

Business and Employment Development Committee

Meeting Date: Wednesday, 28 August, 2019

Location: Jervis Bay Rooms, City Administrative Centre, Bridge Road, Nowra

Attachments (Under Separate Cover)

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4. Reports

BE19.15 Princes Highway Corridor Strategy

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Princes Highway Corridor Strategy

Shoalhaven City Council appreciates the opportunity to make a submission on the Princes Highway Corridor Strategy.

The Transport for NSW recently completed the “Princes Highway Corridor Strategy – August 2016”. This is a comprehensive piece of work. Shoalhaven City Council will refer to this document throughout this submission. Shoalhaven City Council will also reference issues that will be outside of this LGA. This is because the Princes Highway serves as a key link in the movement of people and freight to and from other LGA’s and Australian states.

KEY ISSUES AND RECOMMENDATIONS

1.2 About the Princes Highway

The region is home to a number of key industries that need mentioning being horticulture and food processing.

It is also important to note that a number of Defence bases are located along, or in areas accessed via the Princes Highway, namely HMAS Albatross, HMAS Creswell, Twofold Bay Ordnance Loading Area and RAAF East Sale. Where there are Defence facilities there are defence support industries that also require access to the Princes Highway for the movement of freight and people.

The Transport for NSW (2016:40) identifies the importance of the Princes Highway for the movement of retail cargo and fuel distribution.

Retail cargo: Demand for retail cargo services in the Princes Highway Corridor is related to population needs and surges during peak holiday periods. Growth is strongly related to population growth.

Fuel distribution: Fuel is essential for consumers and industries throughout the Princes Highway Corridor, with tankers travelling daily to deliver petrol, diesel, oil and gas to towns and centres along the Princes Highway. Fuel transport from Sydney services towns and centres along the Princes Highway as far south as Bega, while fuel transport from Melbourne services towns south of Bega, including Eden.

2.1 Corridor strategy objectives

The interconnectivity of the Princes Highway to other national or state highways needs to be examined to determine the most effective and productive transport network for freight and communities.

Efficient transport is key to regional development. The success of the regions is necessary for a strong Australian economy. While many more people live in metro areas, the Princes Highway is a key strategic route that transports the raw materials and produce required to sustain metropolitan Australian.

3.1 Safety

Items for consideration

- 3.1.1 Lack of, or narrow, shoulders
- 3.1.2 Narrow bridges (already included)
- 3.1.6 Frustration at intersections during peak periods can lead to risky behaviour (in order to access highway) and subsequent crashes.
- 3.1.8 Heavy vehicle access to the Princes Highway is constrained in many areas. The lack of use of the Princes Highway by heavy vehicles could be a reason that heavy vehicles represent a small amount of accidents on the road.
- 3.1.10 Tourists can be unfamiliar drivers – to locality, to wildlife (kangaroos), to higher speeds on regional roads
- 3.1.10 Heavy Vehicle Rest Areas need to be located near food outlets
- 3.1.14 Congestion in holiday peaks and an understanding that peak tourist times are from October long weekend through to late February or even to Easter.

Strong focus on improving safety outcomes along the corridor, including where freight and other traffic intersect. This could include information such as crash statistics, and evidence of where locations have safety issues.

Improving safety on the Princes Highway is a high priority. For too long users of the Princes Highway been subjected to unacceptably high risk. Examples identified by the Transport for NSW (2016) include:

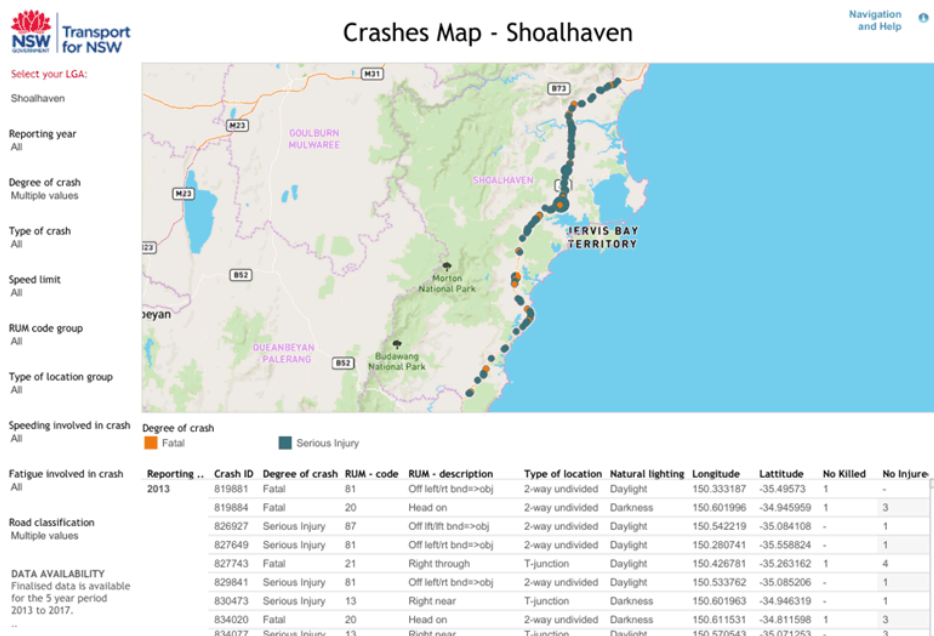
- Jervis Bay Road to Milton is the worst performing of the rural sections with an annual casualty crash rate **more than double** the NSW average (emphasis added)
- Moruya to Narooma – worst performing section in terms of sealed shoulder widths with only 4% meeting the target of 2m Narooma to Bega – 2.5km to the north and south of Brogo River has a poor crash injury including 10 injury crashes resulting in 2 fatalities
- The section between Eden to Edrom Road has the highest casualty crash rate per 100 million vehicle kilometres of all the rural sections
- Most sections of the Princes highway south of Jervis Bay Road have deficient sealed shoulder widths

(Transport for NSW 2016:140,152,153,155)

Shoalhaven City Council suggests that the Federal Government's Princes Highway Corridor Strategy use the safety issues identified by Transport for NSW's Princes Highway Corridor Strategy as a basis to identify priority safety projects.

The Princes Highway is the key link between the 49 towns and villages in the Shoalhaven. The Princes Highway, in the Shoalhaven, has a high incidence of fatalities and accidents resulting in serious injury.

(Transport for NSW, 2019)



Between 2013 and 2017 there were 22 crashes resulting in 29 fatalities, 138 crashes resulting in serious injuries and 217 crashes resulting in moderate injuries on the Princes Highway in the Shoalhaven LGA alone. These numbers do not include subsequent crashes resulting in injury post 2017 nor does it include the number of near misses that regularly occur along the Princes Highway in the Shoalhaven and beyond.

- *Pedestrian crashes are highest in the Nowra town centre*
- *Of the urban areas, Nowra is the only town centre that has had a casualty crash rate per kilometre exceeding the class average with a rate of 2.97 compared to a class average of 2.215*

(Transport for NSW 2016:65)

The Princes Highway serves as the single north-south spine road to and through Nowra Bomaderry's system of urban areas, connecting local and regional urban centres. There are no practical alternatives to this route. Being the single north-south route through Shoalhaven City - the Princes Highway has multiple functions as an important link in the state road network, as a local collector, distributor, and local access road. Congestion in recent years in the vicinity of Nowra has led to it being described as the 'Achilles heel' of the Nowra-Bomaderry road network. Delays, particularly during peak periods and the holiday periods are causing considerable frustrations for local residents and businesses as well as other road users. In addition to capacity issues, safety for road users, pedestrians and cyclists is of ongoing concern. Sustained growth in traffic has resulted in safety and capacity issues along the entire length of the Princes Highway through Shoalhaven City.

Increasing traffic will further impact the level of safety on the Princes Highway at Nowra. The average daily traffic volume in Nowra is nearly 48,000. Shoalhaven City Council strategic (TRACKS) model forecasts traffic on the Princes Highway to grow at an average of 2.3 per cent per annum compared to 2006 flows. This rate would be equivalent to 1.8 per cent per annum using base (2014) traffic flows. (ARUP 2018:41-42).

Shoalhaven City Council has identified the need to construct the East Nowra Sub Arterial. The East Nowra Sub Arterial Road (ENSA) is proposed to connect Greenwell Point Road (in the vicinity of Old Southern Road) to the Princes Highway, at North Street and Junction Street. ENSA will provide a much needed alternative connection to the highway from the East Nowra, Worrigea and coastal village areas. The link will relieve pressure along the Kalandar Street / Princes Highway route to the Nowra CBD. ENSA will take over 900 vehicles per hour off of the constrained highway (Stantec 2018:5).

ESNA will essentially act like a de-facto bypass for local traffic attempting to access the commercial centres of Nowra Bomaderry. It is acknowledged that this will lead to improved safety on the bypassed corridor through less conflict between local and through traffic and between vehicles and pedestrians (RMS 2018:80).

Refer to Appendix 1 for more information about ENSA and Nowra Key Road Projects.

Shoalhaven City Council believes that the East Nowra Sub Arterial (ENSA) be identified as a priority project in the Princes Highway Corridor Strategy.

