

# NOTICE OF MEETING



## TRANSPORT AND INFRASTRUCTURE ADVISORY COMMITTEE MEETING

A Transport and Infrastructure Advisory Committee Meeting of Byron Shire Council will be held as follows:

Venue	<b>Conference Room, Station Street, Mullumbimby</b>
Date	<b>Thursday, 30 July 2020</b>
Time	<b>9.00am</b>

Phillip Holloway  
Director Infrastructure Services

I2020/1098  
Distributed 23/07/20

---

---

## CONFLICT OF INTERESTS

---

**What is a “Conflict of Interests”** - A conflict of interests can be of two types:

**Pecuniary** - an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person or another person with whom the person is associated.

**Non-pecuniary** – a private or personal interest that a Council official has that does not amount to a pecuniary interest as defined in the Code of Conduct for Councillors (eg. A friendship, membership of an association, society or trade union or involvement or interest in an activity and may include an interest of a financial nature).

**Remoteness** – a person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to a matter or if the interest is of a kind specified in the Code of Conduct for Councillors.

**Who has a Pecuniary Interest?** - a person has a pecuniary interest in a matter if the pecuniary interest is the interest of the person, or another person with whom the person is associated (see below).

**Relatives, Partners** - a person is taken to have a pecuniary interest in a matter if:

- The person's spouse or de facto partner or a relative of the person has a pecuniary interest in the matter, or
- The person, or a nominee, partners or employer of the person, is a member of a company or other body that has a pecuniary interest in the matter.

N.B. “Relative”, in relation to a person means any of the following:

- (a) the parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descends or adopted child of the person or of the person's spouse;
- (b) the spouse or de facto partners of the person or of a person referred to in paragraph (a)

**No Interest in the Matter** - however, a person is not taken to have a pecuniary interest in a matter:

- If the person is unaware of the relevant pecuniary interest of the spouse, de facto partner, relative or company or other body, or
- Just because the person is a member of, or is employed by, the Council.
- Just because the person is a member of, or a delegate of the Council to, a company or other body that has a pecuniary interest in the matter provided that the person has no beneficial interest in any shares of the company or body.

### Disclosure and participation in meetings

- A Councillor or a member of a Council Committee who has a pecuniary interest in any matter with which the Council is concerned and who is present at a meeting of the Council or Committee at which the matter is being considered must disclose the nature of the interest to the meeting as soon as practicable.
- The Councillor or member must not be present at, or in sight of, the meeting of the Council or Committee:
  - (a) at any time during which the matter is being considered or discussed by the Council or Committee, or
  - (b) at any time during which the Council or Committee is voting on any question in relation to the matter.

**No Knowledge** - a person does not breach this Clause if the person did not know and could not reasonably be expected to have known that the matter under consideration at the meeting was a matter in which he or she had a pecuniary interest.

**Non-pecuniary Interests** - Must be disclosed in meetings.

There are a broad range of options available for managing conflicts & the option chosen will depend on an assessment of the circumstances of the matter, the nature of the interest and the significance of the issue being dealt with. Non-pecuniary conflicts of interests must be dealt with in at least one of the following ways:

- It may be appropriate that no action be taken where the potential for conflict is minimal. However, Councillors should consider providing an explanation of why they consider a conflict does not exist.
- Limit involvement if practical (eg. Participate in discussion but not in decision making or vice-versa). Care needs to be taken when exercising this option.
- Remove the source of the conflict (eg. Relinquishing or divesting the personal interest that creates the conflict)
- Have no involvement by absenting yourself from and not taking part in any debate or voting on the issue as of the provisions in the Code of Conduct (particularly if you have a significant non-pecuniary interest)

---

---

## RECORDING OF VOTING ON PLANNING MATTERS

---

### Clause 375A of the Local Government Act 1993 – Recording of voting on planning matters

- (1) In this section, **planning decision** means a decision made in the exercise of a function of a council under the Environmental Planning and Assessment Act 1979:
  - (a) including a decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but
  - (b) not including the making of an order under that Act.
- (2) The general manager is required to keep a register containing, for each planning decision made at a meeting of the council or a council committee, the names of the councillors who supported the decision and the names of any councillors who opposed (or are taken to have opposed) the decision.
- (3) For the purpose of maintaining the register, a division is required to be called whenever a motion for a planning decision is put at a meeting of the council or a council committee.
- (4) Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document, and is to include the information required by the regulations.
- (5) This section extends to a meeting that is closed to the public.

**BYRON SHIRE COUNCIL**  
TRANSPORT AND INFRASTRUCTURE ADVISORY COMMITTEE MEETING

**BUSINESS OF MEETING**

**1. APOLOGIES**

**2. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY**

**3. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS**

- 4.1 Minutes of Transport and Infrastructure Advisory Committee - Meeting of 30  
January 2020 and extraordinary TIAC meeting of 19 May 2020 .....4

**4. STAFF REPORTS**

**Infrastructure Services**

- 4.2 Asset Management Policy Updated.....17  
4.3 Byron Shire Integrated Transport Update .....27  
4.4 Road Safety Campaign Review.....135  
4.5 Stormwater Assets Management .....140

STAFF REPORTS - INFRASTRUCTURE SERVICES

**Report No. 4.1**      **Minutes of Transport and Infrastructure Advisory Committee - Meeting of 30 January 2020 and extraordinary TIAC meeting of 19 May 2020**

**Directorate:**      Infrastructure Services  
**Report Author:**      Dominika Tomanek, Executive Assistant Infrastructure Services  
**File No:**      I2020/1070

**Summary:**

The previous minutes of Transport and Infrastructure Advisory Committee Meeting of 30 January 2020 are attached to this report and extraordinary Meeting of 19 May 2020.

There was no quorum present on the Transport and Infrastructure Advisory Committee Meeting of 30 April 2020 therefore the minutes were not presented to Council.

**RECOMMENDATION:**

**That Committee note the report.**

**Attachments:**

- 1      Minutes 30/01/2020 Transport and Infrastructure Advisory Committee, I2020/92 , page 8 [↓](#)
- 2      Minutes 19/05/2020 Transport and Infrastructure Advisory Committee Extraordinary, I2020/743 , page 12 [↓](#)



**REPORT**

5 The minutes of the Transport and Infrastructure Advisory Committee Meeting held on 30 January 2020 are attached. The minutes were reported to the 27 February 2020 Council Meeting which resulted in resolutions 20-047, 20-048, 20-049, and 20-050.

**20-047 Resolved** that Council adopt the following Committee Recommendation(s):

**Report No. 4.1 Road Laser Condition Assessment - process and condition outcomes**

File No: I2020/30

Committee Recommendation 4.1.1

1. That Council note the Road Laser Condition Assessment process.
2. That committee continue to receive information about the progress and improvement of the road network as data becomes available and findings be shared with the community.

**20-048 Resolved:** that Council adopt the following Committee Recommendation(s):

**Report No. 4.2 Open Spaces Asset Management Plan Communication Strategy**

File No: I2020/31

Committee Recommendation 4.2.1

That Council note the draft Communication Strategy for Open Spaces Asset Management Plan (OSAMP).

**20-049 Resolved** that Council adopt the following Committee Recommendation(s):

**Report No. 4.3 Integrated Transport Management Strategy - Update**

File No: I2020/58

Committee Recommendation 4.3.1

1. That TIAC approve two extraordinary TIAC meetings to be held on Tuesday 3 March 2020 and Tuesday 19 May 2020.
2. That Committee receive the draft strategy before 11 February 2020 if possible.

**20-050 Resolved** that Council adopt the following Committee Recommendation(s):

**Report No. 4.4 Stormwater Assets Management**

File No: I2020/83

Committee Recommendation 4.4.1

1. That Council note the report.
2. That a further report regarding prioritisation and funding of shire wide urban stormwater renewals (including relationships to funding of other assets such as sewer and flood mitigation) be presented to the next available meeting of TIAC for consideration.

The reports related to the resolutions 20-048, 20-049 and 20-050 were included in the Agenda of Transport and Infrastructure Advisory Committee Meeting held on 30 April 2020. There was no quorum present on 30 April 2020 meeting, therefore reports related to resolution 20-0049 and 20-050 are included in the Agenda of 30 July 2020.

The Open Spaces Asset Management Plan Communication Strategy (related to resolution 20-048) was adopted by Council on 25 June 2020.. This plan and a dashboard poster are now available on our web site, link below:

<https://www.byron.nsw.gov.au/Council/Community-Strategic-Plan-Our-Byron-Our-Future/Asset-Management-Plans>

Council has also recently developed a **PARK LOCATOR MAP** which contains public toilets and the companion animal exercise areas. For your convenience the link is below:

<https://www.byron.nsw.gov.au/Services/Online-mapping-tool>

The attached minutes of the extraordinary TIAC meeting held on 19 May 2020 were reported to Council on 25 June 2020 and resulted in resolution 20-329. The Byron Integrated Management Strategy Report is also included in this Agenda.

**20-329 Resolved** that Council adopt the following Committee Recommendations:

**Report No. 4.1 Byron Integrated Transport Strategy**

File No: I2020/736

Committee Recommendation 4.1.1

That TIAC advise GTA that the following items are to be included in the DRAFT Byron Integrated Transport Strategy:

1. Provide addition facts, data and evidence within the body of the strategy to help make it more robust and usable for grant applications.
2. Provide an Action Table at the end of the strategy with a 20 year horizon. The table is to outline recommended priorities in regards to (but not limited to) recommended works program; research, studies and investigations; future strategy and policy development; aligning existing programs, policies, masterplans and strategies.
3. Provide a section presenting the regional context of Byron Shire Council. This section is to include the following scope of works:
  - a) State what adjoining regional councils, including Gold Coast City Council are proposing in regards to rail corridors and how Byron Shire Council may connect in with adjoining Councils.
  - b) A description of key transport corridors connecting to and through Byron Shire Council.
  - c) Supporting facts, data and evidence. This does not include the need to undertake detailed statistical analysis and data extrapolation.
4. That the ITMS revert to its original name, the Byron Shire Integrated Transport Strategy (BSITS).
5. That the draft BSITS be redrafted to reflect the scope of the brief particularly as follows:

- a) Local, regional and national transport situation analysis that describes the various policy layers and assumptions and contrasts these with an on ground reality check.
- b) Trends, demography and other data that assists in the forecasting of transport movements and trip drivers to, from and within Byron Shire.
- c) Review and amend to integrate existing BSC studies and projects.
- d) Expand discussion on sustainable transport opportunities including an acknowledgement of climate change.
- e) Understand and respond to unmet transport needs and accessible transport; and
- f) Discuss the benefits and equity of insuring access to transport.

***Legal/Statutory/Policy Considerations***

5 N/A

***Financial Considerations***

N/A

***Consultation and Engagement***

10 N/A

# MINUTES OF MEETING

5



10

## TRANSPORT AND INFRASTRUCTURE ADVISORY COMMITTEE MEETING

15

Venue	Conference Room, Station Street, Mullumbimby
Date	Thursday, 30 January 2020
Time	9.00am

20



**Minutes of the Transport and Infrastructure Advisory Committee Meeting held on Thursday, 30 January 2020**  
**File No: I2020/1098**

**PRESENT:** Cr S Richardson (Mayor), Cr B Cameron, Cr J Martin

Staff: Phil Holloway (Director Infrastructure Services)  
Michael Matthews (Manager Open Spaces and Resource Recovery)  
James Flockton (Drainage and Flood Engineer)  
Blyth Short (Assets Management Coordinator)  
Dominika Tomanek (Minute Taker)

Community Representatives: Sapoty Brook, Graham Hamilton, Andi Maclean

Non-Voting Representatives: Linda Wirf (Transport Development Officer, Social Futures)

*Cr Cameron (Chair) opened the meeting at 9:02 am and acknowledged that the meeting was being held on Bundjalung Country.*

**APOLOGIES:**

David Michie  
Katrina Ross (Transport Development Officer, Social Futures)

**DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY**

There were no declarations of interest.

**ADOPTION OF MINUTES FROM PREVIOUS MEETINGS**

**Committee Recommendation:**

**That the minutes of the Extraordinary Transport and Infrastructure Advisory Committee Meeting held on 3 December 2019 be confirmed.**

(Cameron/Maclean)

*The recommendation was put to the vote and declared carried.*

*Note: The minutes of the meeting held on 3 December 2019 were noted, and the Committee Recommendations to be presented to Council, at the Ordinary Meeting held on 27 February 2020.*

**BUSINESS ARISING FROM PREVIOUS MINUTES**

There was no business arising from previous minutes.

STAFF REPORTS - INFRASTRUCTURE SERVICES

**Report No. 4.1**                      **Road Laser Condition Assessment - process and condition outcomes**  
**File No:**                              I2020/30

**Committee Recommendation:**

1. That Council note the Road Laser Condition Assessment process.
2. That committee continue to receive information about the progress and improvement of the road network as data becomes available and findings be shared with the community.  
(Richardson/Hamilton)

*The recommendation was put to the vote and declared carried.*

---

**Report No. 4.2**                      **Open Spaces Asset Management Plan Communication Strategy**  
**File No:**                              I2020/31

**Committee Recommendation:**

That Council note the draft Communication Strategy for Open Spaces Asset Management Plan (OSAMP).  
(Hamilton/Brook)

*The recommendation was put to the vote and declared carried.*

5

---

**Report No. 4.3**                      **Integrated Transport Management Strategy - Update**  
**File No:**                              I2020/58

**Committee Recommendation:**

1. That TIAC approve two extraordinary TIAC meetings to be held on Tuesday 3 March 2020 and Tuesday 19 May 2020.
2. That Committee receive the draft strategy before 11 February 2020 if possible.  
(Cameron/Maclean)

*The recommendation was put to the vote and declared carried .*

---

**Report No. 4.4**                      **Stormwater Assets Management**  
**File No:**                              I2020/83

**Committee Recommendation:**

1. That Council note the report.
2. That a further report regarding prioritisation and funding of shire wide urban stormwater renewals (including relationships to funding of other assets such as sewer and flood mitigation) be presented to the next available meeting of TIAC for consideration.  
(Hamilton/Maclean)

*The recommendation was put to the vote and declared carried.*

*There being no further business the meeting concluded at 10:59 am.*

# MINUTES OF MEETING

5



10

## EXTRAORDINARY TRANSPORT AND INFRASTRUCTURE ADVISORY COMMITTEE MEETING

15

Venue	Conference Room, Station Street, Mullumbimby
Date	Tuesday, 19 May 2020
Time	12:00pm

20





**Minutes of the Extraordinary Transport and Infrastructure Advisory Committee Meeting  
held on Tuesday, 19 May 2020  
File No: I2020/1098**

PRESENT: Cr S Richardson (Mayor), Cr B Cameron, Cr J Martin

Staff: Phil Holloway (Director Infrastructure Services)  
Evan Elford (Manager Works)  
Andrew Pearce (Traffic Engineer)  
Dominika Tomanek (Minute Taker)

Community Representatives: Sapoty Brook, Graham Hamilton and David Michie

Non-Voting Representatives: Katrina Ross (Transport Development Officer, Social Futures)

Consultants: Nick Buchanan and Will Fooks (GTA)

*Cr Cameron (Chair) opened the meeting at 12:18 and acknowledged that the meeting was being held on Bundjalung Country.*

APOLOGIES:

Andi Maclean

DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

There were no declarations of interest.

ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

**NOTE:**

**The motion was not put to the vote. The minutes of the Transport and Infrastructure Advisory Committee Meeting held on 30 January 2020 will be presented to the next TIAC meeting on 30 July 2020.**

*Note: The minutes of the meeting held on 30 January 2020 were noted, and the Committee Recommendations adopted by Council, at the Ordinary Meeting held on 27 February 2020.*

There was no quorum present on the extraordinary Transport and Infrastructure Advisory Committee Meeting of 3 March 2020 and the ordinary TIAC meeting of 30 April 2020 therefore the minutes/notes were not presented to Council.

BUSINESS ARISING FROM PREVIOUS MINUTES

There was no business arising from previous minutes.

