Oxley Hwy Port Macq
3	Lake Road - Ocean Drv to Gordon St Port Macq
4	Hastings River Drive - Pt Macq
5	Gordon Street - Lake Rd to Horton St Port Macq
6	Houston Mitchell Dr - L Cathie
7	Bago Road - Wauchope
8	Pacific Drive - Port Macquarie
9	Clifton Drive - Port Macquarie
10	High Street - Wauchope
11	Bold Street - Laurieton
11	Kew Road - Laurieton
12	Carrington Street - Wauchope
13	Cameron Street - Wauchope
14	Jindalee Road - Port Macquarie
15	Central Road - Port Macquarie
16	William St - Port Macquarie
17	Horton Street - Port Macquarie
18	Clarence St - Port Macq
19	Stewart St - Port Macquarie
20	Lord Street - Port Macquarie
21	Kennedy Drive - Port Macquarie
22	Fernhill Road - Port Macquarie
23	Chestnut Road - Port Macquarie
24	Blackbutt Rd - Port Macquarie
25	Munster St - Port Macquarie
26	Beechwood Road - Yippin Creek
27	Stoney Creek Road - Redbank
28	Short Street - Port Macquarie
29	Hayward St - Port Macquarie
30	Buller Street - Port Macquarie
31	Granite St - Port Macquarie
32	Uralla Road - Port Macquarie
33	Bolwarra Road - Port Macquarie
34	Jambali Road - Port Macquarie
35	Small Road - Port Macquarie
36	Merrigal Road - Port Macquarie
37	Karungi Crescent - Pt Macq
38	Koala Street - Port Macquarie
39	Flynn Street - Port Macquarie
40	Newport Island Road - Pt Macq
41	Park Street - Port Macquarie
42	Widderson Street - Pt Macq
43	The Parade - North Haven
44	Pacific Highway - Kew (Nancy Bird Walton Rd)
45	Lighthouse Road - Port Macq
46	Acacia Avenue - Port Macquarie
47	Hollingworth Street - Pt Macq
48	King Creek Road - Kings Creek
49	Bay Street - Port Macquarie
50	Bellbowrie Street - Port Macq
51	John Oxley Drive - Wrights Road to Phillip Charlie Drive
52	Stoney Creek Road - Wauchope
53	Hill Street - Port Macquarie
54	Findlay Ave - Port Macquarie
55	Bangalay Dr - Port Macquarie
56	Jonas Absolom Drive - Pt Macq
57	Blackbutt Drive - Wauchope
58	Waugh Street - Wauchope
59	Graham Street - Wauchope
60	Hastings Street - Wauchope
61	Comboyne Street - Kendall
62	Pembrooke Road - Pembrooke
63	Rollands Plains Rd - Tele Pt
64	Kew Comboyne Road
65	Rosewood Rd Sealed - Rosewood
66	Lorne Road Sealed - Lorne
67	Lorne Road Unsealed - Lorne
68	Comboyne Road - Byabarra
69	Reids Road - Pembrooke
70	Rawdon Island Road - Sancrox
71	Boundary St - Port Macq
72	Burrawan Forest Dr -Lake Innes
73	Matthew Flinders Dr - Pt Macq
74	Bellangry Road - Beechwood
75	Murray Street - Port Macquarie
76	Major Innes Road - Pt Macq
77	Barton Cres - Port Macq
78	Campbell Street - Wauchope
79	Laurie Street - Laurieton
80	Belah Road - Port Macquarie
81	Nelson Street - Wauchope
82	Herschell Street - Pt Macq
83	Shelly Beach Road - Pt Macq
84	Bransdon Street - Wauchope
85	John Oxley Drive - Phillip Charlie Drive To Oxley Highway
86	Wallace Street - Wauchope
87	Savoy Street - Port Macquarie
88	Sancrox Road - Sancrox
89	Redbank Road - Redbank
90	Pappinbarra Rd - Upper Pappin
91	Swift Street - Port Macquarie
92	Watonga St - Port Macquarie
93	Dahlsford Drive - Port Macq
94	Livingstone Road - Pt Macq
95	Panorama Drive - Bonny Hills
96	Crestwood Drive - Port Macq
97	Greenmeadows Drive - Pt Macq
98	Wrights Road - Port Macquarie
99	Hindman St - Port Macquarie
100	Emerald Drive - Port Macquarie
101	The Ruins Way Sealed - Pt Macq
102	Waniora Parkway - Port Macq
103	Main St -Comboyne
104	Lake Street - Laurieton
105	Alma Street - North Haven
106	Edith Street - North Haven
107	The Bulkhead - Port Macquarie
108	Kemp Street - Port Macquarie
109	Boronia Crescent - North Haven
110	Gore Street - Port Macquarie
111	Quarry Road - Rosewood
112	The Boulevard - Dunbogan
113	Beach Street - Bonny Hills
114	Ackroyd St - Ocean Drive to Hollingsworth- Port Macquarie
115	Sirius Drive - Lakewood
116	Camden Head Road - Dunbogan
117	Gray Street - Port Macquarie
118	Tallong Drive - L Cathie
119	Jordan Avenue - Bonny Hills
120	Fiona Crescent - L Cathie
121	Ernest Street - L Cathie
122	Glen Haven Drive - Kew
123	Bundella Avenue - L Cathie
124	Kingfisher Road - Port Macq
125	Aqua Crescent - L Cathie
126	Ballengara Bransdon Rd -GScrub
127	Ballengara Bransdon Rd - T Pnt
128	Logans Cross Rd - Logans Cross
129	Herons Ck Rd Sealed -Herons Ck
130	Herons Ck Rd Unseal- Herons Ck
131	Maria River Rd -Limeburners Ck
132	Shoreline Drive - Riverside
133	Maria River Road - Riverside
134	Cap Cook Bicentenary Dr - WHvn
135	Henry Kendall Dr - Laurieton
136	Stewarts River Road - Lorne
137	Byabarra Bagnoo Rd - Byabarra
138	Forbes River Road - Birdwood
139	Forbes River Road - Yarras
140	Pipeclay Rd Sealed - Pipeclay
141	Pipeclay Rd Unseal - Pipeclay
142	Logans Crossing Road - Kendall
143	Middle Rock Rd Sealed - L Cath
144	Middle Rock Rd Unseal - L Cath
145	Albert Street - Kendall