3.2 Access and connectivity

Items for consideration:

- 3.2.19 The Princes Highway is the main connector to many rural towns. Local activity movements should include school/educational movements
- 3.2.28 Providing access for High Productivity Vehicles (HPV) to the entire corridor including A-doubles and PBS Level and above
- 3.2.30 Include intermodals

Access and connectivity: strong focus on improving access to economic opportunities, including regional growth areas along the corridor. This could include information such as locations where certain vehicles cannot access the corridor and information relating to events which have created significant road closures.

The NSW Princes Highway Corridor Strategy has identified a number of constraints.

The range of heavy vehicle types along the entire route is diverse, ranging from light trucks to 19 metre B-doubles. B-doubles are restricted to the northern and southern extremities of the route, mainly because of geometric constraints on the Princes Highway and potential risks associated with critical infrastructure, particularly bridges.

(Transport for NSW 2016:7)

Figure 5-16 Heavy vehicle constraints on the Princes Highway

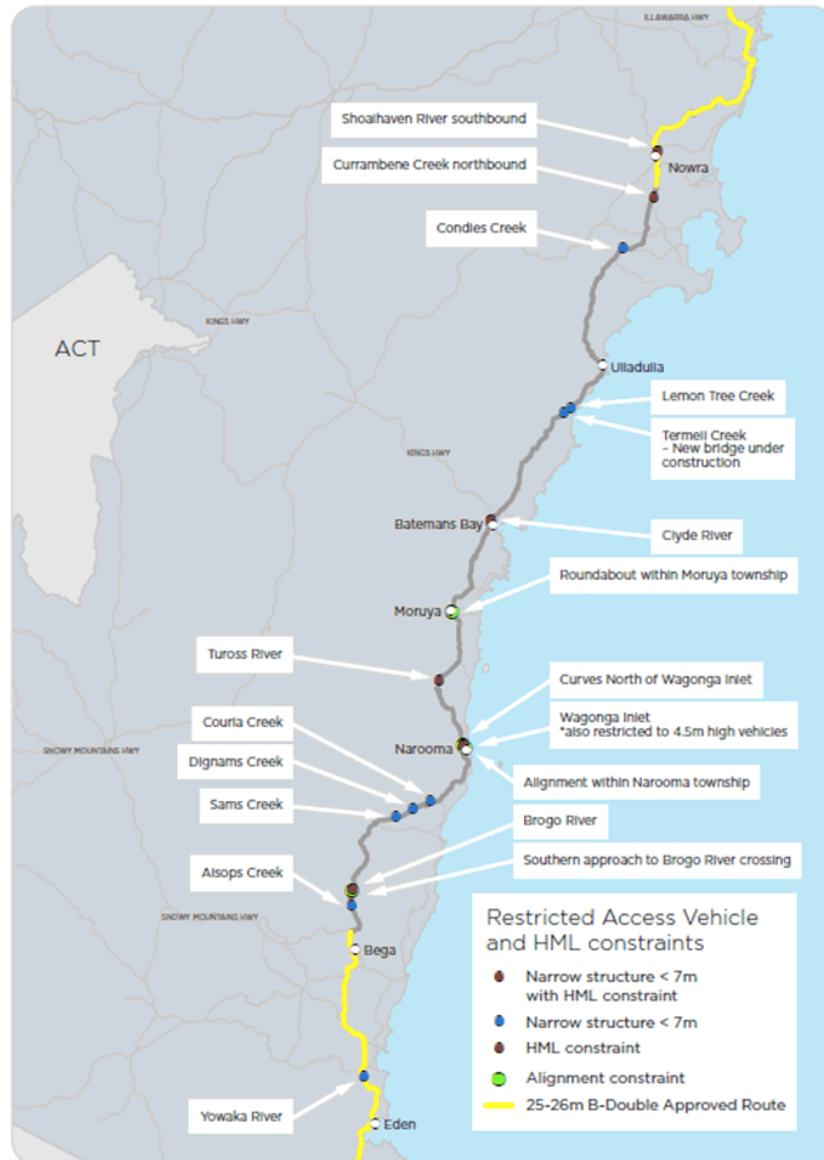


Figure 1: Transport for NSW Princes Highway Corridor Strategy 2016:91

Shoalhaven City Council suggests that the Federal Government's Princes Highway Corridor Strategy uses the Transport for NSW Princes Highway Corridor Strategy to identify constraints and access issues.

The Princes Highway is the primary north-south route connecting the south coast of NSW with the rest of NSW, to Victoria and the ACT. There are limited east west links along the south coast of NSW and so incidents on the Princes Highway can result in significant detours of hundreds of kilometres that often do not cater for heavy vehicles. Examples include detours up to:

- 186km for vehicles travelling between Eden and the Victorian border
- 298km for vehicles travelling from the north of Batemans Bay to Bega
- 179km between Nowra and Batemans Bay
- 92.4km between Albion Park and Nowra.

There is no detour available for incidents that close the Nowra Bridge.

Shoalhaven City Council suggests that the Federal Government's Princes Highway Corridor Strategy identifies the importance of;

- **Upgrading existing east-west links including:**
 - The Illawarra Highway (no B-Double access – see images below)
 - Moss Vale Road (limited heavy vehicle access)
 - The Kings Highway
 - The Snowy Mountains Highway
- **Upgrading of other east-west links across the escarpment to cater for heavy vehicle access such as MR92 from Nowra joining the Hume Highway at Yass, Gunning or Goulburn.**



Figure 2: Truck stuck on hairpin bend, Macquarie Pass, Illawarra Highway. Image Illawarra Mercury



Figure 3: Another truck stuck on same hairpin bend on Macquarie Pass



Figure 4: Illawarra Highway – same corner different heavy vehicle



Figure 5: Another heavy vehicle - different corner Illawarra Highway

Due to the importance of east-west linkages with the Princes Highway, Shoalhaven City Council will be submitting the following motion at the 2019 ALGA Conference.

Motion:

- I. That the Australian Government recognise that the escarpment crossings of the Great Dividing Range connecting the coastal plain highways to the inland highway networks are roads that are of vital importance to the economic development of Australia and the regions.
- II. That the escarpment crossings that support, or can induce, a significant freight task should be earmarked to be upgraded to ensure compliance for HML freight vehicles and that these key freight links be included in the National Freight and Supply Chain Strategy and National Action Plan.

See Attachment 1 for further details.

3.3 Efficiency and sustainability

Items for consideration:

Is it important to reiterate that the “Princes Highway is the **only** land transport corridor south of Bomaderry with the South Coast Rail Line terminating at Bomaderry”. (Transport for NSW, 2016)

- 3.3.31 An integrated network of HML capable routes needs to exist to support the Princes Highway rather than it being the sole solution to the movement of freight to the regional hinterland. More east-west links are integral in making the network functional and productive.
- 3.3.37 Also some priority must exist for traffic, especially freight, to enter the Princes Highway at major intersections
- 3.3.39 Vertical alignment of the Princes Highway allows heavy vehicles to move at reasonable speed. Need to maximise passing opportunities on uphill sections.

“Light-vehicle drivers do not understand the rules and realities about driving with and around trucks. Because of technology, trucks these days are bigger and stronger and heavier and can keep pace with cars. They are not slow and sluggish anymore”

Daryl Dickenson, Trucking Australia 2019 Special Report, The Australian,
Wednesday 3 April 2019

Efficiency and sustainability: Promotes better environmental outcomes from more efficient travel. This could include information such as locations where road congestion is causing issues and locations where the corridor has either positively or negatively impacted the amenity of an area.

Intersection performance is a key issue with many experiencing excessive congestion. The NSW Princes Highway Corridor Strategy recommends that a detailed investigation of the intersections along the highway is conducted from Bomaderry to the Victorian Border (Transport for NSW, 2016:78).

Shoalhaven City Council suggests that the Federal Government work with the NSW Government to undertake an intersection study and identify priority projects.

Shoalhaven City Council recommends that the Jervis Bay Road, Island Point Road and Wool Road intersections with the Princes Highway be identified as being in need of priority works for increased efficiency and safety.

Shoalhaven City Council believes that a north-bound heavy vehicle rest stop, close to amenities and food outlets is required in Nowra/Bomaderry.

3.4 Investment and Vision

Items for consideration:

The population of south east Australian will continue to increase as it has an ideal climate and proximity to Sydney, Canberra and Melbourne. This in itself creates a need for the increase in employment opportunities. Industry sectors that create local wealth through wages and salaries linked to higher productivity and external income are essential. These sectors do require the transport network to be efficient.

- 3.4.49 A federal/state/local funding formula needs to be established to deliver road infrastructure improvements.
- 3.4.51 Local network links can achieve reduction in congestion of Princes Highway. These solutions are sometimes beyond the financial capacity of local government and require Federal and/or State government support.
- 3.4.55 Include infrastructure for buses and heavy vehicles – for all types of electric vehicles
- 3.4.57 NHVR to take a lead role and prioritise areas of improvement and where regulation relaxation is not being met by conservative agencies

Investment and vision: transparent investment priorities achieving value for money and linked together as part of an overarching vision for the corridor. This could include information such as initiatives that have been successfully implemented in other corridors that could apply to the Princes Highway.

Shoalhaven City Council suggests that the Federal Government works with the NSW, Victorian and South Australian State Governments and Councils to identify priority works in each LGA.

Shoalhaven City Council suggests that the Federal Government seeks input from respected organisations such as SEATS (South Eastern Australia Transport Strategy) to ensure that projects with regional benefits are identified.