**Report No. 4.1**                      **Byron Integrated Transport Strategy**  
**File No:**                              **I2020/736**

**Committee Recommendation:**

**That TIAC advise GTA that the following items are to be included in the DRAFT Byron Integrated Transport Strategy:-**

- 1. Provide addition facts, data and evidence within the body of the strategy to help make it more robust and usable for grant applications.**
- 2. Provide an Action Table at the end of the strategy with a 20 year horizon. The table is to outline recommended priorities in regards to (but not limited to) recommended works program; research, studies and investigations; future strategy and policy development; aligning existing programs, policies, masterplans and strategies.**
- 3. Provide a section presenting the regional context of Byron Shire Council. This section is to include the following scope of works:-**
  - a) State what adjoining regional councils, including Gold Coast City Council are proposing in regards to rail corridors and how Byron Shire Council may connect in with adjoining Councils.**
  - b) A description of key transport corridors connecting to and through Byron Shire Council.**
  - c) Supporting facts, data and evidence. This does not include the need to undertake detailed statistical analysis and data extrapolation.**
- 4. That the ITMS revert to its original name, the Byron Shire Integrated Transport Strategy (BSITS).**
- 5. That the draft BSITS be redrafted to reflect the scope of the brief particularly as follows:-**
  - a) Local, regional and national transport situation analysis that describes the various policy layers and assumptions and contrasts these with an on ground reality check.**
  - b) Trends, demography and other data that assists in the forecasting of transport movements and trip drivers to, from and within Byron Shire.**
  - c) Review and amend to integrate existing BSC studies and projects.**
  - d) Expand discussion on sustainable transport opportunities including an acknowledgement of climate change.**
  - e) Understand and respond to unmet transport needs and accessible transport; and**
  - f) Discuss the benefits and equity of insuring access to transport.**

(Cameron/Martin)

*The recommendation was put to the vote and declared carried.*

---

*There being no further business the meeting concluded at 2:14 pm.*



**Report No. 4.2**                      **Asset Management Policy Updated**  
**Directorate:**                      Infrastructure Services  
**Report Author:**                  Blyth Short, Asset Management Coordinator  
**File No:**                              I2020/803

5

**Summary:**

10    The Asset Management Policy has been updated with minor edits (E2020/4726).

---

**RECOMMENDATION:**

**That Council adopt the revised Asset Management Policy (E2020/4726) and is updated on Council's web site.**

15    **Attachments:**

1       Draft Policy: Asset Management 2020, E2020/4726 , page 19 [↓](#)

20

**REPORT**

5 The Asset Management Policy has been updated in accordance with the outstanding audit recommendation from the Buildings and Property Management Audit 2018, recommendation 6 in that audit report (E2018/10497).

Minor edits have been made to bring the document (E2020/4726) up to date, these include:-

- 10
1. Referencing to the Strategic Asset Management Plan (SAMP 2016/108039).
  2. Updating the asset management information systems currently used and deployment targets.
  3. Updating the key components in Councils Asset Management System.



5

---

**Policy:**

---

**Asset Management Policy**

**2020**

---

## INFORMATION ABOUT THIS DOCUMENT

<b>Date Adopted by Council</b>	December 2007	<b>Resolution No.</b>	07-730
<b>Document Owner</b>	Director Infrastructure Services		
<b>Document Development Officer</b>	Asset Management Coordinator		
<b>Review Timeframe</b>	2024		
<b>Last Review Date:</b>	2020	<b>Next Scheduled Review Date</b>	January 2024

### 5 **Document History**

Doc No.	Date Amended	Details/Comments eg Resolution No.
#720612		Adopted at Ordinary meeting 13/12/07
#2014/33229	4/6/2014	Reported to Community Infrastructure Advisory Committee 4/6/2014 deferred to 4/12/2014 Reported to Council for exhibition 5/2/2015
E2015/15623	5/2/2015	Res 15-012 draft Policy to go on exhibition Exhibition dates 25/3/2015 to 22/4/2015
E2015/27107	23/4/2015	No submissions received adopted after close of exhibition in accordance with Res 12-012
E2016/19038	23/03/2016	Edit - added Resolution 14-203 with amendments
E2020/4726	22/01/2020	Updated – IP&R Figure 1, Objectives simplified, Strategic Asset Management Plan (SAMP) title, and Asset Management Information System section removed.

### **Further Document Information and Relationships**

List here the related strategies, procedures, references, policy or other documents that have a bearing on this Policy and that may be useful reference material for users of this Policy.

<b>Related Legislation</b>	<a href="#">Local Government Act 1993 (NSW)</a> – IP& R requirements POEO Act (1997)
<b>Related Policies</b>	
<b>Related Standards, Procedures/Protocols, Statements, documents</b>	Asset Management Strategy (#1252114)

10 *Note: Any reference to Legislation will be updated in the Policy as required. See website <http://www.legislation.nsw.gov.au/> for current Acts, Regulations and Environmental Planning Instruments.*



## TABLE OF CONTENTS

	1. OBJECTIVES .....	1
	2. SCOPE .....	1
5	3. DEFINITIONS .....	1
	4. STATEMENT .....	1
	4.1. Asset Management System .....	2
	4.2. Strategic Asset Management Plan .....	2
	4.3. Asset Management Plans .....	2
10	4.4. Total Asset Management Process Planning Flowchart .....	3
	5. LEGISLATIVE AND STRATEGIC CONTEXT .....	3
	6. SUSTAINABILITY .....	4
	6.1 Economic .....	4
15	6.2 Governance .....	4

## 1. OBJECTIVES

The objective of asset management is to maximise asset service delivery potential and manage related risks and costs over an asset's entire life. Asset management is about intervening at strategic points in an asset's life cycle, optimising the performance of the asset and minimising the cost to maintain it. It requires a proactive approach to asset maintenance and planning to identify works prior to costly and potentially dangerous asset failure occurring. Byron Shire Council's maintenance and capital works will be prioritised where possible using a risk based approach. This decision has been further confirmed via consultation with the Community Solutions Panel in 2018 (Community Solutions Panel Final Report, E2018/33402).

Asset management is a systematic process to guide the planning, operation, maintenance, acquisition, renewal, enhancement and disposal of assets. Asset management aims to maximise asset service delivery potential and manage related risks and costs over the entire life of assets.

Council recognises that asset management investment in accordance with an adopted policy will optimise the use of resources on infrastructure assets that are important to the local community and are fundamental to Council's overall service delivery. Council will develop and maintain assets in the most cost effective manner, driven by defined service levels and performance standards. This will form the objectives of the individual Asset Management Plans.

This policy guides Council's commitment to resource and maintain an asset management framework so that the following objectives are achieved as outlined in the Strategic Asset Management Plan:

- a) What assets council has (Section 2.2)
- b) Our assets and their management (Section 2.3)
- c) Where does council want to be (Section 2.4)
- d) How will council get there (Section 2.5)

## 2. SCOPE

This policy is to set a framework and guide for the strategic management of Council's infrastructure assets in a structured and coordinated way. Assets are managed in accordance with Council's Community Strategic Plan.

## 3. DEFINITIONS

<b>Asset Life Cycle</b>	This is the period of ownership of an asset from the planning and design phase through to decommissioning or disposal.
<b>Level of Service</b>	Defining and meeting community expectations in relation to the quality and quantity of services delivered by Council. In the context of asset management, this applies to assets such as roads.

## 4. STATEMENT

The Policy objectives will be achieved through the implementation of the actions associated with the following elements:

1. Asset Management System
2. Strategic Asset Management Plan
3. Asset Management Plans for specific asset classes

#### 4. Asset Management Planning Process

##### 4.1. Asset Management System

5 Asset management outcomes are the result of the asset management system. Failure to develop the system and improve the system will result in deteriorating performance. The key components in council's asset management system include:

- 10 a) Asset management software
- b) Asset registers and condition assessments
- c) Asset valuations
- d) Lifecycle costs
- e) Predictive modelling (including condition and financial)
- f) Risk analysis (Risk Management Procedures by asset class)
- 15 g) Community evaluation (Quantified customer levels of service with surveys)
- h) Asset Management Strategy
- i) Asset Management Plans by asset class
- j) Asset operational / maintenance programs
- 20 k) Organisation and regulatory reporting
- l) Strategic planning capability

##### 4.2. Strategic Asset Management Plan

25 The IP & R legislation specifies that the Strategic Asset Management Plan (SAMP) must include a council endorsed Asset Management Policy. The SAMP must identify assets that are critical to the council's operations and outline risk management strategies for these assets. It must include specific actions required to improve council's asset management capability and projected resource requirements and timeframes.

Council's SAMP will:

- 30 a) Link and integrate Council's plan and resources, indicating which services are to be delivered through which assets;
- b) Forecast future service delivery needs and the capacity of assets to meet those, on short, medium and long-term bases;
- c) Provide a full overview of expenditure on new assets and the existing asset base;
- 35 d) Specify asset management procedures, systems, resources and training; and
- e) Establish systems for asset performance measurement and to ensure theoretical system implementation is realised in practice.

Council has prepared a Strategic Asset Management Plan (E2016/108039) included in the current CSP documentation.

##### 4.3 Asset Management Plans

45 The IP & R legislation specifies that the Asset Management Plans must encompass all the assets under council's control. The plans must identify service standards and contain long term projections of asset maintenance, rehabilitation and replacement costs.

Council's individual Asset Management Plans will:

- a) Define levels of service within financial/resource/risk constraints;
- b) Present forecasts for acquisition, operation, maintenance and capital expenditure, and for revenue, where relevant;
- 50 c) Specify the capital expenditure for renewing, upgrading or extending assets;
- d) Justify the contribution of each asset in terms of value for money for the Council; and
- e) Establish the targets and measures that will be used for monitoring progress with its implementation.

Asset management plans will be reviewed and revised following the formal revaluation process for an asset class due to enhanced condition assessment data and financial data. There is a rolling cycle of 5 years for revaluations as prescribed by the Division of Local Government.

#### 4.4 Total Asset Management Process Planning Flowchart

Below is the asset management process at Byron Shire, this aligns with the International Infrastructure Management Manual and the IP&R framework.

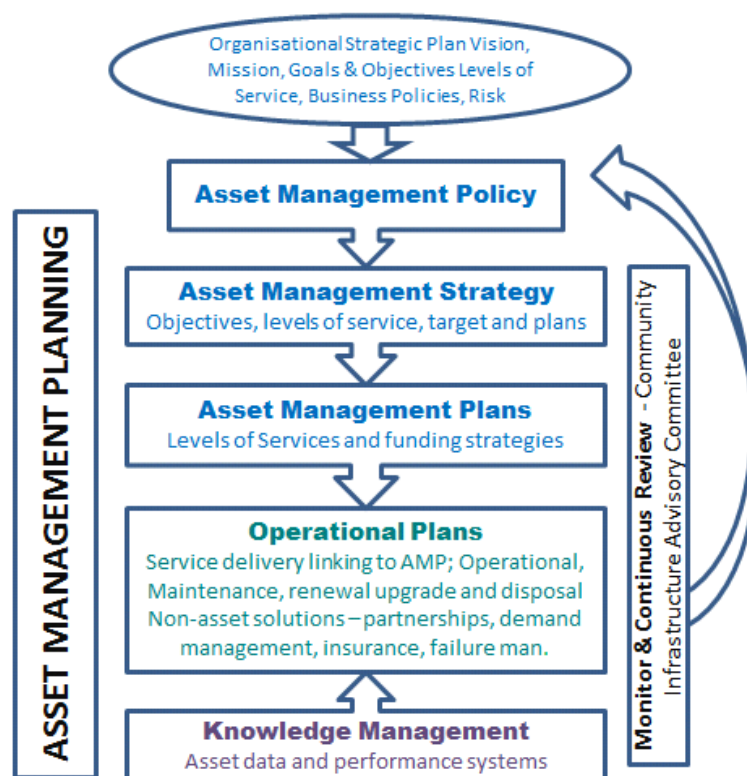


Figure 2 The Corporate Asset Management Framework (IPWEA, 2016).

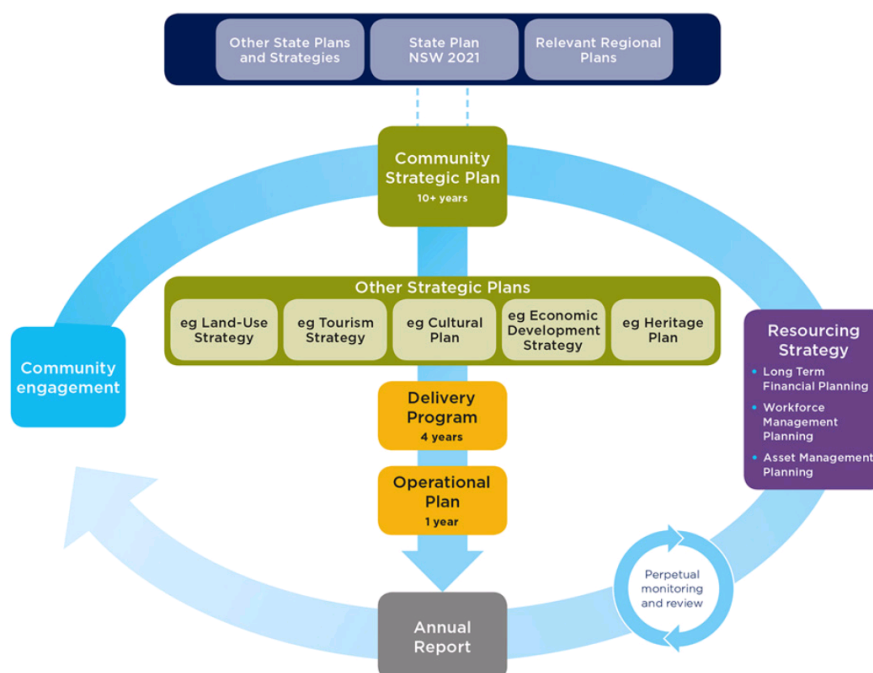
## 5. LEGISLATIVE AND STRATEGIC CONTEXT

In 2009, the NSW Government amended the [Local Government Act 1993 \(NSW\)](#) to introduce the [Integrated Planning and Reporting \(IP&R\)](#) framework in a bid to foster a strong and sustainable Local Government system. The IP&R framework is composed of a suite of integrated processes and documents to streamline Local Government planning and reporting. This suite includes:

- A 10 year community strategic plan.
- A resourcing strategy (which includes an asset management strategy).
- A 4 year delivery program.
- A 1 year operational plan.
- An annual report.

Asset management is integral to the IP& R framework and council must account for and plan for all of the existing assets under its ownership, and any new asset solutions proposed in its Community Strategic Plan and Delivery Program. The council must prepare a Resourcing Strategy which includes Asset Management Strategy and Asset Management Plan/s, a Long

Term Financial Plan and Work Force Management Plan to support the Community Strategic Plan and Delivery Program (Figure 1).



5 Figure 1 Department of Local Government - Integrated Planning and Reporting Framework (OLG NSW)

## 6. SUSTAINABILITY

### 10 6.1 Economic

Infrastructure economic sustainability is reported annually in the Financial Statements and Special Schedule 7.

### 15 6.2 Governance

#### Council and Advisory Committees

20 This policy is enacted through Council, as the custodians of community assets, to demonstrate the organisation's commitment to Council's vision and strategic objectives through an integrated and resourced asset management framework which includes appropriate advisory committees.

#### Asset Management Resources

25 Council will resource the capability and capacity to lead asset management and maintain the core functions of an asset management system as detailed in this policy.

#### The Asset Management Working Group (AMWG)

30 "All council's, irrespective of size or location, need to ensure that the sustainable management of assets is a 'whole of council' responsibility, and that this is recognized at all levels within the council" (DLG Planning & Reporting Manual 2013).

35 The purpose of the Asset Management Working Group (AMWG) is to facilitate and coordinate asset management across the organisation.

The AMWG will implement, monitor and report on the delivery of actions articulated in the asset management strategy and asset management plans that are associated with this policy.

5 **Audit and Review**

The implementation of this policy and the associated asset management framework will be subject to audit and review by council's internal and external auditors. This policy shall be reviewed every four years to ensure that it meets the requirements of legislation and the needs of Council.

10 **REFERENCE:**

International Infrastructure Management Manual 2016, Institute of Public Works Engineering Australia (IPWEA).

Office of Local Government, NSW, viewed 22/1/2020,  
15 <https://www.olg.nsw.gov.au/councils/integrated-planning-and-reporting/framework>

**Report No. 4.3**                      **Byron Shire Integrated Transport Update**  
**Directorate:**                      Infrastructure Services  
**Report Author:**                  Andrew Pearce, Traffic Engineer  
James Flockton, Infrastructure Planning Coordinator  
5   **File No:**                          I2020/892

**Summary:**

All feedback from various reviews of the Byron Shire Integrated Transport Strategy (BSITS) has now been included into the draft document (Attachment 2)

The updated draft Byron Shire Integrated Transport Strategy is now presented to Transport Infrastructure Advisory Committee for further review and comment.