Outside Port Macquarie

Top 10 Road

Asset Management Plan: Transport	Service Level: Unsealed Roads Maintenance
Asset Overview	Council currently provides and maintains 465km of unsealed road network, comprising 179 individual roads across the local government area. Conditions of unsealed roads are highly variable, and dependant on weather, location and traffic.
Asset Value	As at 30 June 2016, Council's unsealed road assets are valued at $94.3M current replacement cost.
Asset Backlog	48km of the network, comprising 24 segments within 4 high risk roads (Lorne Road, Maria River Road, Pappinbarra Road, and The Hatch Road), are in condition 4 or 5, due to insufficient application of gravel material. This represents a $1.45M infrastructure backlog, as reported in Special Schedule 7 as at 30 June 2016.
Community Engagement	Council undertakes regular community engagement on how the community feels about our region, current Council services and community expectations on levels of service. Recent engagement activity includes the February 2015 phone survey (sample over 600 people) conducted by Micromex, the October 2015 to December 2015 Your Voice Our Community face-to-face and online engagement process (sample 274 people), and the July 2016 region-wide telephone survey conducted by University of Technology Sydney (sample 800 people). These interactions have highlighted the community's continuing desire to do more when it comes to our roads. Council have listened to the priority the community place on continuing to build on the progress made over the last 5 years in prioritising funding to maintain and renew Council's road network.

Comments	Risks	Responses
Current asset management practice for unsealed road networks requires application of new gravel material on average every 8 years. For Council's network of 465km this equates to 58km of new gravel every year. Current operations are providing approximately 21km of new gravel per annum.	Continued loss of gravel and infrequent grading resulting in continuing deterioration of network, resulting in compromised connectivity and loss of all weather access across parts of Council's network, and a reduction in vehicle travel speed on poor condition roads.	Existing SRV funding is supporting the maintenance of the network at an average yet deteriorating condition, however additional funding is required to halt the deterioration of this asset class.



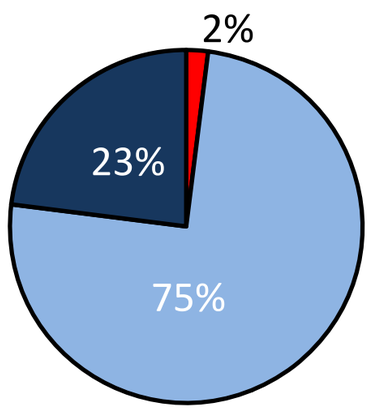
6 Monthly

12 Monthly

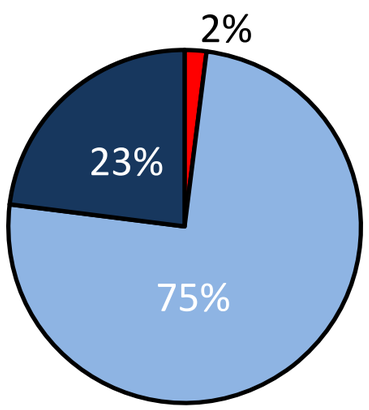
Unscheduled

Asset Condition - Unsealed Roads

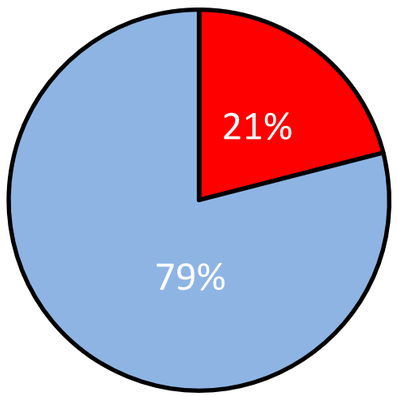
Continue SRV Funding



2016 Network Condition



Discontinue SRV Funding (Immediate Impact)



6 Monthly | 12 Monthly | Unscheduled

Asset Management Plan: Transport	Service Level: Unsealed Roads Maintenance

	Current - Continuation of Existing SRV Funding	Reduced - Discontinuation of SRV Funding
Asset Condition	Average condition. Significant renewal and upgrade required.	Poor and deteriorating condition. Significant renewal and upgrade required.
Level of Service	*Continuation of existing level of service.* - 560km of scheduled grading per annum - New gravel placed on 21km of network per annum - 3 x crews undertaking 12 monthly grading plus 1 x crew undertaking 6 monthly grading (19 roads 6-monthly service, 160 roads annual service)	*Immediate decrease in level of service.* - 400km of scheduled grading per annum - New gravel placed on 18.5km of network per annum - 3 x crews undertaking 12 monthly grading (140 roads annual service, 39 roads unscheduled service).
Service Cost 2016-17 General Fund Allocation 2016-17 SRV Allocation **2016-17 Total Service Cost**	 $1,620,301 $ 438,438 **$2,058,739**	 $1,620,301 $ - **$1,620,301**

Key Outcomes	1. A loss of the SRV in 2017/18 would halt then reverse the critical progress made in recent years. Council would no longer be in a financial position to strategically manage its unsealed road assets, and the condition of the network would deteriorate year on year. 2. A significantly smaller number of rural roads would be graded annually. 3. There would be a significant decrease in the level of service provided to residents by these assets.

PORT MACQUARIE
HASTINGS
COUNCIL

Port Macquarie-Hastings Council
Unsealed Roads
Scheduled Grading Programme

Revision Date January 2017

Contents

UNSEALED ROAD SCHEDULED GRADING PROGRAMME

1 PURPOSE

The purpose of the grading programme is to provide a scheduled grading service to all identified Priority 1 and Priority 2 unsealed roads.