3.5 Corridor activation (regional development)

Items for consideration:

There are other industry stimuli other than the size of regional towns. Assets such as military bases, secure water supply, seaports and mineral resources all play a part in establishing and sustaining employment areas. The Princes Highway does not in itself create the economic activity but plays an important servicing role.

Commercial centres, large and small, are a function of population and economic need and improvements to the Princes Highway will not create economic activity but will facilitate and support any growth that occurs.

- 3.5.59-61 Peak tourism is not a year round activity. The disruption to regular industrial economic activity by peak tourism congestion is real as delivery and freight schedules are disrupted.
- 3.5.62 Bypass options need to be enshrined into local plans NOW to avoid future conflict and allow business and other compatible zones to be established along the corridor.
- 3.5.63 Need to acknowledge that there will continue to be no rail services for a large proportion of the corridor and that the movement of freight will be reliant on heavy road vehicles.
- 3.5.65 Geography of coastal hinterland is not conducive to “line of sight” technologies: even digital telephony has its challenges when the business case has to balance between coastal villages and Princes Highway users.
- 3.5.67 Need to consider port related industries no matter how distant e.g. food processing.

Corridor activation: the role of the corridor in driving better regional development and industry performance. This could include information such as examples of transport corridor treatments leading to improved industry performance and information related to specific industries that could change how the corridor is currently used. It could also include experiences relating to the way land use planning is integrated with transport corridors (i.e. Movement and Place).

Shoalhaven City Council suggests that the Federal Government take a whole of government approach to regional development and combine Princes Highway upgrades with Regional Development programs such as the Regional Jobs and Investment Package which was successfully rolled out on the South Coast of NSW.

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Stantec. (2018). *Initial Indicative Network BCR Assessment*.

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Transport for NSW. (2019, March 28). *Roadsafety*. Retrieved from https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tblga=4

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References: 6852E & 28939E

Appendix 1 – Shoalhaven City Council submission to the 2019 ALGA Conference

2. ESCARPMENT LINKAGES
<p>Motion:</p> <ol style="list-style-type: none"> I. That the Australian Government recognise that the escarpment crossings of the Great Dividing Range connecting the coastal plain highways to the inland highway networks are roads that are of vital importance to the economic development of Australia and the regions. II. That the escarpment crossings that support, or can induce, a significant freight task should be earmarked to be upgraded to ensure compliance for HML freight vehicles and that these key freight links be included in the National Freight and Supply Chain Strategy and National Action Plan.
<p>National Objective:</p> <p>To address the inefficiencies in the national freight network specifically;</p> <ul style="list-style-type: none"> • by ensuring that the efficient movement of freight from areas of production and processing to areas of further processing or consumption is optimised and • by making existing and new escarpment crossings HML compliant.
<p>Summary of Key Arguments:</p> <p>The Great Dividing Range is Australia's most substantial mountain range and the third longest land-based range in the world. It comprises a series of plateaus and low mountain ranges roughly paralleling the coasts of Queensland, New South Wales, and Victoria for 3,700 km. Generally, the Great Dividing Range represents a vertical barrier of an average of 800m – 1000m. Escarpment crossings are necessary for the movement of freight between the coastal plains and the highway networks of the interior.</p> <p>The lack of HML compliant escarpment crossings creates inefficiencies by adding significant additional distances and transportation costs to freight tasks. In addition, the lack of escarpment crossings means that transport movement is vulnerable to incidents on the limited number of available routes.</p> <p>Australia's freight system is the foundation of its economy and success. It connects Australia to the world and allows domestic freight to be moved between regions and within cities. The movement of freight is a key economic driver for Australia. The domestic freight task increased 50% in the 10 years to 2016 and is tipped to grow another 52% by 2036 (<i>Inquiry into National Freight and Supply Chain Priorities—REPORT</i>).</p> <p>Freight movement is a key economic driver for the Nation and HML compliant escarpment crossings are integral to the efficient movement of freight in Eastern Australia.</p>

Appendix 2

Shoalhaven City Council

Nowra Key Road Projects Strategic Overview

Adopted: May 2017

Revised: December 2018



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3	01 May 2017	Steve Thompson	Steve Thompson
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Shoalhaven City Council

Revision	Date	Authors	Reviewer / Approved
1	December 2018	Greg Pullen	Greg Pullen
2			
3			
4			

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Appendix B – Key Road Project Summaries

Appendix C – Indicative Project Timing

Appendix D – Indicative Capital Expenditure by Council

1. Introduction

1.1 Purpose of this Strategic Overview

This strategic overview document provides a succinct review and proposed directions for the future implementation of key road projects in the Nowra area. The document is designed to support Shoalhaven City Council (**Council**) in their lobbying and funding requests to enable key road projects to be progressed in a logical sequence which meets the needs of Council, the NSW Roads and Maritime Services (**RMS**) and the Shoalhaven public.

1.2 Overview of Key Road Projects

A total of 13 key road projects have been identified as being critical to the effective movement of vehicles to and through the Nowra / Bomaderry urban area over the next 20+ years. In the longer-term, a by-pass of Nowra is likely to be required, though these identified projects will assist to ensure that the local area continues to meet minimum service needs in the short to medium term.

It should be noted that not all projects may need to be delivered over the short to medium term. This will be dictated by the priority and timing of each, as further discussed in later sections of this document.

The 13 key road projects include (generally from north to south):

1. Berry to Bomaderry upgrade;
2. Moss Vale Road Duplication;
3. Far Northern Collector Road (short-term);
4. North Nowra Link Road (long term beyond 2028);
5. Highway upgrade - Moss Vale Road roundabout to Bolong Road;
6. Shoalhaven River Bridge;
7. Highway upgrade - Shoalhaven River Bridge to Warra Warra Road;
8. East Nowra Sub-Arterial;
9. Kalandar Street / Princes Highway upgrade;
10. Yalwal Road / Albatross Road to Princes Highway (long term);
11. Yalwal Road widening;
12. Yalwal Road / Albatross Road intersection upgrade; and
13. Registered Road Classification for Flinders Road.

Some projects are considered to be major due to their size/cost, whilst others are important due to strategic economic development interests or because they are able to push back other major works (for example the Nowra by-pass). Many of these projects were identified in the Nowra Bomaderry Structure Plan Strategic Directions report, endorsed by the NSW Department of Planning in February 2008.

A short, one page summary of each project is provided in Appendix B.

2. Desired Process and Outcomes

2.1 Desired Outcomes

The desired outcomes of Council in respect of preparing this Strategic Direction are:

- o To facilitate the implementation of the Berry to Bomaderry Upgrade and Nowra Bridge projects by RMS and the Commonwealth of Australia;
- o To ensure that residents of the Nowra / Bomaderry urban area are not unreasonably disrupted by the implementation of the those major projects;
- o To ensure that more localised projects that have a substantive benefit to the operation of the Princes Highway are recognised by the RMS and considered for funding through appropriate State or Commonwealth funding streams; and
- o To ensure that the implementation of major projects do not exacerbate traffic implications at the local level.

To achieve these outcomes, a comprehensive approach to the issue is required, establishing an agreed set of road network implementation priorities to facilitate long-term outcomes.

2.2 Process of Implementation

As any one nominated project is likely to have implications on another project or projects, a preliminary sequencing of these works has been developed by Council utilising the modelling of previous traffic and transport studies (see for example the Nowra CBD Transport Strategy - by Eppell Olsen & Partners, dated December 2003 and Nowra CBD (East) Road Network Strategy Review - by Eppell Olsen & Partners, dated July 2007). This implementation process is set out in the flowchart at Appendix C.

It is noted that there are two projects which Council believe will be required as a minimum prior to the new Shoalhaven River Bridge being constructed. In conjunction with the Berry to Bomaderry Upgrade project, there is risk that the Princes Highway traffic between the Bridge and the existing intersection of the highway with Moss Vale Road will be operating beyond reasonable capacity, resulting in significant impact on the local road network and the State Government endorsed urban land releases. Establishing and implementing a suitable range of projects that enable the highway north of the bridge to operate effectively is required.

Similarly, the operational efficiency of the highway south of the bridge will also need to be addressed in the short and medium term. Particular issues exist around the impacts on Bridge Road as a result of the new bridge arrangements, as well as the increase in the number of traffic signals through central Nowra and the existing pinch point at Kalandar Street. Council's planning has identified a number of short-term projects that have the potential to reduce these impacts, though more significant long-term projects may also be required.

2.3 Requested Outcomes

In respect to the need for co-ordinated action, Council requests that:

- o State funds are allocated to the development of a co-ordinated effort to identify:

- Northern Nowra roads projects, aimed at ensuring that the proposed major highway projects can be accommodated, and that the implementation of regional / local roads form part of the planning for these projects; and
- Southern Nowra roads project, aimed at long-term highway efficiencies that employ regional/localised efforts as part of a co-ordinated response.

These documents would assist Council and RMS in securing detailed design and construction funding either through budget allocation or grants from State or Federal Governments.

In addition, Council continues to support the need for ongoing planning investigations and improvements to the Princes Highway to the south of Nowra - particularly in relation to transformative projects such as the Milton Ulladulla by-pass road. Whilst this document has a focus on the Nowra Bomaderry urban area, the need for work in other areas is also therefore acknowledged.