---

**RECOMMENDATION:**

**That Council resolve the following:-**

1. **That the Draft Byron Shire Integrated Transport Strategy is revised to the appropriate graphic design format for accessibility by the community prior to public exhibition.**
2. **That Council place the revised Draft Byron Shire Integrated Transport Strategy on public exhibition for 30 days.**
3. **That all feedback and comments collected during the public exhibition be reviewed by the Transport Infrastructure Advisory Committee prior to presenting the final draft Byron Shire Integrated Transport Strategy to Council for adoption.**

**Attachments:**

- 1      BSITS Feedback Tasks - TIAC, E2020/50888 , page 30 [↓](#)
- 2      Byron Shire Integrated Transport Strategy Draft Report 200715 rep-N176800, E2020/53344 , page 38 [↓](#)

**REPORT**

At Councils meeting of 26 June the following was resolved:-

5           20-329 Resolved that Council adopt the following Committee Recommendations:

*TIAC Committee Recommendation 4.1.1*

10           *That TIAC advise GTA that the following items are to be included in the DRAFT Byron Integrated Transport Strategy:*

1. *Provide addition facts, data and evidence within the body of the strategy to help make it more robust and usable for grant applications.*
- 15           2. *Provide an Action Table at the end of the strategy with a 20 year horizon. The table is to outline recommended priorities in regards to (but not limited to) recommended works program; research, studies and investigations; future strategy and policy development; aligning existing programs, policies, masterplans and strategies.*
- 20           3. *Provide a section presenting the regional context of Byron Shire Council. This section is to include the following scope of works:*
  - a) *State what adjoining regional councils, including Gold Coast City Council are proposing in regards to rail corridors and how Byron Shire Council may connect in with adjoining Councils.*
  - 25           b) *A description of key transport corridors connecting to and through Byron Shire Council.*
  - c) *Supporting facts, data and evidence. This does not include the need to undertake detailed statistical analysis and data extrapolation.*
- 30           4. *That the ITMS revert to its original name, the Byron Shire Integrated Transport Strategy (BSITS).*
- 35           5. *That the draft BSITS be redrafted to reflect the scope of the brief particularly as follows:*
  - a) *Local, regional and national transport situation analysis that describes the various policy layers and assumptions and contrasts these with an on ground reality check.*
  - 40           b) *Trends, demography and other data that assists in the forecasting of transport movements and trip drivers to, from and within Byron Shire.*
  - c) *Review and amend to integrate existing BSC studies and projects.*
  - d) *Expand discussion on sustainable transport opportunities including an acknowledgement of climate change.*
  - 45           e) *Understand and respond to unmet transport needs and accessible transport; and*
  - f) *Discuss the benefits and equity of insuring access to transport. (Hunter/Lyon)*

Following this resolution the Byron Shire Integrated Transport Strategy (BSITS) has been amended.

45           As part of this process Council staff has collected all feedback provided by Transport Infrastructure Advisory Committee (TIAC) members and at TIAC meetings since November 2019 and combined them into one spreadsheet. (Attachment 1).

50           To aid the consultants edit process, staff collated all the feedback and comments into themes. For example, all comments that highlight the need for an Action Table have been combined together under a category called Action Table.



The BSITS has now been amended to include all the feedback provided.

Both the feedback spreadsheet (Attachment 1) and amended BSITS (Attachment 2) have been provided in this report for further discussion at the TIAC meeting and to support progression of the document to public exhibition.

**Next steps**

The document provided in this report is currently the raw report format and this this needs graphic design review to meet relevant layouts and to ensure the documents and information provided to Council/Community by consultants is accessible for all people. This includes information on our website, and relevant documents to:-

- Comply with the requirements of the *Disability Discrimination Act 1992* and level AA of the [Web Content Accessibility Guidelines 2.0 \(WCAG 2.0 AA\)](#).
- Be written in plain English.
- Apply correct heading and layout styles (using tags/Word styles).
- Include alternative text for all images, charts, graphs and maps.
- Avoid complex tables.
- Be under 20 MB (or broken into sections) to allow online users to download with ease.

The raw format has been provided following a request that the report information be supported by TIAC prior to the final report being created.

In the interests of being time efficient it is proposed that if TIAC support the information in Attachment 2 then the report receive graphic design prior to being presented to Council and recommended for public exhibition. The proposed recommendations have been worded to support this approach; however, they can be amended at the TIAC meeting if required.

Subject to TIAC approval the next step is to graphically design the report prior to recommending Council place the document on public exhibition.

It is recommended that during the public exhibition phase all public comments be collected through the 'have your say' page on Council's website and then reviewed at the next TIAC meeting along with an updated draft strategy as required.

Staff and consultants GTA will provide commentary to confirm which comments are appropriate for inclusion in the final version of the strategy and present the final draft strategy for approval.

**STRATEGIC CONSIDERATIONS**

***Community Strategic Plan and Operational Plan***

CSP Objective	L2	CSP Strategy	L3	DP Action	L4	OP Activity
<b>Community Objective 1: We have infrastructure, transport and services which meet our expectations</b>	1.3	Support, through partnership, a network of integrated sustainable transport options	1.3.1	Ensure an integrated and accessible transport network (SP)	1.3.1.1	Prepare an Integrated Transport and Movement Plan (ITMP)

CATEGORY	SUB CATEGORIES	KEY WORDS	W INCORPORATED IN STRATEGIC	COMMENTS	FEEDBACK
Action Table		<p>Transport Solutions Projects &amp; Policy targets</p> <p>20 year horizon</p> <p>Cost Estimates</p> <p>Budget Implications</p> <p>Alignment</p> <p>Grants</p> <p>MURC</p> <p>Business Cases Local, Regional, National</p>			<p>Provide an Action Table at the end of the strategy with a 20 year horizon. The table is to outline recommended priorities in regards to (but not limited to) recommended works program; research, studies and investigations; future strategy and policy development; aligning existing programs, policies, masterplans and strategies.</p> <p>Look in future for grants</p> <p>There should be an indication to costs for example Park and ride – what is estimated cost, who is responsible, stakeholders etc</p> <p>Should we have solution in the strategy or should it give us an option to be more flexible in our goals? – Cr Richardson: there should be an action plan for example area where ppl cant travel now so the strategy is giving us the solution of travel, estimated costs, etc. Potential action should be listed so then we can look for the idea for grants</p> <p>This document with more developed action table is fine. – check pest strategy and biodiversity to compare the action plan table for example climate change can have 15 actions that are identified etc</p> <p>Alignment of guiding principles and proposed actions with all of Council's relevant transport related plans and strategies, in particular the MURC study.</p> <p>Comparative data on current and future costs of network components regarding maintenance and development including alternatives and potential initiatives.</p> <p>Under short term actions in Section 2 – Cars out people in maybe include a business case to investigate the MURC Hi-Rail / Active Transport option (the Hi-Rail option included both a Hi-Rail with an active transport corridor). Maybe highlight how long it took for the Solar Train to get up and running as a reference point (about 5-6 years I think).</p> <p>What is Council's financial capacity now and in future to continue to fund and expand existing transport networks? How could development of variety of modes assist council to achieve more sustainable outcomes?</p> <p>What else should/could Council be aiming to do?</p> <p>What are the regional and national policy development conversations that Council needs to initiate and be involved in?</p> <p>Once the regional context surrounding and connecting BSC is understood this may shape what flows out in regards to the strategies to adopt.</p> <p>Draw out the implications, directions and strategies required for Byron Shire (NOT Council)?</p>
Additional Facts		<p>Snap Shots Body of Report v Appendix</p> <p>SWOT Grant Applications in mind</p> <p>Robust Evidence</p>			<p>Provide addition facts, data and evidence within the body of the strategy to help make it more robust and usable for grant applications.</p> <p>There has to be reference where the data is coming from</p> <p>Why there is 80% traveling to work by car in the snap shot? Give answer and action</p> <p>Insufficient evidence and data to back up and justify their document.</p> <p>What data and transport network analysis has been done? Include any supporting data in an appendix. This is also reflected in the regional comments requested.</p> <p>Have GTA done the background research and do they have the data to justify their recommendations?</p>

				<p>The evidence is to justify why they chose their recommendations / actions and why they didn't choose other recommendations and actions.</p> <p>This data is to be seen as robust supporting evidence we can point to when submitting grant applications.</p> <p>Present that data both in the body of the report (as factoids, narratives and stats) and in an appendix section. The order and structure of the appendix and data to be determined by GTA in a way that best supports and backs up their report.</p> <p>Can GTA please come up with a concept way to present the supporting data and factoid layout and BSC will liaise with GTA to confirm we are happy with that direction.</p> <p>Supporting facts, data and evidence. This does not include the need to undertake detailed statistical analysis and data extrapolation.</p> <p>Actions and proposals in the ITS be grounded and supported by situational analysis that provides a solid basis for future grant applications.</p> <p>Network, demographic, geographic, economic, social, environmental (especially climate change mitigation) and financial analysis? Financial should consider the costs of network development and maintenance.</p> <p>SWOT analysis needs to consider financial and environmental sustainability.</p>
Regional Context	Transport Demands	<p>Snap Shots</p> <p>Forecasts</p> <p>Not just Tourism</p> <p>Detail statistical analysis not required</p>		<p>Chart from Cr Cameron looking at traffic along motorway to be updated to 2018 traffic data</p> <p>Getting updated traffic volumes for the Sydney – Brisbane Corridor. Look at the 2006 Sydney t Brisbane Corridor Study and get these traffic volumes updated.</p> <p>Forecasts <del>and analysis</del> [consideration] of demographic factors and tourism industry growth.</p> <p><del>Analysis</del>, consideration and inclusion of tourism transport demands and impacts.</p> <p>See if data from the 2017 SEQ traffic modelling (which is being extended to include the Tweed and possibly Ewingsdale Rd) is available, relevant and useful.</p> <p>Transport for NSW - FYI ... Qld have a transport model that covers GC and integrates different transport modes. There are plans to integrate Tweed into this model given most of their traffic comes from GC. TfNSW have offered to extend that transport model down to include BSC and Ewingsdale Rd in particular.</p> <p>For more info Michael Baldwin Regional Planning at TfNSW</p> <p><del>Forecasts and analysis of</del> [is there any data on] growth in road traffic categories to identify implications for future costs, network demands and proposals in the ITS.</p> <p>Relying on existing state and local policy frameworks is not enough to understand who we are and what going on here at Byron Shire Council.</p>
	Regional Transport Infrastructure & Hubs	<p>Ballina &amp; GC Airports</p> <p>Regional Transport Corridors</p>		<p>State what adjoining regional councils, including Gold Coast City Council are proposing in regards to rail corridors and how Byron Shire Council may connect in with adjoining Councils.</p> <p>Placing BSC in its regional context, i.e. undertake a REGIONAL CONTEXT ASSESSMENT &amp; ANALYSIS.</p>

		GC train line			Regional transport network interconnections not adequately considered or discussed
		Rail Corridors			Include a discussion locating BSC within the wider transport region – use data, stats and a narrative to put BSC in context.
		Motorway			Provide a section / discussion looking at significant north / south & East / West regional transport hubs and their links with BSC.
		East / West Links			Eyes up, look at the network...see the LGA and region as it is...This will not be the same as only using Fed/State policy documents to build a picture?
		North South Links			Ballina airport - How many passengers pass through and how many transit to Byron and how they get to Byron. What actions can be done to improve our transport link?
		Not just Tourism			GC airport - How many pass through, how many transit to BSC and how do they get to Byron. What the current passenger numbers are and the numbers after their upgrade (6M increasing to 16M I think I read). What actions can be done to improve our transport link – see GC rail link for ideas? Show you know this and have done the research and you'll hit the mark.
		SWOT			GC rail link - GC plan to extend their rail link through to the airport and plan to extend their light rail.
		Bus Services & Hubs			Tweed has identified a new rail corridor to link up with the GC rail corridor. They plan convert their existing rail corridor to a rail trail and construct a new line (if it ever gets up and running). Where does this new corridor go? How could it link up with BSC? What actions can be done to progress this link?
					Make a greater mention of the MURC and rail corridor and associated research and infrastructure that may be required to get the MURC running. Maybe consider if building only a Mullum to Byron section would work as stage 1.
					East West Link
					North South Links
					Ballina - In all your maps and figures you don't show Ballina. Point to Ballina on your maps - see page 7 and 9 as a starting point
					Rail Corridor - Mention what Lismore and Richmond are doing to their trail. That may limit our rail trail options.
					Regional connection data and analysis.
	Shire Transport Corridors & Hubs	Not just Tourism			A description of key transport corridors connecting to and through Byron Shire Council.
		Rail Corridor			Transport Hub / Network - Include mention of any other existing regionally and locally significant transport hubs (i.e. Ewingsdale Rd, Lismore Rd, Broken Head Rd, Bus Interchange, Solar Train,) we currently have and are planned. If you've already got this this highlight this in this section.
		MURC			Analysis of current local and regional public transport provision including the lack of public transport as well as consideration of public transport development principles (e.g. integration) and how these principles can be applied for better outcomes.
		SWOT			Integrated network analysis.
					Use of SWOT analyses.
					Discuss the north south corridors
					Discuss the east west transport corridors

					For example, include the Rail corridor in on the map on page 9 and a park n ride at Mullumbimby. Under short term actions in Section 2 – Cars out people in maybe include a business case to investigate the MURC Hi-Rail / Active Transport option (the Hi-Rail option included both a Hi-Rail with an active transport corridor). Maybe highlight how long it took for the Solar Train to get up and running as a reference point (about 5-6 years I think).
	User Groups	Tourist			Extend transport/region – how ppl travel in the region – what region looks like – not just tourism
		Locals			Analysis and consideration of the transport needs of all groups In the community.  Trends, demography and other data that assists in the forecasting of transport movements and trip drivers to, from and within Byron Shire.
		Disadvantage Needs (Specific User Gp)			<p><a href="#">Northern Rivers Transport mapping project- link This report was developed by my team in 2013. It maps the transport options and gaps in the region. Some of these gaps came into the conversation today.</a></p> <p>Northern Rivers Unmet Aboriginal Transport Need- This report has been developed by Social Futures, in consultation with the Aboriginal Community, the report is being finalised and due for publication soon. A draft extract from the report which notes the unmet needs in the Byron shire include:</p> <p>Access to education          Difficult to get to TAFE on public transport for most areas.          No access via public transport to Kingscliff TAFE.          Bus services can be unaffordable for some people.          Access to employment opportunities          Can be difficult to get to employment opportunities due to lack of affordable transport services.          Can be difficult for the smaller villages to get to job network commitments etc as they only have access to school bus services.          Many of the services don't go to where employment opportunities are.          Access to health services          Difficulty getting to specialist appointments.          Gaps for people who do not meet Community Transport criteria.          After hours discharge for people without access to private transport.          General Practitioner's referring patients to Queensland specialists.          Access to cultural activities          Local men's/women's yarnning groups have been set up, however, it is very difficult to get participants there due to a lack of flexible transport.          Access to sport          Some areas experience difficulty to get to local sport during the week and on weekends.          Even more difficult if the person is playing representative sport that takes them out of the local area.</p> <p>It is important to highlight that the Northern Rivers is transport disadvantaged, if we are investing in creating more connected and reliable transport we need to ensure that all people can use these services by making it affordable and accessible.</p>

					The \$2.50 Red ticket is one of the strategies that can support transport disadvantage, the Red ticket enables valid pension card holders, seniors and war widow card holders all day public transport within NSW for \$2.50. This should be considered when looking at options for transport providers as private providers may not provide this service.
	Future Plans / Growth Trends				<p>Other considerations to note in regards to the Byron context are that Byron is:</p> <ul style="list-style-type: none"> <li>· Not urban but may be considered suburban</li> <li>· Not rural but may be considered coastal</li> <li>· Byron is an emerging city</li> <li>· Look at regional and BSC population growths</li> <li>· Traffic growths across the region</li> <li>· And transport growth / changes</li> </ul> <p>what the region needs both now and in 20 years, how BSC should connect to that, what is Council doing in that space and what should it do in that space.</p> <p>If we plan for it now we can be ready when we need it. The rail link to QLD may be a great example of that. If they plan to extend the rail link to GC airport and the connect to Tweed and if Tweed plan to set aside a new rail corridor to connect to this QLD rail extension then how can we plan to connect to that new rail corridor.</p> <p>Identify national, state and local projects/improvements?</p>
	Miscellaneous				<p>Local, regional and national transport situation analysis that describes the various policy layers and assumptions and contrasts these with an on ground reality check.</p> <p>What are the SWOTs? Identify for each layer of transport network...ie National, Regional, Local?</p>
Format / Content	Target Audience	<p>Language - not flowery</p> <p>More technical for practioners</p> <p>length not an issue</p> <p>Not a laymans document</p> <p>Grant Applications</p>			<p>Who the audience is? Community is not going to read it unless you are stakeholder. That should be doc for someone who is looking for funding or some support – community is not going to read it.</p> <p>Byron Transport Information Guide- link It would be great if we were focused on how we can communicate transport options to our community. My understanding is this resource (which is due for update and supported by my role) is a good source of information. Additionally Transport for NSW have funded <a href="http://www.goingplaces.org.au">www.goingplaces.org.au</a> which is managed by Social Futures, it shows local transport information and links to TfNSW Trip Planner. By using these modes of communications we can work towards an easy to understand connected transport system.</p> <p>What is this doc going to be use for? Consultants have to know! Is it for funding or for actions? It has to guide our thinking. This doc is our doc</p> <p>The Integrated Transport Strategy is to be viewed as an outsider looking in and not a Council report looking at itself. What does the region / BSC need as an outsider looking in.</p> <p>Key difference is that the wide view should NOT be done from a Council perspective to begin. This can limit a fuller, necessary view.</p>

					Shape language to target audience. Don't use flowery language targeting general public
	Goal of Strategy				A new overarching principle as follows: A strategy that provides solutions to the range of transport needs in the community that promotes sustainability and a rapid decrease in carbon emissions. Redraft the stated goal of the strategy – "meaningful mode shift away from cars to environmentally sustainable options ..... Etc"
	Snap Shot				Make it a snap shot of transport users, not general demographics Other considerations to note in regards to the Byron context are that Byron is: <ul style="list-style-type: none"> <li>· Not urban but may be considered suburban</li> <li>· Not rural but may be considered coastal</li> <li>· Byron is an emerging city</li> <li>· Look at regional and BSC population growths</li> <li>· Traffic growths across the region</li> <li>· And transport growth / changes</li> </ul> Snapshot: There should be more demographics, who is our community -> not only no of workers and residents but age, Different type of traverses everything sth about hinterland, not only focusing on tourism, who is connected who is disconnected why
	Shire Maps				update to show links to Ballina update to show rail corridor / MURC and how it will be part of a holistic transport strategy.
	Strategy Name				That the ITMS revert to its original name, the Byron Shire Integrated Transport Strategy (BSITS).
SPECIFIC TOPICS	Park n Ride				The one big idea of the Draft Transport Strategy is the proposed Council-run shuttle bus routes with Park & Ride locations at Tyagarah, Ewingsdale and Bangalow  The proposed Tyagarah park & ride makes sense because it is central to most towns and it's at the intersection of the Pacific Highway and railway corridor. However, there is no highway overpass here, and I suspect RMS wouldn't be happy about increased traffic crossing the highway. Also, I believe all the adjacent land (e.g. the turf farm) is privately-owned and very flood prone. So where would the cars park? [be more concrete]  Why would people want a park n ride at Ewingsdale Rd if the bus then gets stuck in traffic on Ewingsdale Rd. How many cars would a park n ride actually take off the road and would it actually make a difference? At the proposed Ewingsdale park & ride there is a highway overpass but this location is less central and it doesn't connect with the railway corridor. The Ewingsdale interchange is already heavily congested and ideally the transport strategy should aim to alleviate pressure on this intersection. Again, my understanding is most of the adjacent land is privately owned, so where would the cars park? (see below) Near Ewingsdale Hall perhaps?