Priority 1 Unsealed Roads are graded on a 6 month Programme

Priority 2 Unsealed roads are graded on a 12 month Programme

Our roads are one of our most critical assets, which is why Council continues to prioritise their maintenance.

The Scheduled Grading program will help make unsealed roads safer and provide a specified service within Council's available resources.

2 OBJECTIVES & BENEFITS

Council maintains approx. 465km of unsealed roads, with a total of 560km of grading undertaken each year. Council has priortised the maintenance of its unsealed road network into three categories with the objective to provide an appropriate risk based allocation of available resources.

Roads are categorised as Priority 1, Priority 2 or Unscheduled.

Scheduled maintenance allows the community to have confidence in the maintenance of the road assets and can become familiarised with the regular attendance. It also allows for the most efficient and economic allocation of Council's limited resources in maintains the unsealed network and ensuring most of the net work is attend to on a regular basis.

Priority 1 Roads - Receive scheduled grading every 6 months. Formed roads providing a significant function within the network and have been assessed based on a multitude of factors including traffic volumes, traffic type, school bus routes and other factors contribution to the importance of the road within the overall network.

Priority 2 Roads - Receive scheduled grading every 12 months. Formed roads providing general access throughout the area generally for multiple properties.

Unscheduled - Do not receive regular grading. Usually unformed sections of road represented by access tracks or worn surface only. Usually only provide access to one or potentially two properties. Road sections within the unscheduled list will be attended to if and when resources allow following a visual assessment.

3 PROGRAMMING

Under the current available funding Council is able to provide 4 wet grading crews. 1 crew is allocated permanently to the 6 month grade two crews are allocated permanently to the 12 month programme whilst one crew is allocated mostly to the 12 month programme and partly to the 6 month Programme.

The attached Programme List at annexure A2 lists each of the grading crews and the roads allocated to either the 6 or 12 month scheduled grading programmes.

As evidenced by its title the Unscheduled Roads group are only attended to on an ad-hoc basis when assessed as requiring attention and as resources allow following Council's adopted public risk management process for road assets.

4 BUDGET

The budget is set annually through Council's adopted Operational Budget. Currently the grading budget is currently set at approx. $1.75M and this is supplemented through the 5 year SRV by approx. $430k, giving an overall budget of approx. $2.2M. The SRV funding provided to unsealed road maintenance allows Council to employ contract plant and operators being two rollers and two water carts, to create a total of 4 Grading crews when combined with existing Council resources.

The SRV is due to expire on 30 June 2017. Should no alternate funding be available at the time of expiry, a review of the scheduled maintenance grading programme will be required as the number of grading crews will reduce from 4 to at least 3 and potentially only 2 depending on resourcing available.

5 CONDITION ASSESSMENT

As the majority of roads are managed on scheduled programme, condition assessments will general only occur on an ad-hoc basis or where Council receives a customer request relating to the condition of the road.

This is particularly relevant for the Unscheduled Roads, where works will only be considered following a visual inspection after a customer request for maintenance has been received.

Council will from time to time undertake are wide network assessments.