It is further acknowledged that there are financial implications of these projects for Council, as well as State and, potentially, Federal Governments. Appendix D provides an indication of these financial implications over the next 10 years which have been derived based on the indicative project timing indicated in Appendix C and the following apportionment of costs (overall estimated costs of each project is provided in the project summaries in Appendix B).

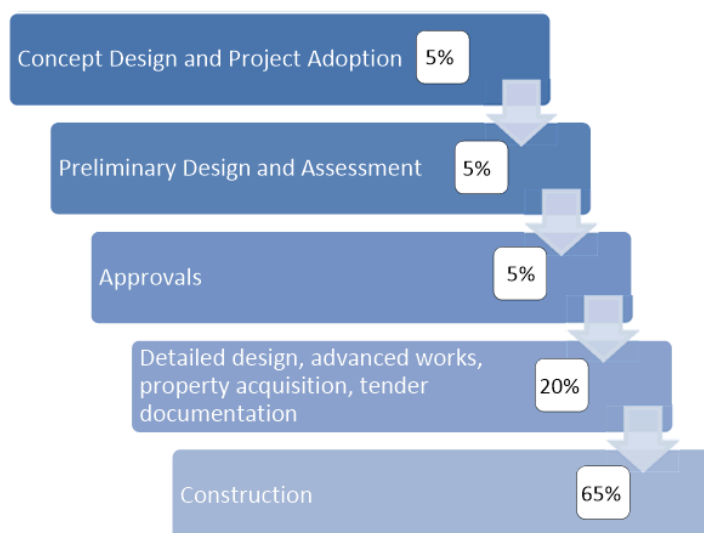


Figure 1: Project Implementation Stages - Including Indicative Cost

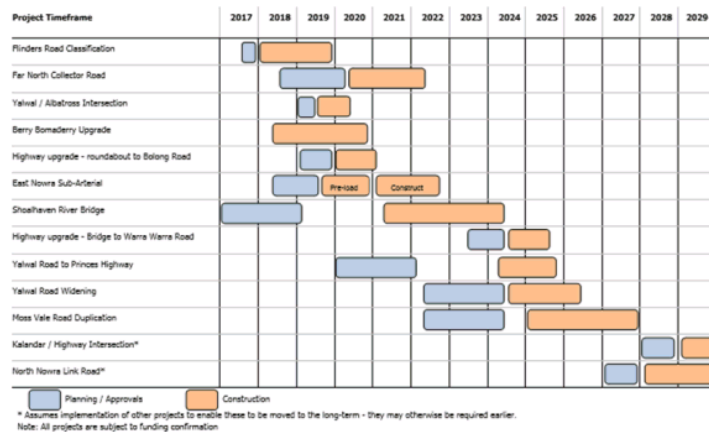
Appendix A – Key Road Projects Briefing Document

BE19.15 - Attachment 1

Our Road Project Priorities

Council have undertaken long-term planning over a number of years, with outcomes continuing to support a number of key projects in the area. In particular, Council is cognisant of ensuring that existing residents and businesses are given equitable access during the construction of the new Shoalhaven River Bridge, and are not unreasonably impacted by the increase in traffic through the northern Bomaderry area. Key projects are needed prior to the Bridge being constructed as outlined below.

Indicative Project Timing



Future Funding

The key issue is providing the co-ordination between all projects and establishing an agreed direction for major local, regional and state level roads across the Nowra Bomaderry urban area. Council acknowledges that there are financial implications of these projects for Council, as well as State and, potentially, Federal Governments.

To better establish and confirm these funding requirements and in respect to the need for co-ordinated action, Council requests that:

- State funds are allocated to the development of a co-ordinated effort to identify:
 - Northern Nowra roads projects, aimed at ensuring that the proposed major highway projects can be accommodated, and that the implementation of regional / local roads form part of the planning for these projects; and
 - Southern Nowra roads project, aimed at long-term highway efficiencies that employ regional/localised efforts as part of a co-ordinated response.

Council also continues to support the need for ongoing planning investigations and improvements to the Princes Highway through and to the south of Nowra - particularly the transformative projects such as the Milton Ulladulla by-pass road, and the future Nowra-Bomaderry by-pass road.



Nowra Key Road Projects

Achieving long-term road network solutions in the Nowra / Bomaderry urban area

Overview and Introduction

This document highlights the ongoing needs of the Shoalhaven community to ensure that the implementation of major road projects not only achieve quality outcomes in terms of travel time along the Princes Highway, but do not cause undue impacts on residents and businesses of the Shoalhaven. An effective road network is also essential to facilitate the housing and population growth in the Shoalhaven as set out in the Illawarra-Shoalhaven Regional Plan. Council is committed to working closely with NSW Roads and Maritime Services to ensure that the delivery of these key projects can be completed in a timely and effective manner.

Council supports the Commonwealth of Australia and the NSW Government in their allocation of funds to the current and future major works programs in the Shoalhaven areas and we look forward to working co-operatively with all parties to facilitate smooth implementation.



Key Projects - Overview

Moss Vale Road Duplication

Strategic Need: Provides access to the Moss Vale Road urban release areas and into North Nowra via the Far North Collector Road.

Project Location: Commencing at the Princes Highway at Bomaderry and terminating at the intersection of Main Road Cambewarra.

Far Northern Collector Road

Strategic Need: Provides a connection from North Nowra to Moss Vale Road that will connect the Moss Vale Road Urban Release Areas to North Nowra providing relief to Moss Vale Road and the Princes Highway. Will also provide relief by removing traffic from the Illaroo Road / Princes Highway intersection.

Project Location: Commencing near the Illaroo Road / West Cambewarra Road intersection, and terminating at the intersection of Moss Vale Road / Bells Lane intersection.

Shoalhaven River Bridge

Strategic Need: Existing southbound (eastern) bridge does not enable suitable service levels (particularly for HML vehicles) due to age / size. A new replacement bridge will increase traffic capacity, reduce congestion and improve the flow of traffic onto and across the Shoalhaven River crossing.

Project Location: Commencing at (or prior to) the intersection of Bolong Road in the north and continuing over the Shoalhaven River to Bridge Road in the south, including grade separation options at Bolong, Illaroo and Bridge Roads.

Yalwal Road Widening

Strategic Need: Provides access to urban release areas at Mundamia from Albatross Road. Also services the University of Wollongong's Shoalhaven Campus and industrial quarries to the west.

Project Location: Commences at Albatross Road intersection (west of highway), continuing through West Nowra urban area to the Flat Rock Dam bridge.

Yalwal Road / Albatross Road Intersection

Strategic Need: Localised issue with conflict between heavy vehicle movements and vehicles accessing residential/education and employment precincts.

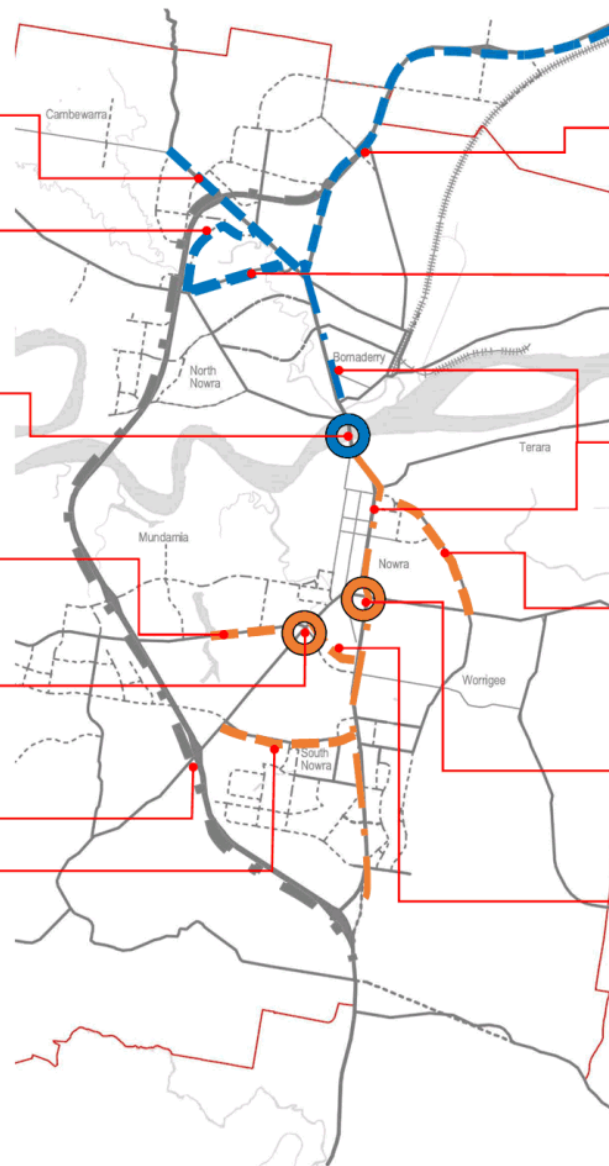
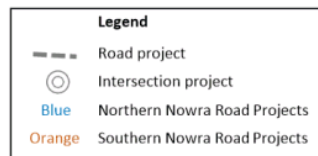
Project Location: Intersection of Yalwal Road and Albatross Road to the west of the existing highway.

Nowra Bypass Road (Long-term project)

Flinders Road Classification

Strategic Need: Classification of Flinders Road to a higher level reflecting its status as primary link between the Princes Highway, Flinders Industrial Estate and Main Road 92. Provides the opportunity to direct heavy vehicles to the new highway connection at Browns Road. Is currently the designated B-double route.