					<p>Regarding the Park &amp; Ride at Bangalow, I think it would make more sense to have a Park &amp; Ride location south of Byron Bay near Suffolk Park and extend the shuttle bus route to Suffolk. There is a lot more traffic on the Suffolk-Byron route than there is on the Bangalow-Byron route. But again, there are limited opportunities for car parking in and around Suffolk Park.</p> <p>Park and ride from Byron to Mullum – no one would really use it if you have your own car (we need shuttle buses anyway)</p> <p>Also, the proposed shuttle bus route doesn't connect Mullum and Bruns directly, which I think would be a popular trip, so I'd suggest extending the Byron-Mullum route to a Suffolk-Bruns route (see below).</p> <p>Categories in the strategy are good</p>
	Policy Integration				<p>Review and amend to integrate existing BSC studies and projects.</p> <p>ITS to reflect community expectations with a critical analysis of policy positions put forward by State Government and other external stakeholders</p> <p>Have to acknowledge the way that existing policy framework is inadequate...does not adequately describe the on ground reality.</p> <p>Have National and State policies seen the same on ground reality (OGR) that strategic analysis identifies?</p> <p>Have they grasped the same (or different?) SWOTs?</p> <p>What are the policy deficiencies at Nat/State? For example does the North Coast Regional Plan acknowledge the OGR. If not, what is missing?</p> <p>What policy adjustments are required to better align with the OGR?</p> <p>How do Council's existing plans address the key challenges of the OGR analysis?</p> <p>What are the regional and national policy development conversations that Council needs to initiate and be involved in?</p>
	Environmental Matters				<p>Analysis [Consider] of proactive measures to review and improve planning framework documents to support an integrated low carbon ITS.</p> <p>All ongoing actions and new proposed actions be considered in relation to current and future potential to decrease carbon emissions.</p> <p>Expand discussion on sustainable transport opportunities including an acknowledgement of climate change.</p> <p>What is the strategy for sustainable transport development?</p> <p>What are the major F/S/L challenges to a sustainable Byron Shire integrated transport network?</p> <p>What is Council's role in delivery of sustainable transport at local level?</p>
	Social Needs - Disadvantaged groups				<p>Understand and respond to unmet transport needs and accessible transport.</p> <p>Discuss the benefits and equity of insuring access to transport.</p> <p>Katrina Ross is going to provide some data/doc for region – Andrew to check</p>
	Rail Corridor & MURC				<p>Rail corridor was ignored in the doc</p> <p>Next draft has to include the rail corridor and shuttle buses</p> <p>The Notice of Motion to incorporate the rail corridor active transport and rail link in the strategy as a key item.</p> <p>The rail corridor within BSC boundaries not discussed</p>



					<p>Make a greater mention of the MURC and rail corridor and associated research and infrastructure that may be required to get the MURC running. Maybe consider if building only a Mullum to Byron section would work as stage 1.</p> <p>For example, include the Rail corridor in on the map on page 9 and a park n ride at Mullumbimby. Under short term actions in Section 2 – Cars out people in maybe include a business case to investigate the MURC Hi-Rail / Active Transport option (the Hi-Rail option included both a Hi-Rail with an active transport corridor). Maybe highlight how long it took for the Solar Train to get up and running as a reference point (about 5-6 years I think).</p> <p>How many cars would a park n ride actually take off the road and would it actually make a difference?</p>
Technical Appendix				Put on hold for now. Wait to see impact of above changes	Moreland better by far because of the way that it looks at key trends, plans, projects and policy that influence or impact sustainable transport in Moreland.

# Byron Shire Council

Draft Report

Byron Shire Integrated Transport Strategy

Prepared by: GTA Consultants (NSW) Pty Ltd for Byron Shire Council

on 15/07/2020

Reference: N176800

Issue #: B-Dr



# Byron Shire Council

## Draft Report

## Byron Shire Integrated Transport Strategy

Client: Byron Shire Council

on 15/07/2020

Reference: N176800

Issue #: B-Dr

### Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A-Dr	21/02/2020	Draft				
B-Dr	15/07/2020	Updated Draft				

GTA Report (NSW)

© GTA Consultants (NSW) Pty Ltd [ABN 31 131 369 376] 2019  
The information contained in this document is confidential and intended solely for the use of the client for the purpose for which it has been prepared and no representation is made or is to be implied as being made to any third party. Use or copying of this document in whole or in part without the written permission of GTA Consultants constitutes an infringement of copyright. The intellectual property contained in this document remains the property of GTA Consultants.



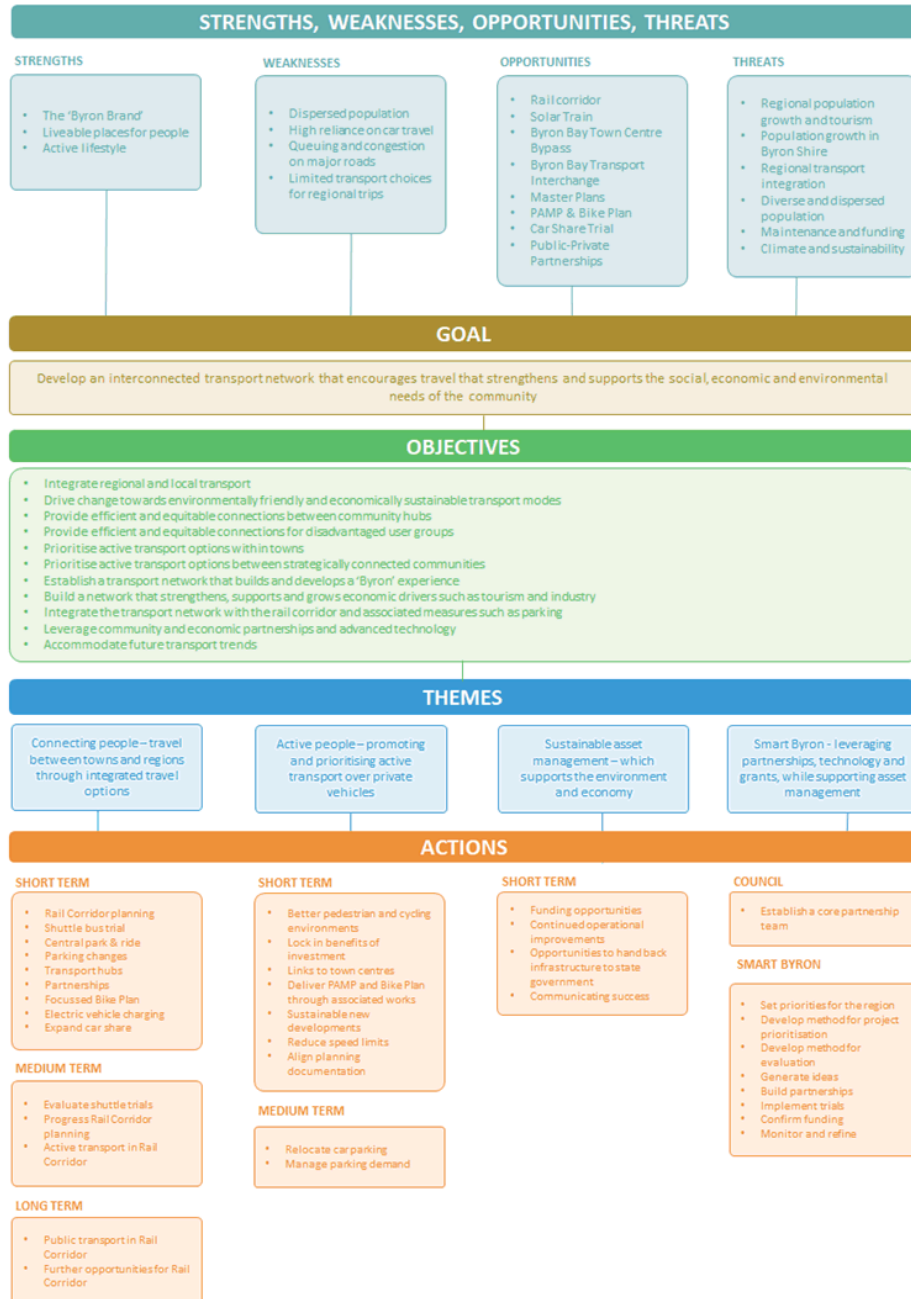
**ACKNOWLEDGEMENT OF COUNTRY**

In the preparation of this document Council acknowledges and pays respect to the Bundjalung of Byron Bay – Arakwal People as Traditional Custodians of the land within Byron Shire, and form part of the wider Aboriginal nation known as the Bundjalung.

In addition, Council acknowledges and respects the Widjabal and Mindjungbul people as Traditional Custodians within the Byron Shire. Council also acknowledges the Aboriginal and Torres Strait Islander people who now reside within this area.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

## Executive Summary



N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

# CONTENTS

<b>1. The Strategy</b>	<b>1</b>
1.1. About this Strategy	2
1.2. Summary of this Strategy	2
1.3. Byron Shire Overview	4
<b>2. Transport Snapshot of Byron Shire</b>	<b>7</b>
2.1. Regional Context	8
2.2. User Groups	20
2.3. Local Transport Context and Issues	26
2.4. Strengths, Opportunities, Weaknesses and Threats	34
<b>3. Goal and Objectives of the Strategy</b>	<b>45</b>
3.1. Policy Context	46
3.2. The Goal of the Byron Shire Integrated Transport Strategy	47
3.3. Objectives	47
3.4. Byron Shire Integrated Transport Strategy Themes	48
<b>4. Connecting People</b>	<b>50</b>
4.1. Guiding Principles	51
4.2. Short Term Actions (0 to 5 years)	54
4.3. Medium Term Actions (5 to 10 Years)	60
4.4. Long term (10+ Years)	62
<b>5. Active People</b>	<b>63</b>
5.1. Guiding Principles	64
5.2. Short Term Actions (0 to 5 Years)	68
5.3. Medium Term Actions (5 to 10 Years)	72
<b>6. Sustainable Asset Management</b>	<b>74</b>
6.1. Guiding Principles	75
6.2. Short Term Actions (0 to 5 Years)	76
<b>7. Smart Byron</b>	<b>79</b>
7.1. Guiding Principles	80
7.2. Council Actions	81
7.3. Smart Byron Actions	82

N176800 // 15/07/20  
 Byron Shire Integrated Transport Strategy // Issue: B-Dr  
 Byron Shire Council, Draft Report

<b>8. The Way Forward</b>	<b>84</b>
8.1. Measures of Success	85
8.2. Summary of Actions	86

**Figures**

Figure 1.1: Byron Shire Local Government Area	6
Figure 2.1: Population Count of Byron and Neighbouring Councils (2016)	8
Figure 2.2: Labour Status of Richmond and Tweed Region	9
Figure 2.3: Index of Relative Socio-economic Advantage and Disadvantage	10
Figure 2.4: Traffic congestion map 2016	11
Figure 2.5: Traffic congestion map 2031	13
Figure 2.6: Average Daily Traffic for All days over time at Pacific Highway, South of Ballina	14
Figure 2.7: Average Daily Traffic for All days over time at Pacific Motorway, Tweed Heads	15
Figure 2.8: GPS tracked freight journey (bi-directional movement), over 12 months	16
Figure 2.9: Employment destination of residents 2016	18
Figure 2.10: Examples of Main Festivals and Events in Byron Shire in 2018	20
Figure 2.11: Byron Shire aging population trend and future forecast	21
Figure 2.12: Population Projection for Northern Rivers Local Council Areas	23
Figure 2.13: Byron Shire Age Structure (2016)	24
Figure 2.14: Existing active infrastructure	25
Figure 2.15: Traffic count growth from 2006 to 2019	27
Figure 2.16: Byron Shire Crash Map (2014-2018)	29
Figure 2.17: Public Transport compared to Car Accessibility from Byron Bay	31
Figure 2.18: Public Transport compared to Car Accessibility from Mullumbimby	32
Figure 2.19: Public Transport compared to Car Accessibility from Bangalow	33
Figure 2.20: Belongil Creek Railway Bridge after restoration by Byron Bay Railway Company	37
Figure 2.21: Traffic in Byron Bay Town Centre	38
Figure 2.22: Popcars in Mullumbimby	40
Figure 3.1: Brunswick Heads	49
Figure 4.1: Proposed inter-town connectivity	57
Figure 5.1: Travel distance to work by area	66
Figure 5.2: Parking demand on Burringbar Street, Mullumbimby on a Saturday during school holidays (Sept 2015) <sup>123</sup>	67
Figure 5.3: Average parking demand in Brunswick Heads, Friday & Saturday during school holidays (Oct 2015) <sup>119</sup>	67
Figure 5.4: Average parking occupancy during various 'typical' periods (2018-19) <sup>120,121,122</sup>	67
Figure 5.5: Priority walking and cycling routes to major towns	69

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

**Tables**

Table 2.1:	Commuter Mode Share for Byron and nearby regions	17
Table 2.2:	Employed Person Destinations 2016	22
Table 2.3:	Population Projection for Local Council Areas	23
Table 2.4:	Byron Shire Transport SWOT Summary	44
Table 4.1:	Indicative Shuttle Bus Costs*	55
Table 8.1:	Summary of Byron Shire Integrated Transport Strategy Actions	87

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report



THE STRATEGY

DRAFT

# 1. THE STRATEGY

1

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

1

## THE STRATEGY

DRAFT

### 1.1. About this Strategy

The Byron Shire Integrated Transport Strategy (BSITS or 'the Strategy') sets out a proposed path forward over the coming decades to improve transport and support more environmentally sustainable ways of travel in Byron Shire.

The Strategy builds on known issues raised through previously received community feedback. Past community surveys and engagement have highlighted that better roads, more sustainable transport options and more resilient transport network are high priorities for the region, and this strategy focuses Byron Shire Council's ('Council') resources and efforts on those issues.

The strategy structure and much of the input has been provided by Council directly or via the Transport and Infrastructure Advisory Committee (TIAC) Council Working Group.