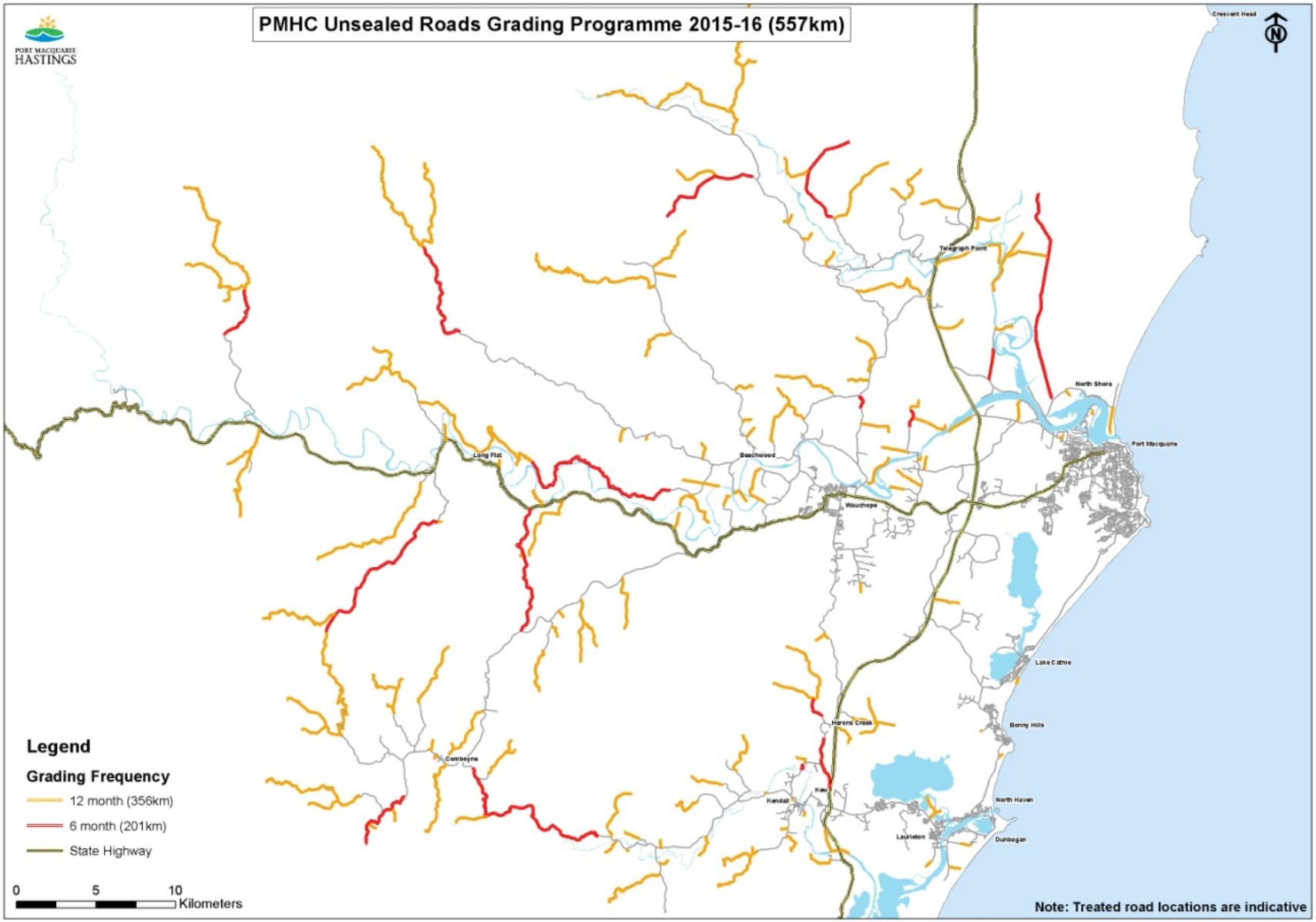
6 ADMINISTRATION

The implementation of the Scheduled Grading Programme is the responsibility of Council's Transport and Stormwater Network Group. The programme will be maintained and updated monthly through the Programme List in TRIM D2016/712571. This will be the responsibility of the Transport and Stormwater Network Operations Manager or Operations Engineer.

This information is to be recorded in Attachment A2 - Programme List

ATTACHMENTS

A1 PLAN SHOWING ROADS ON THE SCHEDULE GRADING PROGRAM



A2 PROGRAMME LIST

Order	Unsealed Road	Grader Number	Programme Frequency	Length (kms)	Width (m)	Area (m2)	Road Hierarchy TOTAL	2014-15 Start Date Date	2014-15 Start Date Date2	2015-16 Start Date	2015-16 Start Date2	2016-17 Start Date
1	Sharkeys Rd	Grader 1	12 monthly	3.4	6	20400	7		16/07/2014	8/07/2015	13/05/2016	
2	Cowal Creek Rd	Grader 1	12 monthly	11.1	6	66600	21		22/07/2014	17/07/2015	16/05/2016	
3	Apple Tree Rd	Grader 1	12 monthly	0.4	6	2400	4		28/07/2014	20/07/2015		
4	The Cedars Rd	Grader 1	12 monthly	1.5	5	7500	3		6/08/2014	21/07/2015		
5	Eastern Boundary Rd	Grader 1	12 monthly	4	6	24000	9		8/08/2014	4/08/2015	30/05/2016	
6	Foxs Rd	Grader 1	12 monthly	3.1	5	15500	14		13/08/2014	11/08/2015		
7	Ready Money Rd	Grader 1	12 monthly	2.2	5	11000	6		15/08/2014	10/06/2016		
8	Upper Rollands Plains Rd	Grader 1	12 monthly	3.6	6	21600	24		19/08/2014	16/09/2015	9/06/2016	
9	Littles Loop Rd	Grader 1	12 monthly	6.4	6	38400	25		21/08/2014	4/09/2015	15/06/2016	
10	Clarefield Dungay Rd	Grader 1	12 monthly	11	6	66000	18		9/09/2014	14/08/2015	22/06/2016	
11	Molly Milligan Rd	Grader 1	12 monthly	2.1	6	12600	4		4/09/2014	24/08/2015		6/07/2016
12	Spokes Rd	Grader 1	12 monthly	0.3	5	1500	6		25/09/2014	22/09/2015		19/07/2016
13	Doyles Rd	Grader 1	12 monthly	0.9	5	4500	4		26/09/2014	22/09/2015		19/07/2016
14	Herberts Rd	Grader 1	12 monthly	0.9	5	4500	3		27/09/2014	23/09/2015		20/07/2016
15	Myall Scrub Rd	Grader 1	12 monthly	1.2	5	6000	2		1/10/2014	25/09/2015		25/07/2016
16	Scotts Plains Rd	Grader 1	12 monthly	2.6	5	13000	3		2/10/2014	30/09/2015		10/08/2016
17	Gum Scrub Rd	Grader 1	12 monthly	5.5	6	33000	19		8/10/2014	1/10/2015		28/07/2016
18	Red Hill Rd	Grader 1	12 monthly	2.6	6	15600	5		28/10/2014	14/10/2015		11/08/2016
19	Baileys Rd	Grader 1	12 monthly	1.2	6	7200	9		30/10/2014	20/10/2015		18/08/2016
20	Sun Valley Rd	Grader 1	12 monthly	2.7	6	16200	11		31/10/2014	21/10/2015		22/08/2016
21	Haydons Wharf Rd	Grader 1	12 monthly	3.1	5	15500	14		4/11/2014	22/10/2015		31/08/2016
22	Hyndmans Creek Rd	Grader 1	12 monthly	3.7	5	18500	6		19/11/2014	30/10/2015		2/09/2016
23	Jones Rd	Grader 1	12 monthly	4.3	6	25800	18		12/11/2014	16/11/2015		7/09/2016