Project Location: Flinders Road extends from the Princes Highway in the east to Albatross Road in the west.



Berry to Bomaderry Upgrade Project

Strategic Need: Completes the duplication (at least two lanes in each direction) of the Princes Highway between Sydney and the Jarvis Bay Road intersection to achieve a safer highway and reduce travel times.

Project Location: Commencing to the south of Berry at the end point of the Foxground & Berry Bypass project, and terminating to the north of the roundabout in Bomaderry (Cambewarra / Moss Vale Road intersection).

North Nowra Link Road

Strategic Need: Provides a future connection from North Nowra to the Princes Highway, reducing pressure on the Illaroo Road / Princes Highway intersection and the flow-on impacts on the Shoalhaven River Bridge.

Project Location: Three options originally considered, with the northern option - commencing on Illaroo Road and terminating at the intersection of Moss Vale Road / Elvin Drive - receiving concept approval by the Planning Assessment Commission (Part 3A major project).

Highway Upgrade - Moss Vale Rd to Warra Warra Rd

Strategic Need: To decrease Highway travel times and improve safety through Bomaderry / Nowra / South Nowra there will be a progressive need to upgrade the highway to three lanes in each direction and signalise each of the major intersections to support projected traffic flows.

Project Location: Commencing at the roundabout in the north (Bomaderry) and continuing to Bolong Road (northern section) and from the Shoalhaven River bridge to Warra Warra Road in the south.

East Nowra Sub-Arterial

Strategic Need: Will reduce congestion on Highway by providing access between the Nowra CBD and the growing East Nowra / Worrige residential area by way of accessing a direct signalised Highway crossing.

Project Location: Commencing in the Nowra CBD at North and Junction Streets, and continuing south east to meet Greenwell Point Road at the intersection of Old Southern Road.

Kalendar Street / Princes Highway Upgrade

Strategic Need: Potential grade separation of Princes Highway at Kalendar Street, improving Highway efficiency. An east-west crossover links residential and commercial areas extracting most vehicles from highway traffic.

Project Location: Intersection of Kalendar Street and Princes Highway, with Highway rising to the north and re-joining the existing highway alignment to the south.

Yalwal / Albatross Rd to Princes Highway

Strategic Need: Provides an additional east west access across the Nowra urban area between areas of significant residential growth and employment / education precincts. Facilitates greater highway flows due to alleviating congestion at Kalendar Street and at Flinders / Browns Road.

Project Location: Commences at Albatross / Yalwal Road (west of highway), continuing through existing vegetated / vacant land to the Highway at or near to the Hillcrest Avenue roundabout.

Appendix B – Key Roads Projects Summaries

Nowra Key Road Projects

Berry to Bomaderry Upgrade

Strategic Need: Completes the duplication (at least two lanes in each direction) of the Princes Highway between Sydney and the Jervis Bay Road intersection to achieve a safer highway and reduce travel times.

Project Location: Commencing to the south of Berry at the end point of the Foxground & Berry Bypass project, and terminating to the north of the roundabout in Bomaderry (Cambewarra / Moss Vale Road intersection).

Approval and Construction Timeframes: Project approved received March 2014. Construction period anticipated to be 2018 - 2020.

AADT 2016: 14,000 2026: 18,000 2036: 24,000

Responsibilities: RMS / Commonwealth

Estimated Cost: \$450 million



Nowra Key Road Projects

Moss Vale Road Duplication

Strategic Need: Provides access to the Moss Vale Road urban release areas and into North Nowra via the Far North Collector Road.

Project Location: Commencing at the Princes Highway at Bomaderry and terminating at the intersection of Main Road Cambewarra.

Approval and Construction Timeframes: No approvals or construction timeframes have been identified.

AADT 2016: 8,000 2026: 10,000 2036: 16,000

Responsibilities: Council / RMS

Estimated Cost: \$50 million

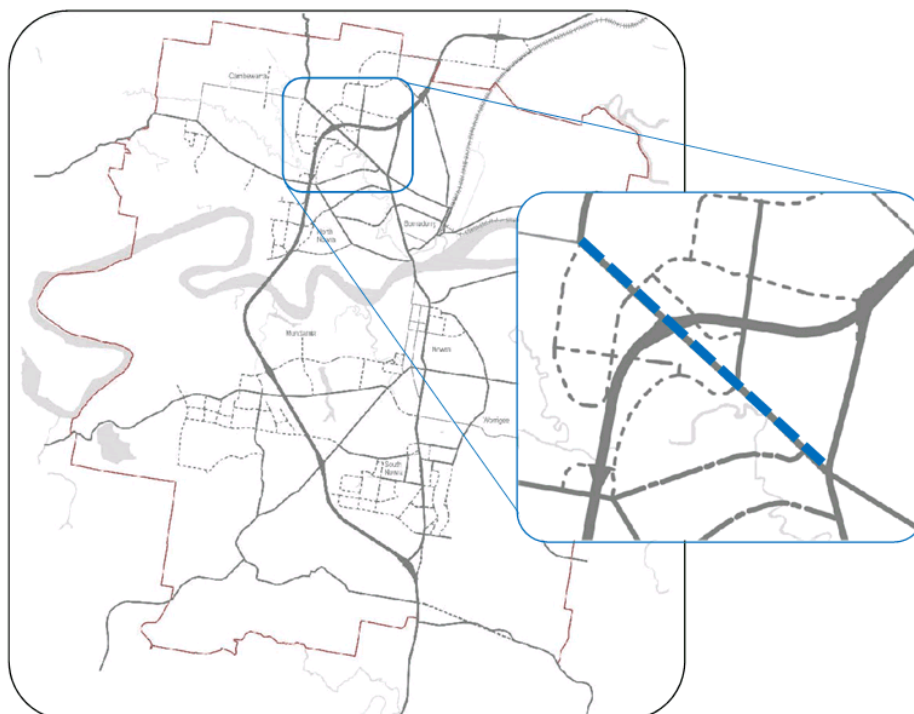
Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Far North Collector Road

Strategic Need: Provides a connection from North Nowra to Moss Vale Road that will connect the Moss Vale Road Urban Release Areas to North Nowra providing relief to Moss Vale Road and the Princes Highway. Will also provide relief by removing traffic from the Illaroo Road / Princes Highway intersection.

Project Location: Commencing near the Illaroo Road / West Cambewarra Road intersection and terminating at the intersection of Moss Vale Road / Bells Lane intersection.

Approval and Construction Timeframes: Project approval could be achieved within 6 months. Construction period expected to be 12 months. (2021/22)

AADT 2016: n/a 2026: 5,000 2036: 8,000

Responsibilities: Council / Commonwealth

Estimated Cost: \$14 million

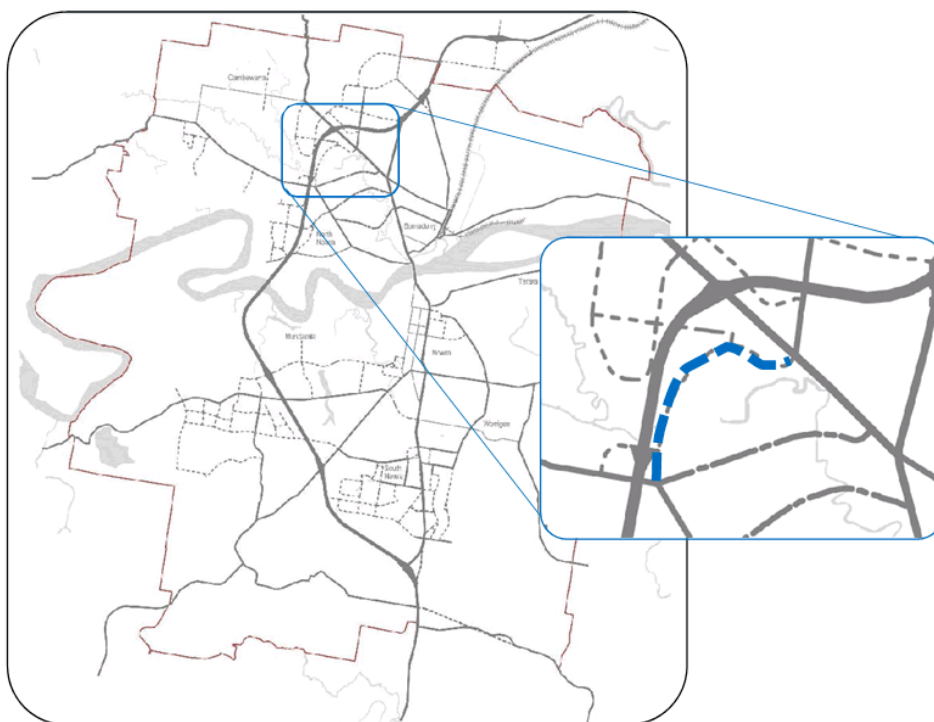
Concept Design and Project Adoption 2008

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

North Nowra Link Road

Strategic Need: Provides a future connection from North Nowra to the Princes Highway, reducing pressure on the Illaroo Road / Princess Highway intersection and the flow-on impacts on the Shoalhaven River Bridge.