The Strategy aims to:

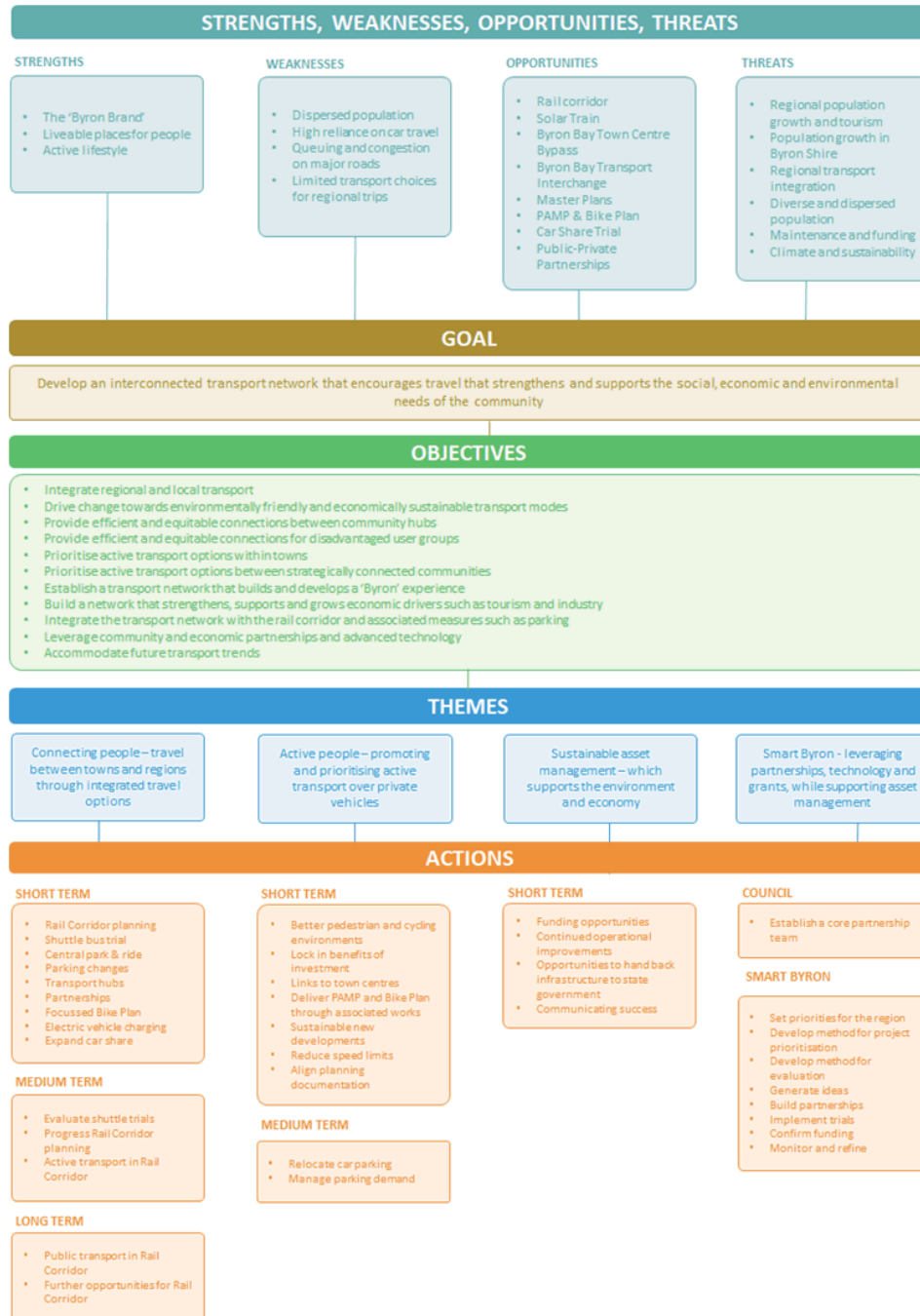
- Align to Council's Policies, Plans and Strategies
- Reflect the aims and aspirations of Byron Shire Council
- Describe transport challenges – locally and regional
- List transport actions.

### 1.2. Summary of this Strategy

Based on an understanding of the transport issues and needs for Byron Shire, the following figure summarises the approach, strengths, weaknesses, opportunities and threats, the goal of the Strategy and the key themes and actions to reduce reliance on private car travel to, from and within Byron Shire.

### THE STRATEGY

DRAFT



N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

3

THE STRATEGY

DRAFT

### 1.3. Byron Shire Overview

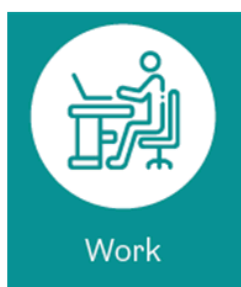
Byron is a special place – laid-back but conscientious, progressive but true to its roots, diverse and with a strong sense of community.



More than 30,000 people call Byron Shire home<sup>1</sup>, drawn to the spectacular setting, laid-back way of life, connection to the environment and characteristic vibe.

At the core of the region is the community, which is inclusive, creative and forward-thinking. The community are proudly progressive and foster a culture of opportunity and open-mindedness, where people can tread their own path. The community is engaged, passionate and invested in pursuing better outcomes for each other and the region.

However, the Shire also has many parts of the community that are disadvantaged, dispersed and not easily served by the current transport network for a variety of reasons. These parts of the community need to be better supported by more equitable transport options in the future.



The sense of community and entrepreneurial spirit extends to their enterprises and ventures, where alternative thinking can flow freely and passions are pursued.

There are almost 13,000 people working in the region across a range of industries, with tourism and hospitality the largest employment sector. Most people both live and work in the region.<sup>2,3,4</sup> Many businesses, from local makers to iconic names, were created in Byron and continue to thrive with creativity and energy.

The 'Byron' brand itself is an influential marketing mechanism, reflecting the region's core values and recognisable around the world.

- 1 Byron Shire Community Profile, profile.id by .id, the population experts, based on Australian Bureau of Statistics Estimated Resident Population 2018, <https://profile.id.com.au/byron>, accessed February 2020
- 2 Byron Shire Council – Workers place of residence by occupation – All occupations, profile.id by .id, the population experts, based on Australian Bureau of Statistics – Census 2016 – by Journey to Work, <https://economy.id.com.au/byron/workers-place-of-residence-occupation>, accessed February 2020
- 3 Byron Shire Council – Tourism Scale and Impact Analysis, .id – the population experts, November 2018, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-promotion-programs-and-activities-byron-shire-identity-program-2019/byron-shire-council-tourism-scale-and-impact-analysis-november-2018-powerpoint-from-.id-the-population-experts.-see-revision-1-for-full-powerpoint.-revision-2-minus-slide-38-for-web-version.pdf>, accessed January 2020
- 4 Our Byron Our Future - Community Strategic Plan 2028, Byron Shire Council, May 2018, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/community-services-planning-plans-strategies-community-strategic-plan-2018-2028/e201846204-community-strategic-plan-2028-adopted-170518.pdf>, accessed January 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

4

THE STRATEGY



'Byron' is a cultural symbol and a brand in its own right, recognised around the world as a haven of relaxation, lifestyle, wellbeing and sustainability.

More than two million people visit the Shire each year, growing by 60 per cent over the last three years.<sup>5</sup>

The Shire hosts national events and festivals across the year, with five per cent of all domestic visitors in the region to attend an event.<sup>6</sup>

DRAFT

Figure 1.1 provides an overview of the transport network in the Byron Shire Local Government Area.

<sup>5</sup> Talking Future Tourism Kitchen Table Discussion Handbook 2019, Byron Shire Council, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-industries-development-tourist-strategies-sustainable-svisitation-strategy-2019-2029/talking-future-tourism-kitchen-table-booklet.pdf>, accessed January 2020

<sup>6</sup> Byron Shire Council – Tourism Scale and Impact Analysis, .id – the population experts, November 2018, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-promotion-programs-and-activities-byron-shire-identity-program-2019/byron-shire-council-tourism-scale-and-impact-analysis-november-2018-powerpoint-from-.id-the-population-experts.-see-revision-1-for-full-powerpoint.-revision-2-minus-slide-38-for-web-version.pdf>, accessed January 2020

### THE STRATEGY

DRAFT

Figure 1.1: Byron Shire Local Government Area



Source: GIS layers provided by Byron Shire Council.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

6

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

## 2. TRANSPORT SNAPSHOT OF BYRON SHIRE

2

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

7

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

## 2.1. Regional Context

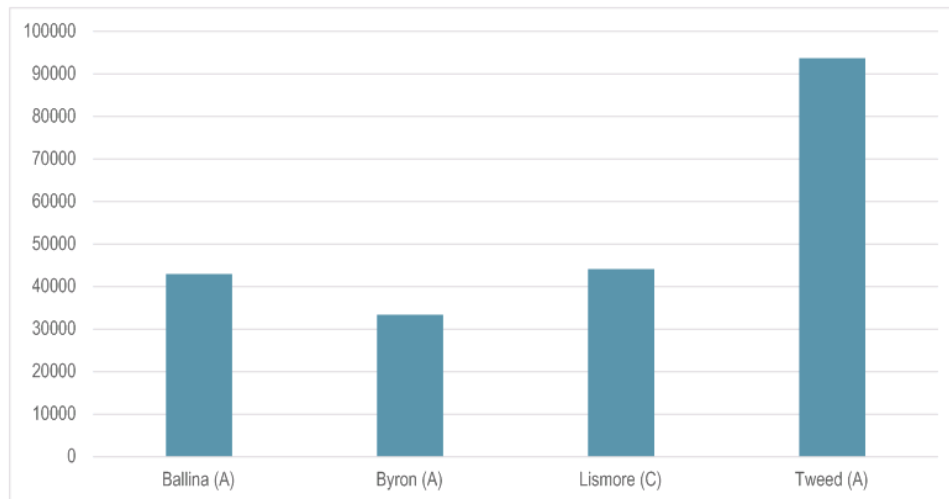
Byron Shire is located on the North Coast of New South Wales (NSW), approximately 800 kilometres north of Sydney and 200 kilometres south of Brisbane, with shared boundaries with the Tweed, Lismore and Ballina Local Government Areas, in a region known as the Northern Rivers. The Northern Rivers region is located in relatively close proximity to South Eastern Queensland – approximately 45 minutes to the Gold Coast and less than 2 hours to Brisbane by car.

### 2.1.1. Regional Population and Employment

#### Population

Byron Shire has the smallest population out of the surrounding Local Government Areas at 33,000.<sup>7</sup> Its neighbours Lismore and Ballina are slightly bigger in population as they are strategic centres of regional importance. Tweed Heads is the most populated nearby area, significantly larger than the other three Local Government Areas. Situated next to Gold Coast and bridging NSW with Queensland, it is an important region and economic centre, as it provides many interstate services and facilities.

Figure 2.1: Population Count of Byron and Neighbouring Councils (2016)



#### Employment

According to labour market statistics released by the Australian Government<sup>8</sup>, which includes participation, unemployment, and forms of employment. For people over the age of 15 in the Richmond-Tweed area, there is an unemployment rate of 3%. There is also a 41% non-participation rate, which includes the people who are not working or are not actively looking for work. Thirty-three per cent of the labour force is employed full time and 23% working part time. Although Byron Shire is only a component of the Richmond-Tweed area and may have different labour characteristics to the average, this data gives an indication of the wider trends which occur in the Shire. Further details can be seen in Figure 2.2.

<sup>7</sup> GTA Consultants analysis of NSW Government 2019 Population Projections - ASGS 2019 LGA projections

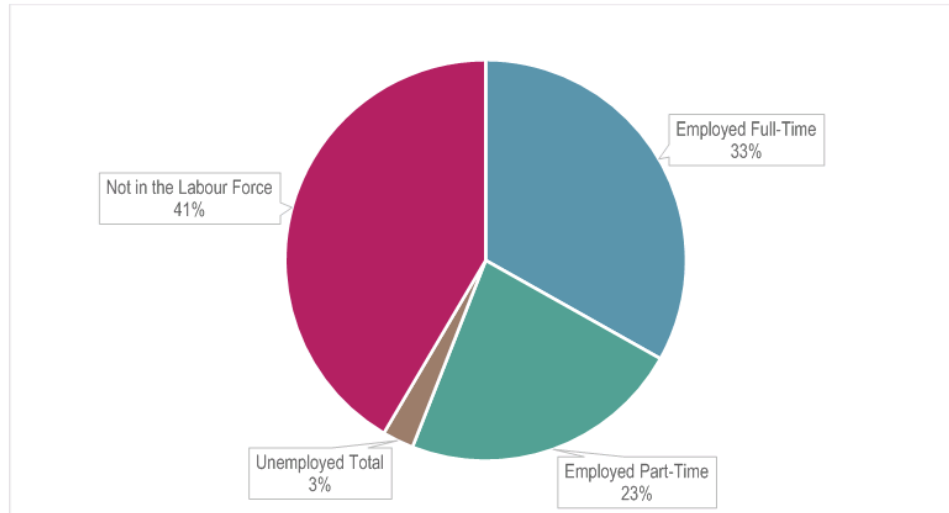
<sup>8</sup> GTA Consultants analysis of ABS Labour Force Survey, 12-month average - SA4 - Population by Labour Force Status, May 2020



TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

Figure 2.2: Labour Status of Richmond and Tweed Region



### Socio-Economic Deprivation

The Socio-Economic Indexes for Areas (SEIFA) Index of Disadvantage measures the relative level of socio-economic disadvantage based on a range of Census characteristics.<sup>9</sup> The coastal areas and Lismore are regarded as socially advantage compared to the rest of the region, however, there are rarely any areas that can be considered the most advantaged. The most deprived areas are generally at local centres such as Lismore and Tweed Heads, with Byron Shire being the exception to this observation. Details of the individual areas can be seen in Figure 2.3<sup>10</sup>.

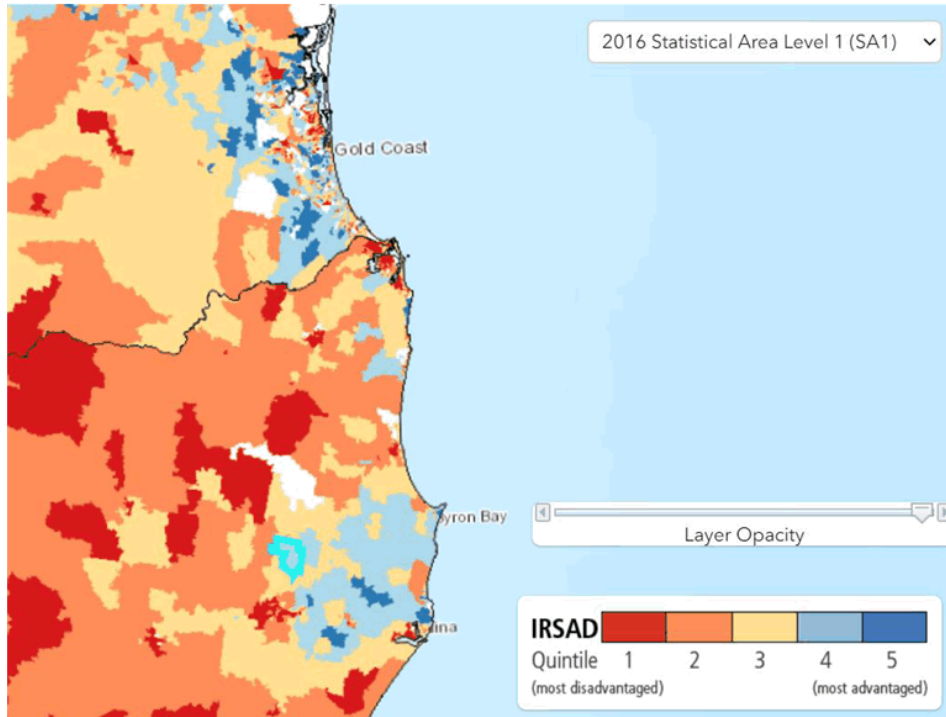
<sup>9</sup> GTA Consultants analysis of 2033.0.55.001 - Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016

<sup>10</sup> IRSAD INTERACTIVE MAP - 2033.0.55.001 - Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016  
<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001-2016-Main%20Features-IRSAD%20Inter-active%20Map-16>, accessed June 2020

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

Figure 2.3: Index of Relative Socio-economic Advantage and Disadvantage



### 2.1.2. Regional Transport and Traffic

Traffic volume and capacity from the Infrastructure Australia supplied strategic model<sup>11</sup> for 2016 and 2031 are visualised in Figure 2.4 and Figure 2.5. Volume (V) indicates the number of vehicles on the network and capacity (C) indicates a theoretical cap on how many vehicles the network can take. A V/C ratio of 1 indicates that the road or network is completely full and has no spare capacity. The V/C ratio is a proxy for congestion; the more vehicles on the network, the more likely there is going to be congestion.

In 2016, for Byron Shire and surrounding areas, congestion was fairly minor in the Byron Shire area and nearby centres such as Lismore and Ballina, free flow speed is generally expected with some low-level issues during peak hours at local centres.

<sup>11</sup> Urban Transport Crowding and Congestion, Infrastructure Australia, 2019 - <https://www.infrastructureaustralia.gov.au/publications/urban-transport-crowding-and-congestion> , accessed in July 2020

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

Figure 2.4: Traffic congestion map 2016<sup>12</sup>



DRAFT

<sup>12</sup> GTA analysis of Urban Transport Crowding and Congestion, Infrastructure Australia, 2019 - <https://www.infrastructureaustralia.gov.au/publications/urban-transport-crowding-and-congestion> , accessed in July 2020

**TRANSPORT SNAPSHOT OF  
BYRON SHIRE****DRAFT**

In the 2031 estimate, the transport model has more data input and thus resulted in a bigger coverage of the local transport network. Access from the M1 Motorway into various local centres is noticeably more congested, including the length of Ewingsdale Road to and from the Byron Bay township.