24	Lantana Rd	Grader 1	12 monthly	2.3	6	13800	9		17/11/2014			12/09/2016
25	~~Thone River Rd~~	Grader 1	12 monthly	1.6	5	8000	4		3/12/2014			
26	Blanches Rd	Grader 1	12 monthly	0.6	5	3000	3		4/12/2014			21/09/2016
27	Fegans Rd	Grader 1	12 monthly	0.9	5	4500	2		5/12/2014	20/11/2015		21/09/2016
28	Bulli Creek Rd	Grader 1	12 monthly	4	6	24000	15		9/12/2014	20/11/2015		22/09/2016
29	Violets Rd	Grader 1	12 monthly	0.9	5	4500	2		11/12/2014	25/11/2015		29/09/2016
30	McWhirters Rd	Grader 1	12 monthly	0.6	5	3000	5		12/12/2014	25/11/2015		29/09/2016
31	Llanthony Rd	Grader 1	12 monthly	1.4	5	7000	1		12/01/2015	26/11/2015		8/10/2016
32	Deep Creek Rd	Grader 1	12 monthly	5	6	30000	6		15/01/2015	30/11/2015		29/09/2016
33	Churchills Rd	Grader 1	12 monthly	0.5	5	2500	8		15/01/2015	9/12/2015		12/10/2016
34	Long Flat Rec Ground	Grader 1	12 monthly	0.5	6	3000	0		15/01/2015	9/12/2015		
35	Boat Harbour Lane	Grader 1	12 monthly	0.8	5	4000	2		16/01/2015	9/12/2015		12/10/2016
36	Blue Gum Lane	Grader 1	12 monthly	0.2	6	1200	8		20/01/2015	14/01/2016		
37	Tilbaroo Rd	Grader 1	12 monthly	6.2	6	37200	8		21/01/2015	14/01/2016		11/11/2016
38	Toms Creek Rd (12mth,Sth)	Grader 1	12 monthly	12.7	6	76200	13		6/02/2015	27/01/2016		18/11/2016
39	Wallis Rd	Grader 1	12 monthly	9.7	5	48500	11		11/03/2015	11/12/2015		14/10/2016
40	Kindee Rd	Grader 1	12 monthly	6.6	6	39600	20		26/03/2015	2/03/2016		8/12/2016
41	Pine Scrub Rd	Grader 1	12 monthly	2.3	5	11500	4		16/04/2015	10/03/2016		14/12/2016
42	Pipe Clay Rd (12mth,West)	Grader 1	12 monthly	14.9	6	89400	17		20/04/2015	19/01/2016		20/12/2016
43	Boytrang Rd	Grader 1	12 monthly	0.9	5	4500	3		30/04/2015			
44	Hartys Plains Rd (Nth)	Grader 1	12 monthly	1.2	5	6000	8		7/05/2014	13/08/2015		
45	Monaghans Rd	Grader 1	12 monthly	1.4	5	7000	5		8/05/2015	12/04/2016		
46	Bartletts Rd	Grader 1	12 monthly	1.2	5	6000	5		8/05/2015	12/04/2016		
47	Hewens Rd	Grader 1	12 monthly	2.5	6	15000	12		12/05/2015	7/04/2016		
48	Koree Island Rd	Grader 1	12 monthly	1.4	6	8400	17		14/05/2015	15/04/2016		
49	West Frazers Creek Rd	Grader 1	12 monthly	1.2	5	6000	5		18/05/2015	19/04/2016		
50	Mortons Creek Rd	Grader 1	12 monthly	4.7	6	28200	22	2/07/2014	29/05/2015	12/04/2016		
51	Orara Lane	Grader 1	12 monthly	1.4	6	8400	6	10/07/2014		13/04/2016		
52	Caparoos Rd	Grader 1	12 monthly	0.9	6	5400	2	11/07/2014		19/04/2016		
53	Mi Trotters Rd	Grader 1	12 monthly	0.9	5	4500	3	14/07/2014	15/06/2015	9/05/2016		
54	Fishers Ridge Rd	Grader 1	12 monthly	1.5	6	9000	13	15/07/2014	15/06/2015	10/05/2016		

55	Dog Track Rd	Grader 2	12 monthly	0.2	6	1200	0			15/07/2015	15/06/2016		
56	Araluen St	Grader 2	12 monthly	0.1	5	500	2		17/07/2014	14/07/2015	16/06/2016		
57	Cobb and Co Rd	Grader 2	12 monthly	0.4	5	2000	4		5/08/2014	1/07/2015	16/06/2016		
58	Foxes Creek Rd	Grader 2	12 monthly	1.6	5	8000	6		18/07/2014	2/07/2015	17/06/2016		
59	Cedar Loggers Rd	Grader 2	12 monthly	0.5	5	2500	10		24/07/2014	13/07/2015		1/07/2016	
60	Batar Creek Rd	Grader 2	12 monthly	4.1	6	24600	15		25/07/2014	3/07/2015	22/06/2016		
61	Old Coach Rd	Grader 2	12 monthly	1.8	5	9000	12		31/07/2014	10/07/2015	29/06/2016		
62	North Wall Rd	Grader 2	12 monthly	1.6	6	9600	25		14/08/2014	21/07/2015			
63	Plomer Rd (12mth,Nth)	Grader 2	12 monthly	7	6	42000	26		7/08/2014	27/07/2015		6/07/2016	
64	Sandfly Alley	Grader 2	12 monthly	0.5	5	2500	20		19/08/2014			14/07/2016	
65	Hacks ODonnel Rd	Grader 2	12 monthly	0.2	5	1000	0		21/08/2014	31/07/2015			
66	Mundays Lane	Grader 2	12 monthly	5.4	5	27000	3		22/08/2014	4/08/2015		19/07/2016	
67	Woodlands Rd	Grader 2	12 monthly	2	5	10000	3		4/09/2014			20/07/2016	
68	Pappinbarra Rd (Left Arm)	Grader 2	12 monthly	7.5	6	45000	11		10/10/2014	30/09/2015		21/09/2016	
69	Pappinbarra Rd (Right Arm)	Grader 2	12 monthly	6.8	6	40800	7		24/10/2014	16/11/2015		18/10/2016	
70	Lemon Gum Rd	Grader 2	12 monthly	1.2	5	6000	8		25/11/2014	26/11/2015		26/10/2016	
71	Roachs Rd	Grader 2	12 monthly	0.3	5	1500	6		26/11/2014	30/11/2015		3/11/2016	
72	Forbes River Rd (12mth,Nth)	Grader 2	12 monthly	11	6	66000	30		18/09/2014	24/08/2015		2/09/2016	
73	Coombes Rd	Grader 2	12 monthly	4.8	5	24000	6		3/10/2014	15/09/2015		22/08/2016	
74	Bitter Ground Creek Rd	Grader 2	12 monthly	1.2	5	6000	0						
75	Costigans Rd	Grader 2	12 monthly	6.5	6	39000	7		8/09/2014	11/08/2015		1/08/2016	
76	Clayworths Rd	Grader 2	12 monthly	1.7	5	8500	2		17/09/2014			17/08/2016	
77	Elands/Collings Rd	Grader 2	12 monthly	8.3	6	49800	44		18/02/2015	1/12/2015		11/11/2016	
78	Ducks Rd	Grader 2	12 monthly	2.5	5	12500	4		11/03/2015			24/11/2016	
79	Mount Gibraltar Rd	Grader 2	12 monthly	0.8	5	4000	3		4/01/2015				
80	Latimores Rd (West)	Grader 2	12 monthly	1.5	4	6000	1		20/03/2015	29/03/2016			
81	Innes View Rd	Grader 2	12 monthly	4.6	6	27600	14		30/01/2015	2/03/2016		29/11/2016	
82	Phyiffers Rd	Grader 2	12 monthly	2.5	5	12500	7		12/01/2015	15/03/2016		8/12/2016	
83	Ducks Ridge Rd	Grader 2	12 monthly	4.2	6	25200	11		11/12/2014	27/01/2016			
84	Amos Rd	Grader 2	12 monthly	0.4	5	2000	11		12/12/2014	4/02/2016			
85	Parsons Rd	Grader 2	12 monthly	0.8	5	4000	1		10/12/2014	2/02/2016			