Project Location: Three options originally considered, with the northern option - commencing on Illaroo Road and terminating at the intersection of Moss Vale Road / Elvin Drive - receiving concept approval by the Planning Assessment Commission (Part 3A major project).

Approval and Construction Timeframes: Whilst northern option has concept approval, implementation of this and Far Northern Collector Road is not recommended. As Far Northern Collector road is being implemented North Nowra Link Road will be deferred.

AADT 2016: n/a 2026: 7,000 2036: 10,000

Responsibilities: Council / RMS

Estimated Cost: \$15 million

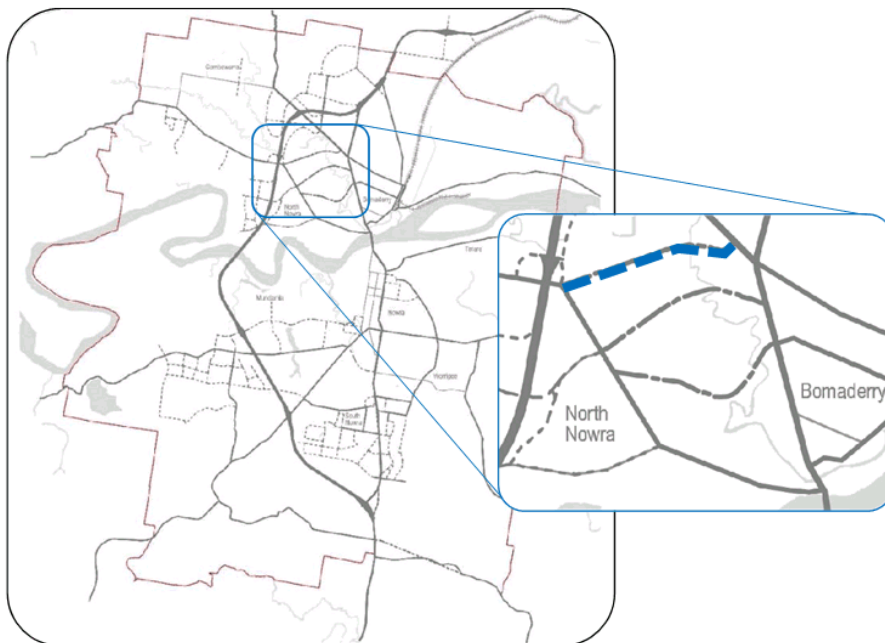
Concept Design and Project Adoption 2008

Preliminary Design and Assessment 2012

Approvals 2013

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Highway upgrade - Moss Vale Road roundabout to Shoalhaven River Bridge

Strategic Need: To decrease Highway travel times and improve safety through Nowra/Bomaderry there will be a progressive need to upgrade the highway to three lanes in each direction and signalise each of the major intersections to support projected traffic flows.

Project Location: Commencing at the roundabout in the north and continuing to Bolong Road in the south.

Approval and Construction Timeframes: No approvals or construction timeframes have been identified.

AADT 2016: 22,000 2026: 30,000 2036: 40,000

Responsibilities: RMS

Estimated Cost: \$30 million

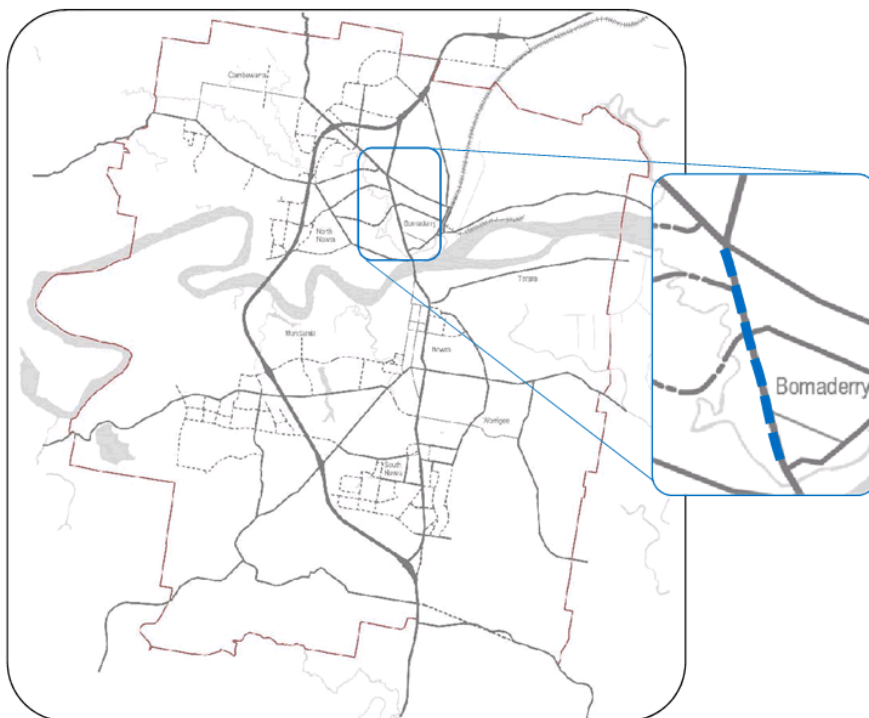
Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Shoalhaven River Bridge

Strategic Need: Existing southbound (eastern) bridge does not enable suitable service levels (particularly for HML vehicles) due to age / size. A new replacement bridge will increase traffic capacity, reduce congestion and improve the flow of traffic onto and across the Shoalhaven River crossing.

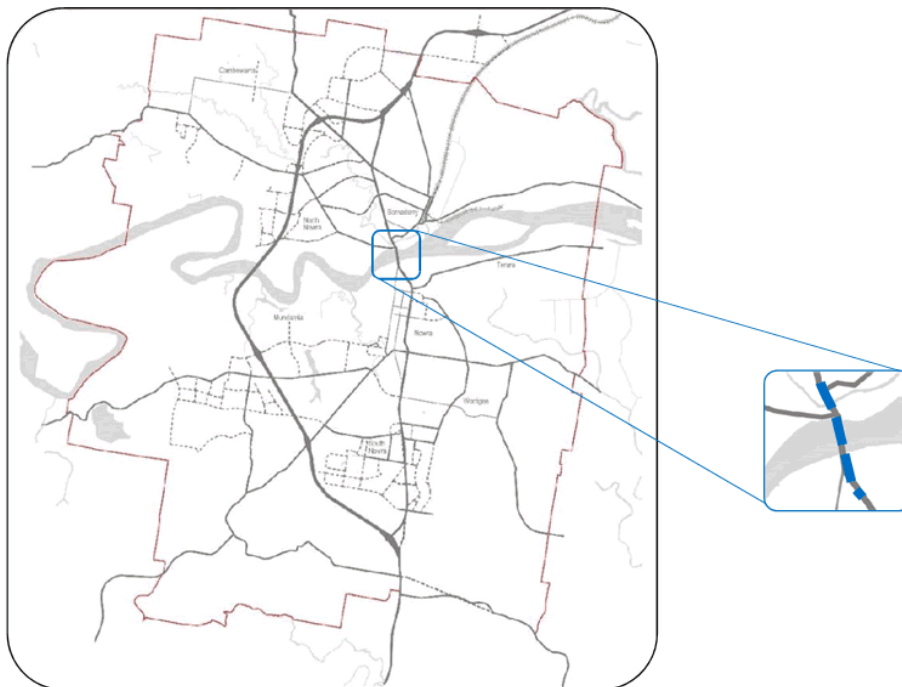
Project Location: Commencing at (or prior to) the intersection of Bolong Road in the north and continuing over the Shoalhaven River to Bridge Road in the south, including grade separation options at Bolong, Illaroo and Bridge Roads.

Approval and Construction Timeframes: Design process is ongoing. Approvals expected in 2019 and construction to commence within the short-term according to the Princes Highway Corridor Strategy (2021/2022).

AADT 2016: 50,000 2026: 58,000 2036: 68,000

Responsibilities: RMS / Commonwealth

Estimated Cost: \$500 million



Nowra Key Road Projects

Highway upgrade - Shoalhaven River Bridge to Warra Warra Road

Strategic Need: To decrease Highway travel times and improve safety through Nowra/South Nowra there will be a progressive need to upgrade the highway to three lanes in each direction and signalise each of the major intersections to support projected traffic flows.

Project Location: Commencing at the Shoalhaven River bridge in the north to Warra Warra Road in the south.

Approval and Construction Timeframes: No approvals or construction timeframes have been identified.