Although the strategic modelling incorporates the known and committed land use changes into its calculations, it is still an indicative estimate of the traffic demand and may overlook future technological and behavioural changes. The other note is the inability to detect and estimate the impact of festival and events generated traffic, so it is possible that these events and localised congestion are not picked up in the strategic model.

Nevertheless, for the purpose of this Strategy, the strategic modelling is able to provide an approximate guideline on where the demands will intensify and how the network functions on an average day.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

**12**

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

Figure 2.5: Traffic congestion map 2031<sup>13</sup>



DRAFT

<sup>13</sup> GTA analysis of Urban Transport Crowding and Congestion, Infrastructure Australia, 2019 - <https://www.infrastructureaustralia.gov.au/publications/urban-transport-crowding-and-congestion> , accessed in July 2020



## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

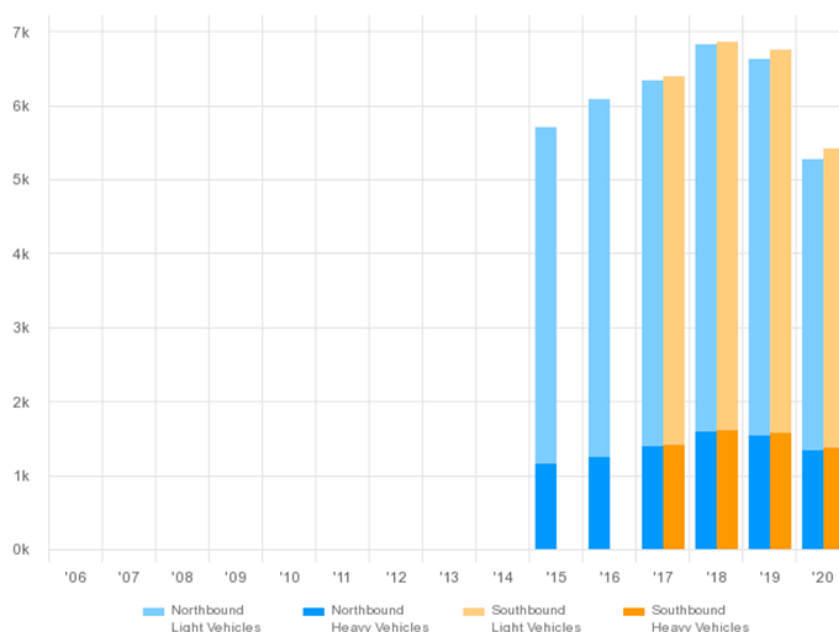
### Traffic and Freight Vehicle Demand: On the Increase

Traffic count data are recorded via permanent counters on the state road network, where its information is accessible. Upon reviewing the available counters relating to Byron Shire and its surroundings, the relevant counters to the south are the Wardell counter (south of Ballina) on the M1 Motorway and the Tweed Heads counter to the north. Both counters serve as an indicative volume of traffic and breakdown within the Northern Rivers region, with detailed breakdowns shown in Figure 2.6 and Figure 2.7.

Traffic is significantly lower south of Byron Shire with the Wardell counter registering 13,000 vehicles per day with 22% heavy vehicle traffic. While there was an increase from 2015 to 2018, there was a slight decrease in 2019. Most recent 2020 counts may reflect the impact of the COVID-19 (Coronavirus) pandemic where there has been a period of lockdown.

The traffic demand grew at the Tweed Heads counter site where an average of 70,000 vehicles was observed in 2018, which had increased from less than 50,000 in 2008; it is most likely that this growth is directly related to the growth in the region. Traffic counts from Queensland Transport and Main Roads suggests there is approximately 49,000 vehicles including 9% heavy vehicles emerging from Gold Coast on the Queensland side, not including traffic to/from Brisbane.<sup>14</sup>

Figure 2.6: Average Daily Traffic for All days over time at Pacific Highway, South of Ballina<sup>15</sup>



<sup>14</sup> 2018 traffic census data, Open Data Portal, Queensland Government, 2019 <https://www.data.qld.gov.au/dataset/traffic-census-for-the-queensland-state-declared-road-network>, accessed in July 2020

<sup>15</sup> Traffic Volume Viewer, Transport for NSW, 2020 <https://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html/?z=B&lat=-29.388527610370893&lon=153.03656853125&id=6116> accessed in July 2020

N176800 // 15/07/20

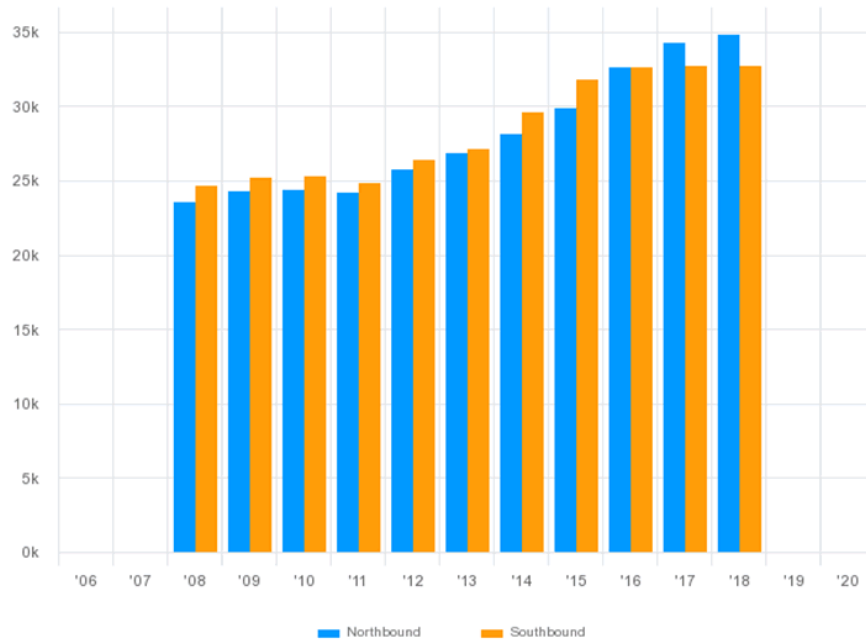
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

14

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

Figure 2.7: Average Daily Traffic for All days over time at Pacific Motorway, Tweed Heads<sup>16</sup>



The only on-road heavy freight movements permitted for Byron Shire is along the M1 Motorway, as it is on a B-double route. The annual demand for the corridor is estimated between 10,000 to 50,000, as shown in Figure 2.8. This is done using aggregated, de-identified GPS data generated by vehicles monitored through the Intelligent Access Program owned by the NSW State Government. While this does not account for all heavy vehicles on the network, however, it is representative of a sizeable majority of trips across a 12-month period.

This estimate is only inclusive of NSW traffic; Queensland data is not part of the data and figure.

Byron Shire has a national significant road running through it which is the responsibility of the State and Federal Governments.

<sup>16</sup> Traffic Volume Viewer, Transport for NSW, 2020, <https://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html/?z=12&lat=-28.215428153819364&lon=153.53722090480585&id=04010&yr=2017> accessed in July 2020

### TRANSPORT SNAPSHOT OF BYRON SHIRE

Figure 2.8: GPS tracked freight journey (bi-directional movement), over 12 months<sup>17</sup>



DRAFT

<sup>17</sup> GTA Consultants analysis of NSW Telematics, Transport for NSW, 2018 <https://www.transport.nsw.gov.au/data-and-research/freight-data-10/nsw-telematics> accessed in June 2020.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

16



## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### Travel Patterns

Mode share in Byron Shire and nearby Local Government Areas across the Northern Rivers and South East Queensland for commuting is shown in Table 2.1. Despite best intentions, census data suggests that for work trips the general population is still largely reliant on driving as the main method to go to and from work, with Byron Shire leading in terms of non-private vehicle travel, with a significant bigger proportion of users working from home or using active travel modes.

**Table 2.1: Commuter Mode Share for Byron and nearby regions<sup>18</sup>**

Local Government Area	Public Transport	Vehicle	Active Transport	Work at home	Other Mode
Byron	1%	75%	8%	15%	1%
Lismore	1%	87%	4%	7%	1%
Ballina	1%	85%	5%	8%	1%
Tweeds	2%	86%	4%	8%	1%
Gold Coast	5%	84%	4%	7%	1%

Active travel modes are consistently used by 4-5% of commuters across Byron Shire's neighbouring Local Government Areas, with Byron being much higher at 8%. The NSW regional average is lower at 6% for walking, cycling and other modes not defined.<sup>19</sup>

Public transport mode share is minimal across the sparsely populated Northern River region, with only Gold Coast having a larger group of people commuting through public transport. This is likely attributed to the population size, provision of car parking, council's investment, availability of services and infrastructure provision (e.g. design of roads not to include bike paths).

Byron Shire has a high proportion of people that work at home when compared to its neighbours. This is likely reflective of the wealth in Byron Shire and the ability to work remotely. Byron Shire's high percentage of people work at home could also be attributed to the Shire's economic focus on tourism and retail, where a sizeable portion of shops are owner occupied.

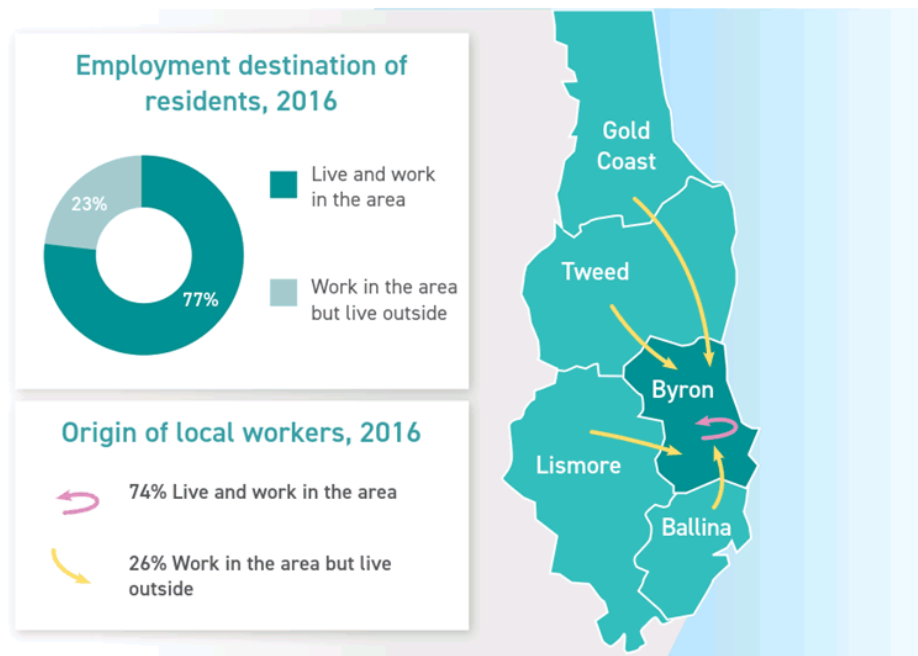
The following figure (Figure 2.9) shows a high percentage of the shire's residents about 77% (9,558) work and live in the area, which proves high proportion of trip containment in the Local Government Area. The other 23% of resident lived in the area mainly commute to other Local Government Areas including particularly Ballina (6%), following with Lismore (5.6%), Tweed and Gold Coast.

<sup>18</sup> GTA Consultants analysis of 2016 Census - Counting Employed Persons, Place of Work (POW), Australian Bureau of Statistics.

<sup>19</sup> Regional NSW Services and Infrastructure Plan, Transport for NSW, 2018

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

Figure 2.9: Employment destination of residents 2016



DRAFT

### 2.1.3. Major Connections

Local towns and centres are attractions for regional travel movements around Byron Shire. Given the relatively low population and dispersed nature of the centres, people typically use cars to travel. This is also the case for visitors, as many key destinations are spread across the Shire, with Byron Bay as the main hub. On a daily basis, many residents are travelling to different parts of the Shire for work, with Byron Bay attracting a sizable portion of commuters from its nearby centres.

The main regional destination centres are Tweed Heads, Lismore and Ballina, as they are the largest centres in the area with a comprehensive provision of essential services and employments.

- Lismore is a regional city and the focal point of inland journeys. It is also the gateway to the west. It has many urban amenities such as education precinct, health precinct and airport. It is also home to new housing and employment developments.
- Tweed Heads is the most populated urban area on the NSW side, situated right at the Queensland border. Any coastal movements between the states typically go through Tweed Heads.
- Ballina is a coastal centre south of Byron Bay, it is a regional significant area as it provides a hospital and port, as well as future employment developments.

Further north is the Gold Coast airport, which is a main attraction for either passengers or workers. It is the closest international airport for Byron Shire. The airport facilitates a sizeable number of passengers, and support more than ten times the amount of air traffic of Ballina airport<sup>20</sup>, in 2018, 7% of all international visitors to Byron entered Australia from Gold Coast Airport<sup>21</sup>.

<sup>20</sup> Airport traffic data, The Department of Infrastructure, Transport, Regional Development and Communications, 2020  
[https://www.bitre.gov.au/publications/ongoing/airport\\_traffic\\_data](https://www.bitre.gov.au/publications/ongoing/airport_traffic_data), accessed in July 2020

<sup>21</sup> Byron Shire Council – Tourism scale and impact analysis, id, 2018

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 2.1.4. Communities and Townships of Byron Shire<sup>22</sup>

#### Byron Bay

Byron Bay is an iconic coastal town characterised by spectacular beaches and coastline. For such a significant tourist destination within the Shire, it has maintained relatively low density urban places with a compact, walkable commercial centre and a predominance of one and two storey development in residential areas with three storeys in the business area. The sensitive coastal environment with hazards and flooding, has influenced how the town has expanded over the years. Byron Bay itself attracts tourists due to the natural environment, laid-back culture, shopping, eateries and nightlife as well as its identity as a haven for celebrities.

#### Mullumbimby

About twenty kilometres north of Byron Bay via the Pacific Highway is Mullumbimby, situated on the Brunswick River. Mullumbimby is known as "The Biggest Little Town in Australia", holding a steadfast role as a key service provider not only for town residents but surrounding rural areas. The town has a variety of cafes, colourful shops, interesting buildings, attractive parks, a swimming pool and a museum, with regular farmers and community markets attracting residents and visitors alike.

The inclusive community finds alternative and practical solutions to any issues that may arise. More recent concerns such as the cost of housing, caring for the less fortunate, threats to the live music scene and access to renewable energy and local produce has seen the community successfully respond with the establishment of community and business enterprises.

#### Bangalow

Bangalow is a unique rural community situated in some of the State's richest farmland. With its Federation influences and stunning surrounding scenery, Bangalow also attracts tourists to its range of eclectic, individual and unique stores, as well as local arts and crafts. Bangalow is a very popular day tripper destination in Byron Shire.

Many residents see the village's heritage appeal as a gift, expressing caution when it comes to change. The regular community and farmers' markets as well as festivals and events such as the annual Billycart Derby, Taste and Christmas Eve festival reflect the heritage charm of the area.

#### Brunswick Heads

Brunswick Heads is a small yet resilient seaside township situated in an area of natural beauty alongside the coast. The natural landscape, made up of beaches, rivers and green spaces, dominates and shapes the area and the community over time has developed around this, delivering a varied and compatible range of architectural styles, materials, landscapes and streetscapes. It has much to offer as a family-friendly coastal village with local community facilities and services.

#### Ocean Shores, New Brighton & South Golden Beach

The eclectic villages of Ocean Shores, New Brighton and South Golden Beach are home to a mix of newcomers, as well as those who have lived in the district all of their lives. The hilly nature of the area allows all aspects of the natural environment to be appreciated, with various places benefitting beach and hinterland outlooks. Many residents have fantastic nature reserve views supporting a growing interest in water leisure and sporting activities and art amongst the community. More and more tourists are visiting Ocean Shores for its services and amenities due to its proximity to the North Byron Parklands; a 660 acre cultural arts and music events venue at Yelgun, renowned for events such as Splendour in the Grass and Falls Music & Arts Festival.

<sup>22</sup> Byron Shire Sustainable Visitation Strategy 2020-2030, Byron Shire Council, 2019

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 2.2. User Groups

#### 2.2.1. Tourism & Events

Byron is a popular tourist spot both domestically and internationally, it is home to various festivals attracting thousands of visitors a day. It is already an established centre for musical, artistic and other surfing events for visitors across the globe. Domestically, the wider Northern Rivers region is identified as the most popular regional NSW attraction. Council has forecasted the number of annual visitors nights to increase by 1.6 million from 2017 to 2027<sup>23</sup>.