86	Ponsfords Rd	Grader 2	12 monthly	5	6	30000	19		19/12/2014	19/02/2016		
87	Herbert Gill Rd	Grader 2	12 monthly	1	5	5000	2		9/12/2014	22/01/2016		
88	Browns Rd	Grader 2	12 monthly	0.6	5	3000	2		5/12/2014			
89	Stennets Rd	Grader 2	12 monthly	4.5	6	27000	13		27/11/2014	11/01/2016		9/12/2016
90	Manbridges Rd	Grader 2	12 monthly	0.2	5	1000	1		2/12/2014	25/02/2016		
91	Lansdowne Rd	Grader 2	12 monthly	6.5	6	39000	6		20/03/2015	18/03/2016		
92	Latimores Rd (East)	Grader 2	12 monthly	1.2	5	6000	1		26/03/2015	26/02/2016		
93	Playfords Rd	Grader 2	12 monthly	4.5	6	27000	18			29/03/2016		
94	Blackbutt Rd (12mth, West)	Grader 2	12 monthly	0.8	6	4800	5		7/04/2015	30/03/2016		
95	Koppin Yarrat Rd	Grader 2	12 monthly	3	5	15000	7		8/04/2015	12/04/2016		
96	Tipperary Rd	Grader 2	12 monthly	4	6	24000	21		16/04/2015	20/04/2016		
97	Isaacs Rd	Grader 2	12 monthly	1.3	5	6500	8		21/04/2015	24/04/2016		
98	McLeods Cl	Grader 2	12 monthly	0.2	5	1000	4		22/04/2015	25/04/2016		
99	Sullivans Rd	Grader 2	12 monthly	1.3	5	6500	12		23/04/2015	9/05/2016		
100	Cooks Rd	Grader 2	12 monthly	1	5	5000	1			12/05/2016		
101	~~Gills Rd~~	Grader 2	12 monthly	0.2	5	1000	2			10/05/2016		
102	Bell Haven Rd	Grader 2	12 monthly	0.7	5	3500	6		28/04/2015	12/05/2016		
103	Hannam Vale Rd	Grader 2	12 monthly	4.6	6	27600	14		29/04/2015	16/05/2016		
104	Roys Rd	Grader 2	12 monthly	0.3	5	1500	3		8/05/2015	17/05/2016		
105	~~Barlin Rd~~	Grader 2	12 monthly	0.5	5	2500	0					
106	Sommervilles Rd	Grader 2	12 monthly	1.4	5	7000	8		3/06/2015	24/05/2016		
107	North Branch Rd	Grader 2	12 monthly	2.3	6	13800	21	4/07/2014	27/05/2015	25/05/2016		
108	Upsalls Ck Rd	Grader 2	12 monthly	2.1	6	12600	26	9/07/2014	4/06/2015	31/05/2016		
109	Black Creek Rd	Grader 2	12 monthly	3.2	6	19200	18	14/07/2014	15/06/2015	9/06/2016		
110	Smiths Rd	Grader 2	12 monthly	0.1	5	500	1			15/06/2016		
111	Byabarra Bagnoo Rd (1st)	Grader 3	6 monthly	9.1	6	54600	32	1/07/2014		21/07/2015		13/07/2016
112	Forbes River Rd (1st)(6mth,Sth)	Grader 3	6 monthly	4	6	24000	64	10/07/2014				
113	Toms Creek Rd (1st)(6mth,Nth)	Grader 3	6 monthly	10	6	60000	60	4/07/2014		31/07/2015		12/08/2016
114	Wingham Rd (1st)	Grader 3	6 monthly	6	6	36000	56	17/07/2014		20/08/2015		13/09/2016