AADT 2016: 20,000 2026: 27,000 2036: 36,000

Responsibilities: RMS

Estimated Cost: \$30 million

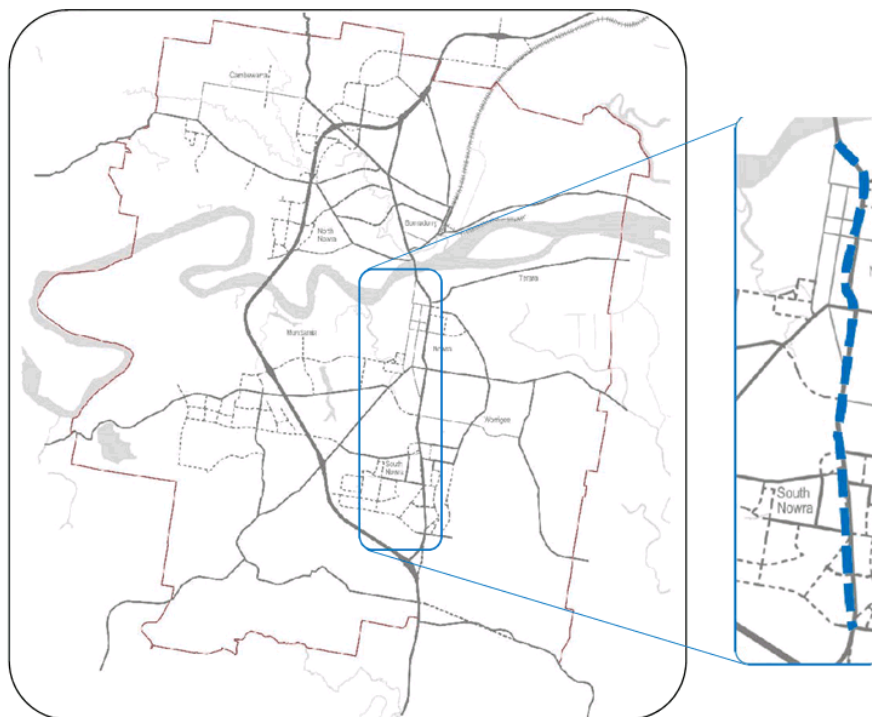
Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

East Nowra Sub-Arterial

Strategic Need: Will reduce congestion on Highway by providing access between the Nowra CBD and the growing East Nowra / Worrigeer residential area by way of accessing a direct signalised Highway crossing.

Project Location: Commencing in the Nowra CBD at North and Junction Streets, and continuing south east to meet Greenwell Point Road at the intersection of Old Southern Road.

Approval and Construction Timeframes: Project approval could be achieved in around 12 months. Construction is likely to need to be staged with pre-loading requiring a 12 month construction and settlement period, followed by an 18 month road construction period.

AADT 2016: n/a 2026: 7,000 2036: 10,000

Responsibilities: Council / RMS.

Estimated Cost: \$45 million depending on flood level (1:20 or 1:100).

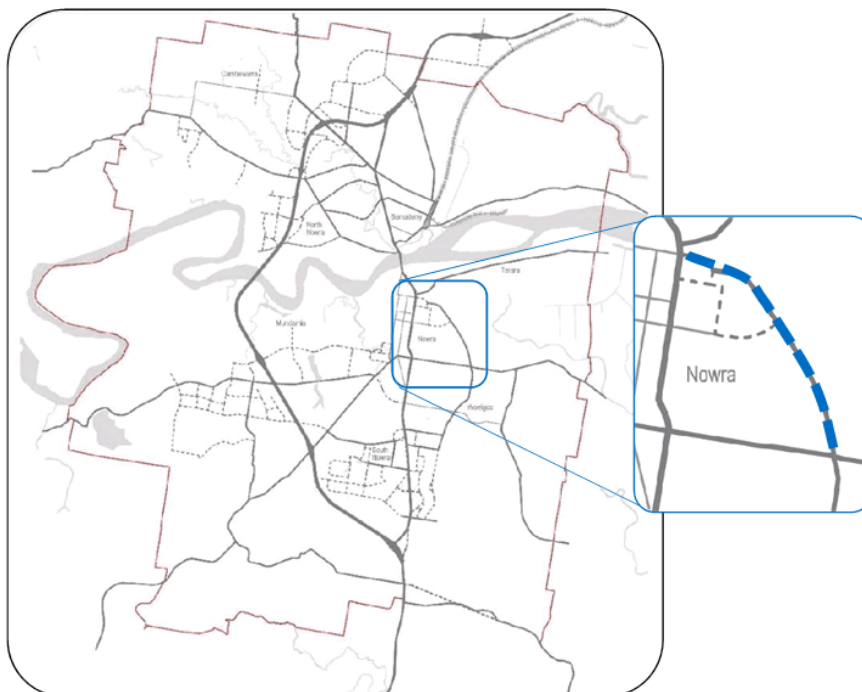
Concept Design and Project Adoption 2008

Preliminary Design and Assessment 2009

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Kalandar Street / Princes Highway Upgrade

Strategic Need: Potential grade separation of Princes Highway at Kalandar Street, improving Highway efficiency. An east-west crossover links residential and commercial areas extracting most vehicles from highway traffic.

Project Location: Intersection of Kalandar Street and Princes Highway, with Highway rising to the north and re-joining the existing highway alignment to the south.

Approval and Construction Timeframes: No approvals or construction timeframes have been identified. Could be deferred by implementation of the East Nowra Sub-Arterial and Yalwal Road to Highway projects.

AADT 2016: 16,000 2026: 19,000 2036: 22,000
(*volumes assume no other improvements)

Responsibilities: RMS.

Estimated Cost: \$50 million.

Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Yalwal / Albatross Rd to Princes Highway

Strategic Need: Provides an additional east west access across the Nowra urban area between areas of significant residential growth and employment / education precincts. Facilitates greater highway flows due to alleviating congestion at Kalandar Street and at Flinders / Browns Road.

Project Location: Commences at Albatross / Yalwal Road (west of highway), continuing through existing vegetated / vacant land to the Highway at or near to the Hillcrest Avenue roundabout.

Approval and Construction Timeframes: Basic planning undertaken, with landowner negotiation and resolution of Aboriginal land claims required. Protracted approvals likely to be experienced. 18 month construction period would be expected.

AADT 2016: n/a 2026: 6,000 2036: 8,000

Responsibilities: Council / RMS.

Estimated Cost: \$15-\$20 million

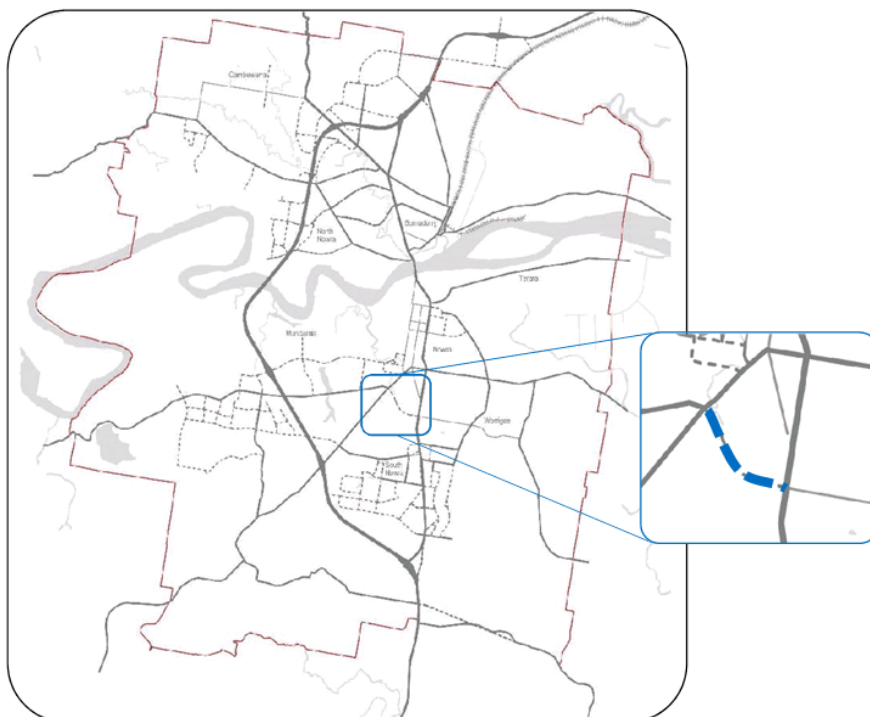
Concept Design and Project Adoption 2008

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Yalwal Road Widening

Strategic Need: Provides access to urban release areas at Mundamia from Albatross Road. Also services the University of Wollongong's Shoalhaven Campus and industrial quarries to the west.

Project Location: Commences at Albatross Road intersection (west of highway), continuing through West Nowra urban area to the Flat Rock Dam bridge.

Approval and Construction Timeframes: No approvals or construction timeframes have been identified.

AADT 2016: 8,000 2026: 12,000 2036: 16,000

Responsibilities: Council / RMS.

Estimated Cost: \$10 million

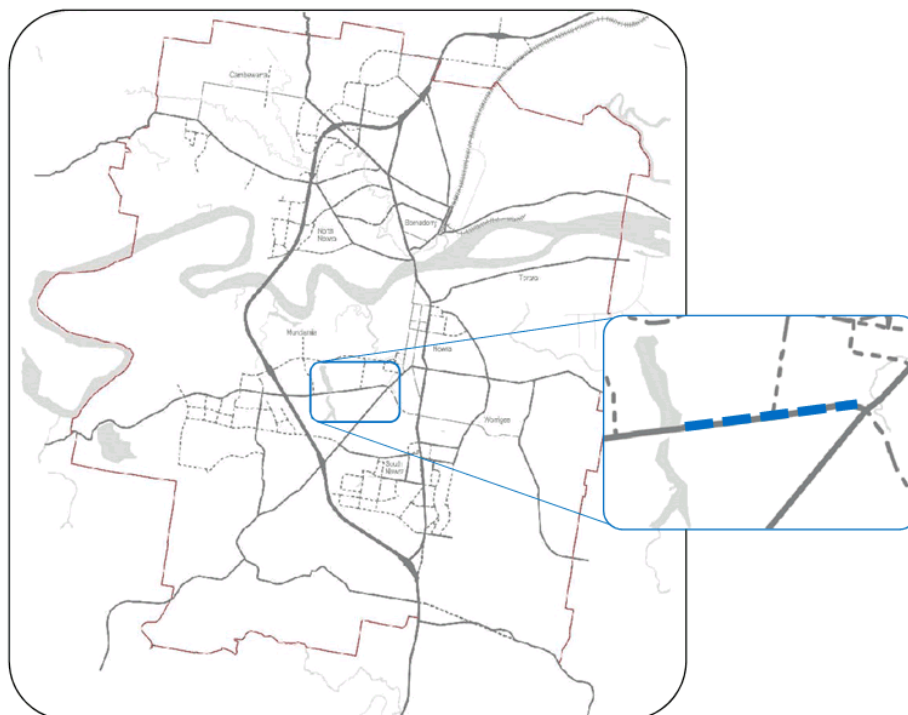
Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Yalwal Road / Albatross Road intersection upgrade

Strategic Need: Localised issue with conflict between heavy vehicle movements and vehicles accessing residential/education and employment precincts. Intersection requires signalisation to create a safe and efficient operational state.