The visitation to Byron is largely a seasonal affair as the main attractions are the summertime beaches and major festivals. Where 5 per cent of all visitors in the region to attend an event. The biggest events are "Splendour in the Grass" and "Bluesfest" which both are estimated at over 100,000 visitors over the course of the festivals<sup>24</sup>. Smaller events also scatter across the year, where the Council estimates at least a few thousand on average. More examples can be seen in Figure 2.10.

**Figure 2.10: Examples of Main Festivals and Events in Byron Shire in 2018**

Category	Event	Estimated no of attendees (counting over event days)	Closest station
Music Festivals	Splendour in the Grass	105,000	Yelgun
	Falls Festival Byron Bay	60,000	Yelgun
	Bluesfest	100,000	Tyagarah
	Mullum Music Festival	9000	Mullumbimby
Sport Events	Byron Bay Surf Festival	10,000	Byron Bay
	Byron Bay Tri & Multisport Festival	2000 *	Byron Bay
Other Cultural Events	Sample Food Festival	17,000	Bangalow
	Byron Writers Festival	12,000	Byron Bay
	Soul St NYE	15,000	Mullumbimby
	Schoolies	10,000	Byron Bay
	Byron Bay Japan Festival	5000	Byron Bay
	Byron Bay Spirit Festival	4500	The Cavanbah Centre and Elements

The large influx of visitors bolsters the local hospitality and other tourism associated business; however it does create a sudden demand for essential infrastructures that far surpasses what is considered business as usual.

#### 2.2.2. Social Disadvantage

While Byron Shire is often seen as a holiday and tourist destination with limited diversity in non-tourist industries, the Shire does have parts of the community which are socially and economically disadvantaged, as was seen earlier from the SEIFA index.

<sup>23</sup> Byron Shire Sustainable Visitation Strategy 2020-2030, Byron Shire Council, 2019

<sup>24</sup> Reactivation and Multi Use of the Byron Shire Rail Corridor – Economic Report 3 Events and Festivals, Arcadis, 2019

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### Unemployment

According to a Council demographics review in 2017<sup>25</sup>, Byron has an unemployment rate of 8.5% as opposed to the NSW average of 6.1% and National average of 5.6%. The youth unemployment is also high at a 15.5% with 11.8% of the youth unengaged in any work or studies. With a high turnover and a strong backpacking culture, the region has a significantly higher percentage of part-time employment at 47%, with the NSW average at 32%.

### Income

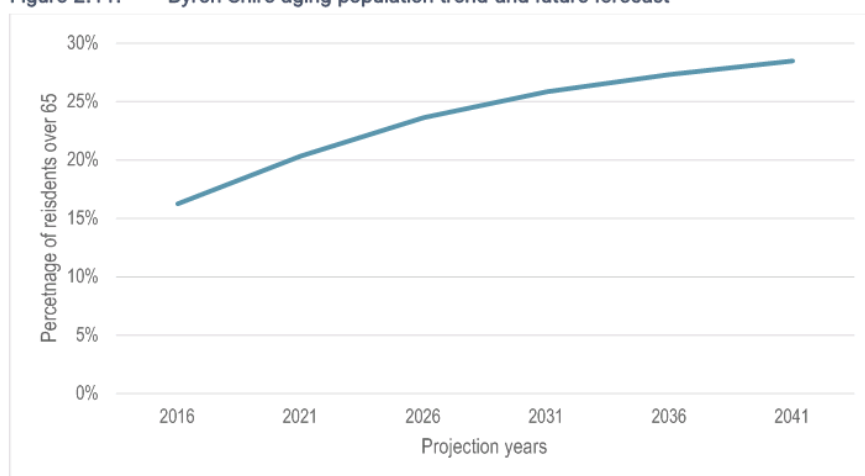
In the same review, the reported median income of \$1,143 per week in Byron is also lower than the NSW average of \$1,500, although this may be skewed by the number of temporary backpackers. Despite the lower income, Byron properties on average are higher than the NSW average by \$125,000.

### Aging Population

As can be observed in Figure 2.11, the percentage of people over 65 years of age is expected to noticeably increase in the future, going from 16% in 2016 to a projected 28%. As such, the community demands of the residents will change accordingly. As of now, the trip purpose is 34% health care related.

Going forward, the greater travel demand will be required for healthcare and recreational purposes as the population gets older. The demand for modes of transport will also need to adjust accordingly to address this change in demographic, more specialist vehicles and services are needed to cater to the daily demands of the senior population.

**Figure 2.11: Byron Shire aging population trend and future forecast<sup>26</sup>**



<sup>25</sup> RJIP 2017 Byron Bay Bypass Byron Shire demographics and disadvantages, Byron Shire Council, 2017

<sup>26</sup> GTA Consultants analysis of NSW Government 2019 Population Projections - ASGS 2019 LGA projections

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 'Unmet' Transport Issues for disadvantaged groups

In an engagement report, disadvantage in terms of access to opportunities and services were discussed and reflected.<sup>27</sup> The identified issues include:

- Lack of public transport options to employment opportunities
- Expensive public transport fares
- Lack of public transport coverage, particularly to education, cultural activities, and health facilities
- Lack of after-hour public transport services
- Lack of transport options to health services and Queensland specialists.

### 2.2.3. Workers

Byron Shire's local centres provide most of the employment opportunities, whether if it is tourism or services-based work. The journey to work data on the origin-destination of commuting trips are shown in Table 2.2.

**Table 2.2: Employed Person Destinations 2016<sup>28</sup>**

	Brunswick Heads - Ocean Shores	Byron Bay	Bangalow	Mullumbimby
Workers living in area	3,379	4,210	2,469	3,075
Living and working in the same area	1,078	2,784	1,052	1,612
<b>Containment</b>	<b>32%</b>	<b>66%</b>	<b>43%</b>	<b>52%</b>

The proportion of individuals living and working in the same labour market region is referred to as the level of self-containment and is seen as a positive as it reduces the length of trips and can also lead to greater flexibility at what time the trips are undertaken (e.g. outside peak times).

Trip containment has important environmental consequences in its capacity to increase the likelihood of transport to work via methods other than private cars, given distances between home and work are probably shorter. Despite the shorter distances, car use may be the only viable commuting option unless appropriate public transport and safe active transport facilities is available between nearby areas within the Local Government Area, rather than a focus on transport infrastructure and services for trips toward employment destinations outside of the Local Government Area.

Byron Bay and its surrounding areas all have relatively low trip containment, with the highest Byron Bay having the highest of 66% of its residents live and work in its own area. This is expected as private vehicle is the most popular mode of transport in the region, where people can elect to live further away.

<sup>27</sup> Northern Rivers Unmet Aboriginal Transport Need: Interim report, Social Futures, HART Services, Tweed, Byron and Ballina Community Transport, 2019

<sup>28</sup> GTA Consultants analysis of ABS Place of Work data for Statistical Area 2, NSW Government, based on origin and destination counts of residents and place of work



## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

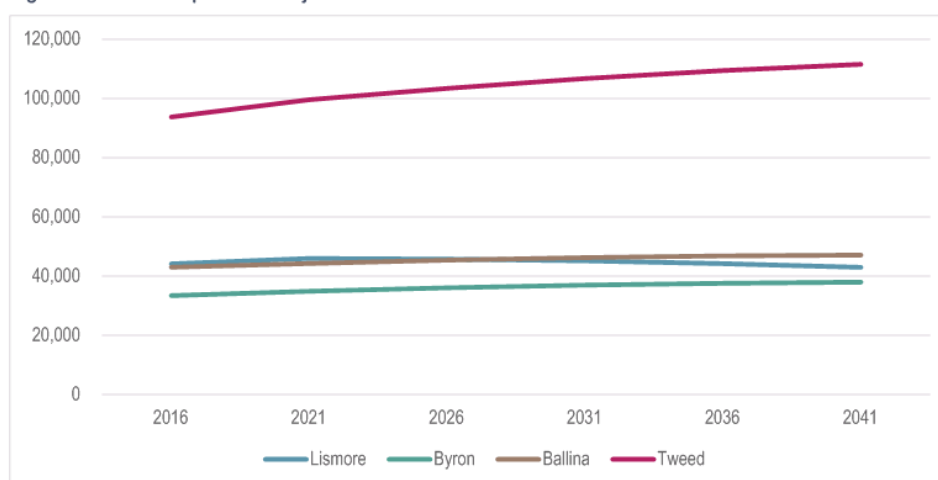
### 2.2.4. Residents

Population projection data have been acquired from the NSW<sup>29</sup> and Queensland<sup>30</sup> State database, where projections are in increments of 5 years until 2041. Byron and its surrounding areas will not experience a significant population in the upcoming decades, in the case of Lismore, the population is expected to decline. The most significant growth is in the northern border at Tweed. Similarly, Gold Coast in Queensland will experience a substantial amount of growth in the upcoming decades. Growing by 64% from 2016, to a population of almost one million by 2041, the Gold Coast will carry an even more significant regional importance. As an effect, Gold Coast will have more influence and generate more activities between itself and nearby regions, such as Byron Shire.

**Table 2.3: Population Projection for Local Council Areas**

Local Government Area	2016	2041	% Change
Lismore	44,122	42,944	-3%
Byron	33,399	37,955	14%
Ballina	42,993	47,092	10%
Tweed	93,742	111,531	19%
Gold Coast	576,918	943,686	64%

**Figure 2.12: Population Projection for Northern Rivers Local Council Areas<sup>31</sup>**



<sup>29</sup> GTA Consultants analysis of NSW Government 2019 Population Projections - ASGS 2019 LGA projections

<sup>30</sup> GTA Analysis of Projected population (medium series), by five-year age group (males, females and persons), by local government area, Queensland, 2016 to 2041, Queensland Government, 2016

<sup>31</sup> GTA Consultants analysis of NSW Government 2019 Population Projections - ASGS 2019 LGA projections

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

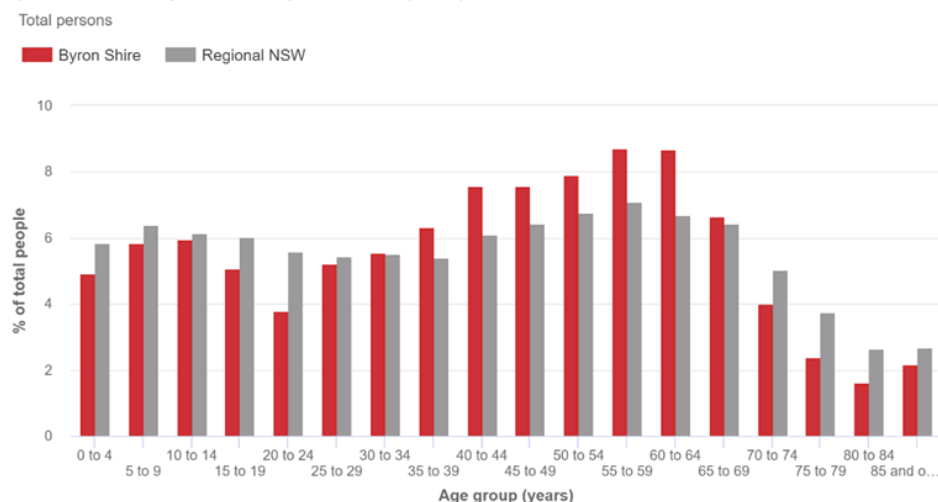
23

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

Figure 2.13 shows the comparison of age demographics of Byron Shire with regional NSW. One noticeable difference is Byron Shire having a significantly higher share of middle aged people from 35-65, which in contrast having a smaller young population, especially from 20-24 of years old. This suggests Byron Shire is a lifestyle block for established adults. Where the young adults are likely to leave the Shire for studies or professional pursuits.

**Figure 2.13: Byron Shire Age Structure (2016)<sup>32</sup>**



### 2.2.5. Active Transport

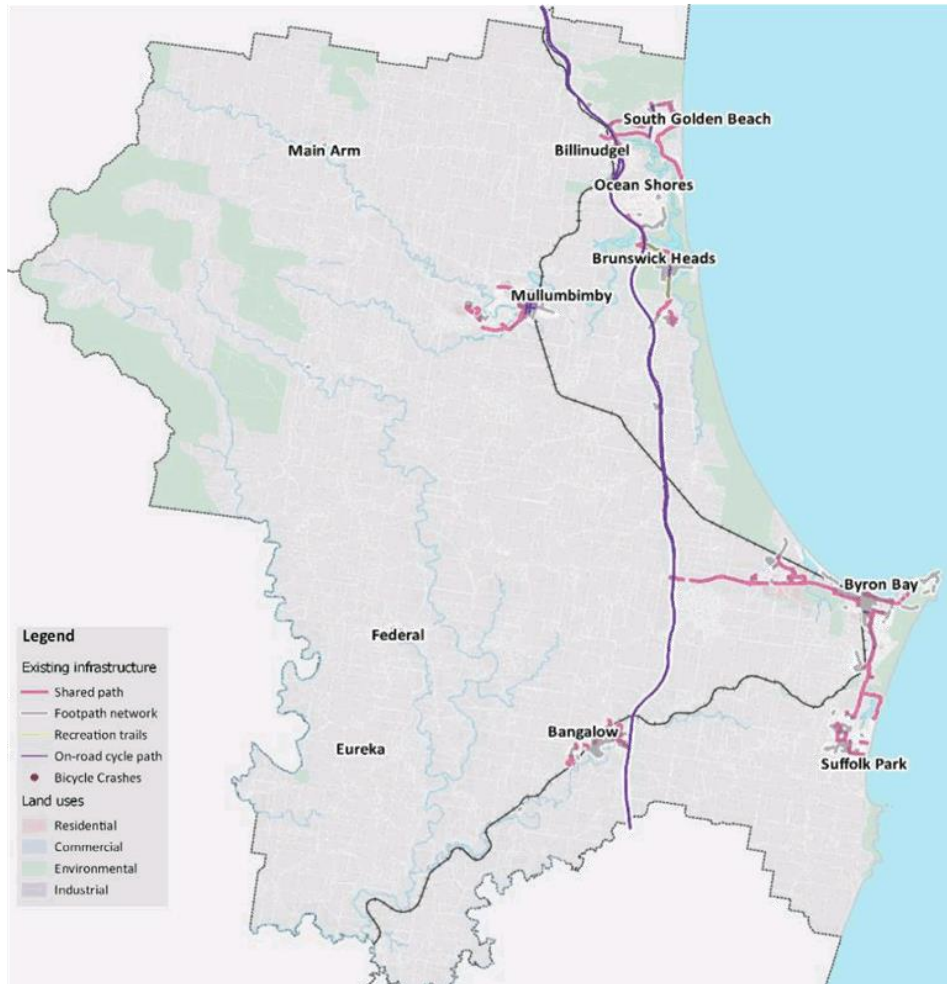
The supply of cycling facilities in the Byron area is limited, while cycling is permitted on the M1 Motorway, this is dangerous with heavy vehicles and other private vehicles travelling at high speeds. On a local level, only sections of major centres have any form of cycle paths. Given the long distance between the centres in Byron Shire, travelling by active transport is challenging, though there are some connections that are easily covered by a cycle, especially with more e-bikes becoming common.

<sup>32</sup> Byron Shire Five year age groups, .id Australia, <https://profile.id.com.au/byron/five-year-age-groups> accessed in July 2020



TRANSPORT SNAPSHOT OF  
BYRON SHIRE

Figure 2.14: Existing active infrastructure<sup>33</sup>



Currently, according to ABS data analysed in previous sections, the active transport mode share for going to work is 9% in the Shire.

In the *Northern Rivers Regional Transport Plan*, there has been provisions to support the introduction of new cycle facilities in the Local Government Area, which includes converting disused rail tracks into cycle trails for the region.<sup>34</sup>

Overall in the Shire, cycling facilities will not only benefit the commuters and local residents make their trips, there are also opportunities in using cycling facilities to unlock further areas for tourism purposes.

<sup>33</sup> Byron Shire 10 Year Bike Plan 2019, Byron Shire Council, 2019

<sup>34</sup> Northern Rivers Regional Transport Plan, Transport for NSW, 2013

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

Given the events are festivals are all youthful in its gatherings, there will be a higher openness to use cycling as the main mode to get around. Also taking into account that international visitor may not necessarily fully grasp the driving behaviour of local drivers and right-hand side driving, providing cycling as a viable alternative may reduce road accidents.

### 2.3. Local Transport Context and Issues

#### 2.3.1. Traffic Growth

From local traffic count sites shown in Figure 2.15, there is an observed growth in traffic amongst the various town centres and accesses to state highway or motorway.<sup>35</sup> Daily traffic on Ewingsdale Road to the M1 Motorway is an indicative measure of traffic going in and out of Byron Bay to other regional areas. From 2006 to 2016, the daily traffic grew from 16,600 to 21,700, which is a 31% increase.