115	Lorne Rd (1st)	Grader 3	6 monthly	19.2	7	134400	52	25/07/2014		28/08/2015		21/09/2016
116	Logans Crossing Rd (1st)	Grader 3	6 monthly	0.4	6	2400	23	12/08/2014		25/09/2015		20/09/2016
117	Herons Creek Rd (1st)	Grader 3	6 monthly	4	6	24000	20	12/08/2014		29/09/2015		16/09/2016
118	Blackbutt Rd (1st)(6mth,East)	Grader 3	6 monthly	3	6	18000	12	21/08/2014		29/09/2015		
119	Stoney Creek Rd (1st)	Grader 3	6 monthly	1	7	7000	29	22/08/2014		22/09/2015		28/07/2016
120	Rawdon Island Rd (1st)(6mth,Sth)	Grader 3	6 monthly	1	6	6000	30	20/08/2014				
121	~~Fernbank Creek Rd (1st)(6mth)~~	Grader 3	6 monthly	0.6	6	3600	0	17/09/2014		17/11/2015		
122	~~Plomer Rd (1st)(6mth,Sth)~~	Grader 3	6 monthly	7	7	49000	49	3/09/2014		22/10/2015		
123	Maria River Rd (1st)	Grader 3	6 monthly	14.6	8	116800	41	5/09/2014		22/09/2015		18/10/2016
124	The Hatch Rd (1st)	Grader 3	6 monthly	2.5	6	15000	20	3/10/2014		28/10/2015		14/11/2016
125	Ballengarra Bransdon Rd (1st)	Grader 3	6 monthly	3.9	6	23400	41	9/10/2014		17/11/2015		8/12/2016
126	Old Kempsey Rd (1st)	Grader 3	6 monthly	3.3	6	19800	24	22/10/2014		4/11/2015		23/11/2016
127	Bril Bril Bottlebrush Rd (1st)	Grader 3	6 monthly	7.5	6	45000	43	24/10/2014		19/11/2015		30/11/2016
128	Pappinbarra Rd (1st)	Grader 3	6 monthly	8.5	6	51000	53	3/11/2014		27/10/2015		
129	Pipe Clay Rd (1st)(6mth,East)	Grader 3	6 monthly	10	6	60000	60	3/11/2014		2/12/2015		
130	Byabarra Bagnoo Rd (2nd)	Grader 3	6 monthly	9.1	6	54600	32	3/12/2014		4/12/2015		
131	Forbes River Rd (2nd)(6mth,Sth)	Grader 3	6 monthly	4	6	24000	64	12/01/2015		14/12/2015		
132	Toms Creek Rd (2nd)(6mth,Nth)	Grader 3	6 monthly	10	6	60000	60	3/02/2015		13/01/2016		
133	Wingham Rd (2nd)	Grader 3	6 monthly	6	6	36000	56	19/02/2015		8/02/2016		
134	Lorne Rd (2nd)	Grader 3	6 monthly	19.2	7	134400	52	5/03/2015		23/02/2016		
135	Logans Crossing Rd (2nd)	Grader 3	6 monthly	0.4	6	2400	23	27/03/2015		16/03/2016		
136	Herons Creek Rd (2nd)	Grader 3	6 monthly	4	6	24000	20	7/04/2015		18/03/2016		
137	Blackbutt Rd (2nd)(6mth,East)	Grader 3	6 monthly	3	6	18000	12	10/04/2015		21/03/2016		
138	Stoney Creek Rd (2nd)	Grader 3	6 monthly	1	7	7000	29	14/04/2015		7/03/2016		
139	Rawdon Island Rd (2nd)(6mth,Sth)	Grader 3	6 monthly	1	6	6000	30	16/04/2015		27/04/2015		
140	~~Fernbank Creek Rd (2nd)(6mth)~~	Grader 3	6 monthly	0.6	6	3600	0	17/04/2015				
141	~~Plomer Rd (2nd)(6mth,Sth)~~	Grader 3	6 monthly	7	7	49000	49	15/04/2015				

142	Maria River Rd (2nd)	Grader 3	6 monthly	14.6	8	116800	41	26/02/2015		30/03/2016		
143	The Hatch Rd (2nd)	Grader 3	6 monthly	2.5	6	15000	20	21/04/2015		27/04/2015		
144	Ballengarra Bransdon Rd (2nd)	Grader 3	6 monthly	3.9	6	23400	41	30/04/2015		9/05/2016		
145	Old Kempsey Rd (2nd)	Grader 3	6 monthly	3.3	6	19800	24	8/05/2015		12/05/2016		
146	Bril Bril Bottlebrush Rd (2nd)	Grader 3	6 monthly	7.5	6	45000	43	12/05/2015		24/05/2016		
147	Pappinbarra Rd (2nd)	Grader 3	6 monthly	8.5	6	51000	53	4/06/2015		1/06/2016		
148	Pipe Clay Rd (2nd)(6mth,East)	Grader 3	6 monthly	10	6	60000	60	30/06/2015		27/06/2016		
149	Muscio Rd	Grader 4	12 monthly	0.5	5	2500	3	11/08/2014		15/07/2015		
150	Walters Rd	Grader 4	12 monthly	1.9	5	9500	6	12/08/2014		16/07/2015	24/05/2016	
151	Narrow Gut Rd	Grader 4	12 monthly	2	5	10000	4	22/08/2014		28/07/2015	30/05/2016	
152	Rawdon Island Rd (12mth,Nth)	Grader 4	12 monthly	2.3	6	13800	17	16/08/2014		23/07/2015	2/06/2016	
153	Freemans Rd	Grader 4	12 monthly	2.3	6	13800	8	2/09/2014		24/07/2015	31/05/2016	
154	Bengal Rd	Grader 4	12 monthly	0.6	5	3000	6	15/08/2014		29/07/2015		
155	Byrams Rd	Grader 4	12 monthly	0.4	5	2000	0	15/08/2014		29/07/2015		
156	Riverbend Rd	Grader 4	12 monthly	0.9	5	4500	4	14/08/2014		25/05/2016		
157	Glen Ewan Rd	Grader 4	12 monthly	1.8	5	9000	13	19/09/2014		31/07/2015	9/06/2016	
158	Elfords Rd	Grader 4	12 monthly	1	6	6000	4	22/09/2014		5/08/2015	16/06/2016	
159	Bill Hill Rd	Grader 4	12 monthly	1.9	5	9500	12	12/05/2015		8/02/2015		
160	Hacks Ferry Rd	Grader 4	12 monthly	5.6	6	33600	14	20/04/2015				
161	Mooney St	Grader 4	12 monthly	0.5	4	2000	0	8/05/2015				
162	Charlie Watt Reserve	Grader 4	12 monthly	0.3	6	1800	0					
163	Farrawells Rd	Grader 4	12 monthly	5.3	5	26500	19	23/04/2015		19/02/2016		
164	Cutlers Rd	Grader 4	12 monthly	0.5	5	2500	2	7/05/2015		1/03/2016		
165	Tower Rd	Grader 4	12 monthly	3	6	18000	8	30/06/2015		2/03/2016		
166	Rowsells Rd	Grader 4	12 monthly	1.5	5	7500	7			2/07/2015		
167	Brookhouse Rd	Grader 4	12 monthly	5	6	30000	10	23/07/2014		3/07/2015	14/03/2016	
168	Hursley Rd	Grader 4	12 monthly	2.2	6	13200	11	5/08/2014		10/07/2015		
169	Ennis Rd	Grader 4	12 monthly	2.2	5	11000	13	7/08/2014		13/07/2015	16/05/2016	
170	~~Letterewe Rd~~	Grader 4	12 monthly	0.5	5	2500	0	26/09/2014				
171	Rosewood Rd	Grader 4	12 monthly	3.5	6	21000	6	23/09/2014		11/08/2015	21/06/2016	
172	~~Carinya Rd~~	Grader 4	12 monthly	0.3	5	1500	2	26/09/2014		23/06/2016		