Project Location: Intersection of Yalwal Road and Albatross Road to the west of the existing highway.

Approval and Construction Timeframes: Approval and construction could be completed within 1 year.

AADT 2016: 8,000 2026: 12,000 2036: 16,000

Responsibilities: Council / RMS.

Estimated Cost: \$1 million

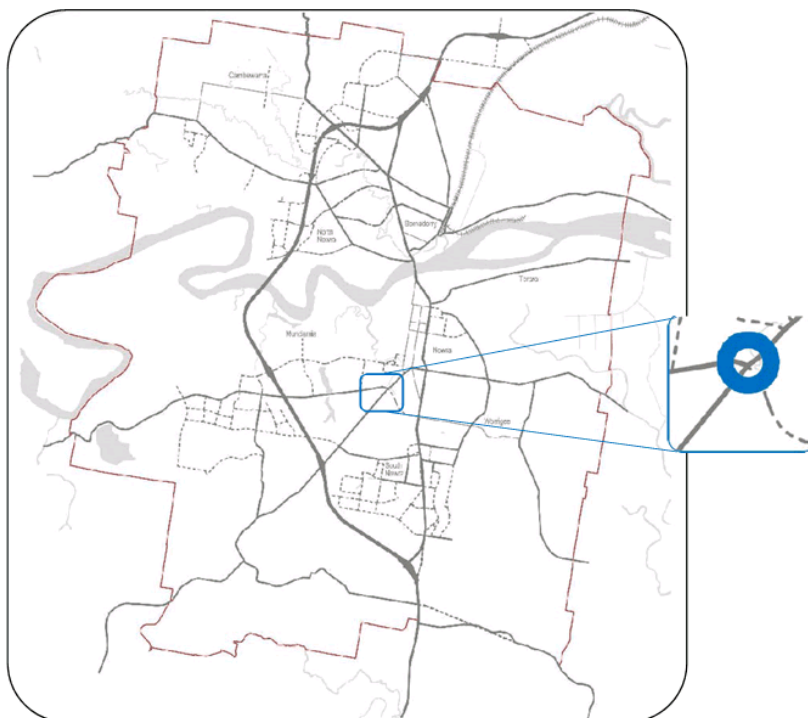
Concept Design and Project Adoption

Preliminary Design and Assessment

Approvals

Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Nowra Key Road Projects

Registered Road Classification of Flinders Road

Strategic Need: Classification of Flinders Road to a higher level reflecting its status as primary link between the Princes Highway, Flinders Industrial Estate and Main Road 92. Provides the opportunity to direct heavy vehicles to the new highway connection at Browns Road. Is currently the designated B-double route.

Project Location: Flinders Road extends from the Princes Highway in the east to Albatross Road in the west.

Approval: On completion of current works to upgrade Flinders Road

AADT 2016: 5,000 2026: 8,000 2036: 12,000

Responsibilities: Council / RMS.

Estimated Cost: N/A

Concept Design and Project Adoption 2014

Preliminary Design and Assessment

Approvals

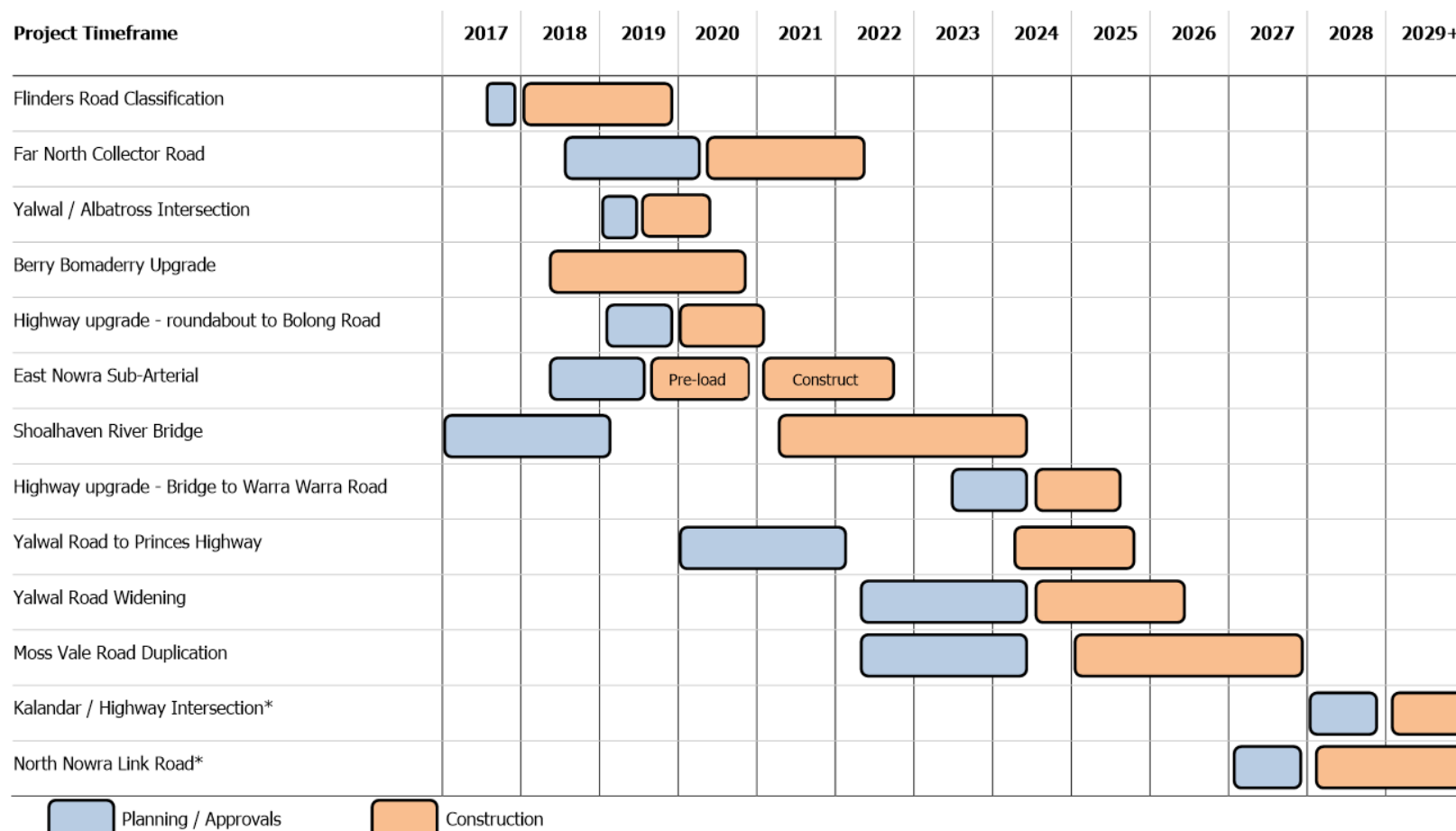
Detailed design, advanced works,
property acquisition, tender
documentation

Construction



Appendix C – Indicative Project Timing

Indicative Project Timing



* Assumes implementation of other projects to enable these to be moved to the long-term - they may otherwise be required earlier.
Note: All projects are subject to funding confirmation

Appendix D – Indicative Capital Expenditure by Council

BE19.15 - Attachment 1

Indicative Capital Expenditure by Council

It is acknowledged that there are financial implications of localised road projects for Council. An indication of these financial implications over the next 10 years which have been derived based on the following.

1. Identification of localised projects where Council has funding responsibilities, including their likely capital cost as follows:
 - o Yalwal/Albatross intersection \$1,000,000
 - o Far North Collector Road \$0
 - o East Nowra Sub-Arterial \$45,000,000
 - o Yalwal Road to Princes Highway \$15,000,000
 - o Yalwal Road Widening \$10,000,000
 - o Moss Vale Road Duplication \$50,000,000
2. Apportionment of costs during project stages and in accordance with the Indicative Project Timing. Apportionment has been undertaken as follows:
 - o Concept design and project adoption 5%
 - o Preliminary design and assessment 5%
 - o Approvals 5%
 - o Detailed design, advanced work, property acquisition, tender documentation 20%
 - o Construction 65%

Outcomes of these calculations provide the following indicative costs for Council over the next 10 years.