173	Huntington Rd	Grader 4	12 monthly	0.9	5	4500	26	30/09/2014		12/08/2015	24/06/2016	
174	Hartys Plains Rd (Sth)	Grader 4	12 monthly	1.7	5	8500	8	1/10/2014			29/03/2016	
175	Old King Creek Rd	Grader 4	12 monthly	0.6	6	3600	4	2/10/2014		3/12/2015	17/06/2016	
176	Ryans Rd	Grader 4	12 monthly	1.8	6	10800	7	12/02/2015		27/01/2016		23/11/2016
177	Little Bago Lane	Grader 4	12 monthly	0.4	5	2000	4	11/02/2015		20/10/2015		18/11/2016
178	Nelsons Rd	Grader 4	12 monthly	0.7	5	3500	1	11/02/2015		20/10/2015		18/11/2016
179	Bobs Creek Rd	Grader 4	12 monthly	3	6	18000	24	15/01/2015		7/10/2015		21/09/2016
180	Cedar Wood Lane	Grader 4	12 monthly	0.3	5	1500	4	10/02/2015				14/11/2016
181	Cutty Creek Rd	Grader 4	12 monthly	1.5	5	7500	8	4/02/2015		13/10/2015		9/11/2016
182	Roseneath Rd	Grader 4	12 monthly	1.7	5	8500	9	6/02/2015		14/10/2015		8/11/2016
183	Cluleys Rd	Grader 4	12 monthly	1.2	6	7200	9	12/01/2015		6/10/2015		16/11/2016
184	Blackbutt Rd (12mth, East)	Grader 4	12 monthly	2.8	6	16800	21	25/11/2014		8/09/2015		9/08/2016
185	Old School Rd	Grader 4	12 monthly	2.7	6	16200	5	26/11/2014		23/09/2015		31/08/2016
186	Old Mill Rd	Grader 4	12 monthly	2.8	5	14000	6	14/11/2014		25/09/2015		2/09/2016
187	Berryman Rd	Grader 4	12 monthly	1	5	5000	1	13/11/2014		7/09/2015		11/08/2016
188	Stage Coach Rd	Grader 4	12 monthly	2	5	10000	4	2/10/2014		21/08/2015		6/07/2016
189	Sunnyvale Rd	Grader 4	12 monthly	2.5	6	15000	7	7/10/2014		29/06/2016		
190	Ivers Rd	Grader 4	12 monthly	1	5	5000	8	3/10/2014		20/08/2015		1/07/2016
191	Sirius Boat Ramp	Grader 4	12 monthly	0.05	8	400	0					
192	St Albans Boat Ramp	Grader 4	12 monthly	0.05	8	400	0					
193	Henry Kendall Reserve	Grader 4	12 monthly	2.2	6	13200	20	11/10/2014		24/08/2015		8/07/2016
194	Bruce Porter Reserve	Grader 4	12 monthly	0.3	5	1500	0	30/10/2014				
195	~~Laurieton Lanes~~	Grader 4	12 monthly	0.3	4	1200	0					
196	Deauville Rd	Grader 4	12 monthly	1.3	5	6500	15	23/10/2014		27/08/2015		11/07/2016
197	Beach St	Grader 4	12 monthly	0.8	6	4800	5	29/10/2014		28/08/2015		13/07/2016
198	Dunbogan Tip	Grader 4	12 monthly	1.4	6	8400	40	20/10/2014				14/07/2016
199	Pilot Beach Tracks	Grader 4	12 monthly	0.5	5	2500	30	22/10/2014		1/09/2015		15/07/2016
200	4wd Access Track	Grader 4	12 monthly	0.5	5	2500	10	31/10/2014		2/09/2015		20/07/2016
201	Shark Beach Reserves	Grader 4	12 monthly	0.4	5	2000	20	3/11/2014				25/07/2016
202	Grants Head Beach Access	Grader 4	12 monthly	0.3	5	1500	0					
203	Sponneys Bay / Tennis Crts	Grader 4	12 monthly	0.3	6	1800	0					26/07/2016

204	McGilvray Rd	Grader 4	12 monthly	0.6	6	3600	2	5/11/2014		4/09/2015		28/07/2016
205	Middle Rock Rd	Grader 4	12 monthly	1	6	6000	30	11/11/2014		4/09/2015		9/08/2016
206	Stevens St	Grader 4	12 monthly	0.3	5	1500	3	25/02/2015				29/11/2016
207	~~The Ruins Way~~	Grader 4	12 monthly	1	6	6000	33	17/02/2015				
208	~~Lady Nelson Dr~~	Grader 4	12 monthly	0.3	6	1800	37	18/02/2015				25/11/2016
209	Wood St Lane	Grader 4	12 monthly	0.3	5	1500	0	19/02/2015				
210	Hibbard Dr Carpark	Grader 4	12 monthly	0.08	8	640	0	19/02/2015				28/11/2016
211	Tuffins Lane Carpark	Grader 4	12 monthly	0.08	8	640	0	18/02/2015				
212	Fernbank Creek Rd (12mth)	Grader 4	12 monthly	2.7	6	16200	62	16/09/2014		19/11/2015	14/06/2016	