Further north at Mullumbimby Road, which is the main entrance from the M1 to Mullumbimby, from 2006 to 2019, there was 43% traffic growth to an average daily estimate of 12,350. Other count sites at Bangalow, Ocean Shores and Suffolk Park also had increases in traffic between 2006 to 2019. Overall, the traffic volumes in the Byron Shire have all increased significantly, indicating demand for regional travel between the centres is growing and placing more pressure on the road network.

<sup>35</sup> GTA Consultants analysis of Council commissioned traffic counts from 2006 to 2019

### TRANSPORT SNAPSHOT OF BYRON SHIRE

Figure 2.15: Traffic count growth from 2006 to 2019



DRAFT

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

27

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 2.3.2. Road Safety

Road safety forms part of the Premier's Priorities relating to Safer Communities, with most road fatalities occurring in rural areas. The intent is to reduce road fatalities by at least 30 per cent between 2011-2021. The *2021 Road Safety Plan*<sup>36</sup> outlines a number of priority actions including creating liveable and safe urban communities; this includes the expansion of 40km/h high pedestrian activity areas, safety upgrades at intersections and safety integration in bicycle network programs.

A Safe Systems approach has been adopted which looks at safe roads (and intersections), safe speeds, safe vehicles and safe people. Whilst this moves away from the traditional crash cluster analysis to identify specific crash issues, an understanding of historical road crashes provides an understanding of prevalent types of crashes within the Shire.

A crash map of Byron Shire for a five-year history from 2014 to 2018 is shown in Figure 2.16<sup>37</sup>. A total of 818 crashes were recorded in the Shire during this period.

Detailed analysis of the crash history of the Shire indicates that the most frequent location for crashes is along major roads including Bangalow Road with three fatal crashes, and the Pacific Highway and Hinterland Way with 1 fatal crashes likely related to high traffic speed.

There were no fatal crashes in Byron Bay, Mullumbimby and other town centres between 2014 to 2018, although the number of injury crashes are substantial. Approximately 12% of crashes involved cyclists and pedestrians within the Shire and more than 92% of the crashes involved cars with 8 fatal crashes.

<sup>36</sup> Road Safety Plan 2021, NSW Government, 2018 <https://towardszero.nsw.gov.au/sites/default/files/2018-02/road-safety-plan.pdf>

<sup>37</sup> Transport for NSW data provided by Byron Shire Council



### TRANSPORT SNAPSHOT OF BYRON SHIRE

Figure 2.16: Byron Shire Crash Map (2014-2018)<sup>36</sup>



Source: Transport for NSW, courtesy of Byron Shire Council.

<sup>36</sup> GTA Consultants analysis of historical crash data from 2014-2018, categorised by Fatal, Injury and Non-casualty

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

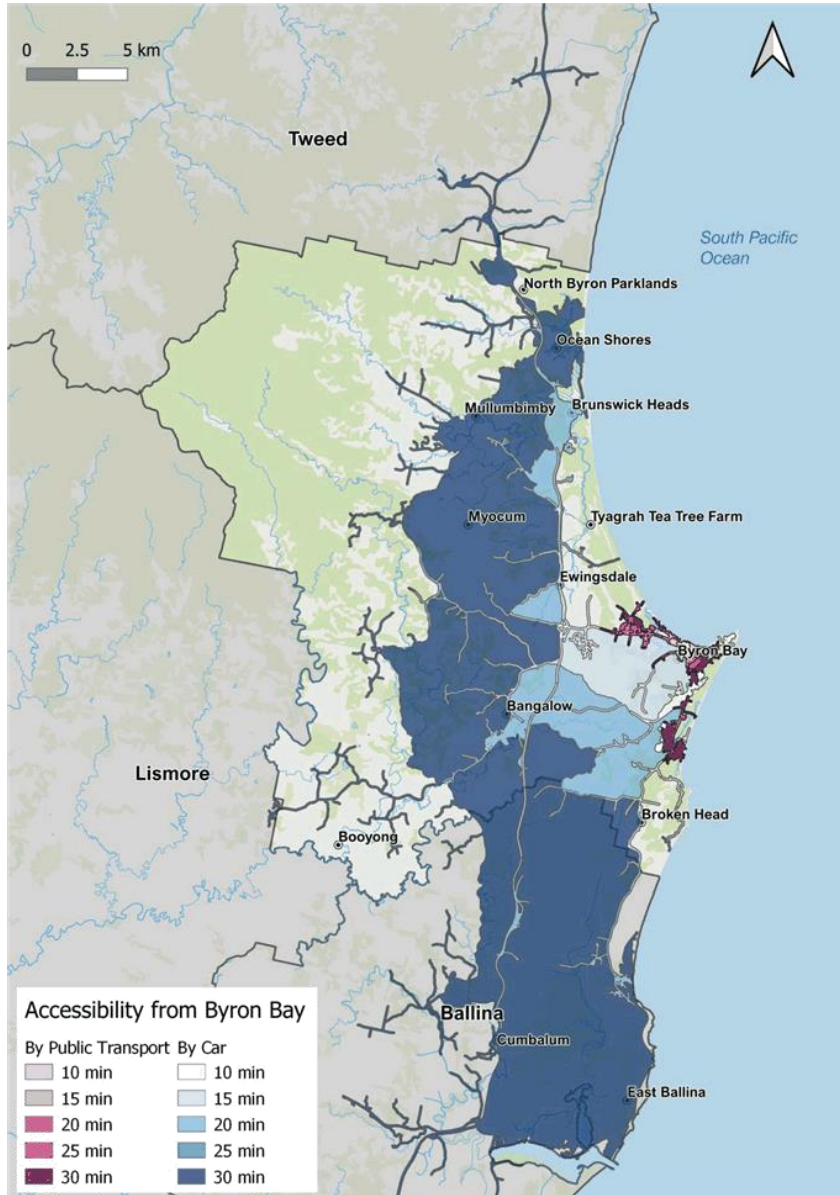
## 2.3.3. Public Transport and Car Based Accessibility

Figure 2.17 to Figure 2.19 illustrate public transport versus a private car's accessibility within 30 minutes from Byron Bay, Mullumbimby and Bangalow respectively. This analysis for public transport accessibility is based on timetable data from March 2019 which is the most recent publicly available General Transit Feed Specification (GTFS) dataset available. The extracted data for both car and public transport is related to a weekday (Wednesday) at 8:00am. Overall, the figures highlight that there is a lack of fast public transport across the Shire, while driving provides much better 30-minute access across and beyond the Local Government Area.

The public transport network from the Byron Bay town centre only provides access within 30 minutes to Suffolk Park to the south and the North Beach / Arts and Industry Precinct to the west, car accessibility from Byron Bay covers most of the townships in the Local Government Area and while driving a car, covers access further north into the Tweed Local Government Area and south into the Ballina Local Government Area.

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

Figure 2.17: Public Transport compared to Car Accessibility from Byron Bay<sup>39</sup>



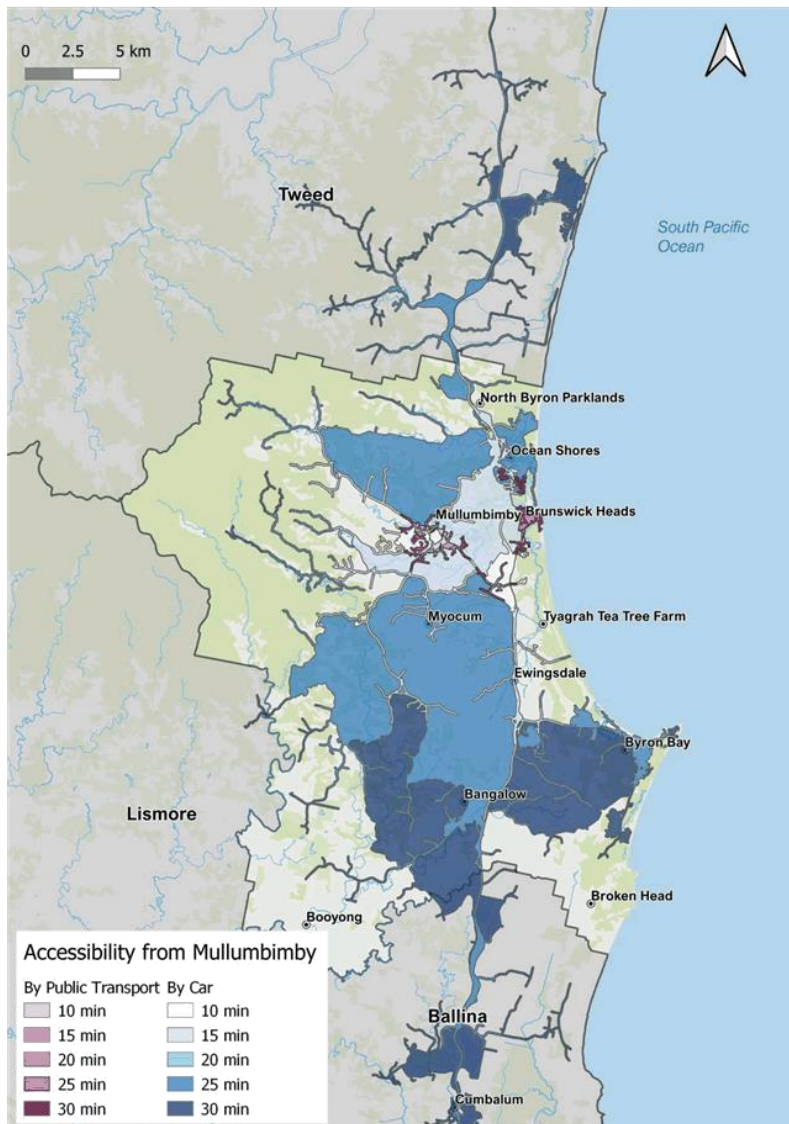
<sup>39</sup> GTA Consultants analysis based on Targomo, <https://www.targomo.com/>

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

In Figure 2.18, 30-minute public transport accessibility from Mullumbimby provides access to Brunswick Heads and Ocean Shores while driving also allows access within 30 minutes to Tweed and Ballina due to the Pacific Motorway. Byron Bay and Bangalow are not accessible from Mullumbimby within 30 minutes by public transport.

Figure 2.18: Public Transport compared to Car Accessibility from Mullumbimby<sup>40</sup>



<sup>40</sup> GTA Consultants analysis based on Targomo, <https://www.targomo.com/>

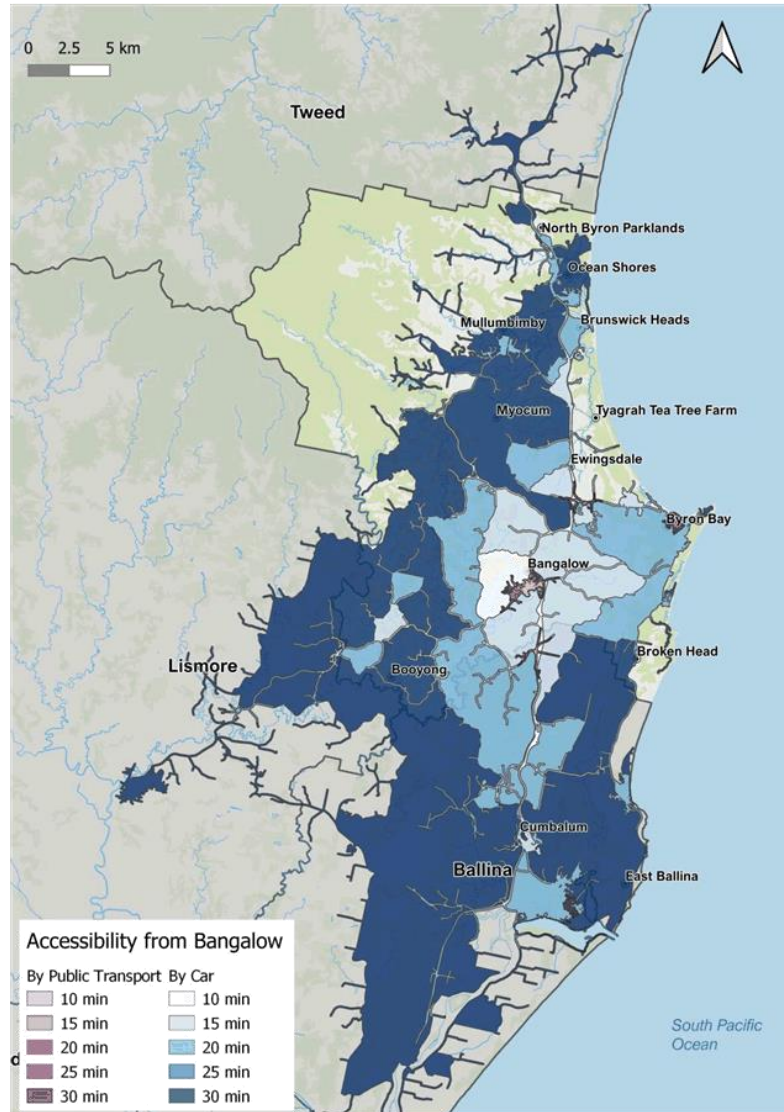


### TRANSPORT SNAPSHOT OF BYRON SHIRE

For Bangalow, as shown in Figure 2.19, the Pacific Motorway and Bangalow Road provide wide coverage within 30 minutes by car to almost all towns within the Shire as well access to the Tweed and Ballina Local Government Areas. In comparison, public transport 30-minute accessibility reaches to Byron Bay, Byron Bay Hospital at Ewingsdale and West Ballina.

DRAFT

Figure 2.19: Public Transport compared to Car Accessibility from Bangalow<sup>41</sup>



<sup>41</sup> GTA Consultants analysis based on Targomo, <https://www.targomo.com/>

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 2.4. Strengths, Opportunities, Weaknesses and Threats

#### 2.4.1. Strengths

There are many good things already happening in Byron Shire; some of the key strengths are outlined as follows.

##### The 'Byron Brand'

Byron Shire is famous for its culture, beaches creativity, sustainability and a relaxed lifestyle. Beautiful natural surroundings, friendly and accepting people and an alternative community consciousness make Byron Shire unique. Byron's residents are diverse and colourful including surfers, professionals, farmers and those committed to alternative lifestyles and philosophies.

Byron Shire has changed from a conservative agricultural area to a region that attracts innovators, entrepreneurs and big-city sea and tree changers. Tourism is a key industry within the Byron Shire economy – in 2016/2017 Tourism and Hospitality generated 23% of Byron Shire's jobs (3,506 jobs) and 14.1% of output/sales (\$463M) in 2016/2017. More than 2 million tourists visit the Shire every year. As a sector it is Byron Shire's largest employer.<sup>42</sup>

##### Liveable places for people – an emerging direction

Council has been working on several 'place plans' which have been created in partnership with the community for Byron Bay, Mullumbimby and Bangalow. At the heart of the place plans are principles that create more liveable places for people.

These place plans are long term visions that will drive quality outcomes for people, public spaces and the environment. The place plans work in conjunction with other key strategies to realise places, spaces and pathways that support vibrant, safe and connected communities. A strategic, place based approach will ensure that places across the Shire recognise and support the local community and support diverse needs, interests and lifestyle options which enable residents to develop a strong sense of belonging.

These place plans are supported by the *Byron Shire Pedestrian Access and Mobility Plan 2019* and the *Byron Shire Bike Plan* that identify and prioritise pedestrian and cycling projects across the Shire. The Byron Bay Bypass is another example to reduce the number of cars in central Byron Bay and prioritise pedestrians in the town centre.

##### Active lifestyle

Around 900 people ride their bike to work. This is one of the highest proportion of people cycling to work of any regional municipality, although there is little competition in this space.<sup>43</sup>

Byron Shire also has a comparatively high level of people working from home, around 1,820, which means there is a lower share of people travelling to work at all.

<sup>42</sup> Byron Shire Sustainable Visitation Strategy 2020-2030, Byron Shire Council, 2019

<sup>43</sup> Bike Account for Byron Shire, Bicycle Network, based on Australian Bureau of Statistics Census 2011, <http://bikeaccount.com.au/#/>, accessed January 2020 and GTA analysis of Australian Bureau of Statistics, Census of Population and Housing 2016 ('worked from home', 'did not go to work', 'not stated' and 'not applicable' responses excluded. Comparison against other 'Inner Regional' Remoteness Areas).

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

Only 48% of households have access to two or more motor vehicles which is less than the regional average.<sup>44</sup>

### 2.4.2. Weaknesses

#### Dispersed population

There are many towns and villages scattered across the Northern Rivers region and Byron Shire from the coast to the hinterland. The Northern Rivers region consists of several large towns separated by considerable distances with most social services existing in regional centres such as Lismore and Tweed. Tweed Heads is also strongly linked to the Gold Coast for employment opportunities and economic growth.

Each town and village in Byron Shire has their own unique character and offerings, which collectively contribute to the culture of Byron Shire.<sup>45</sup> Towns and villages are where, in 2016, 72% of the Shire's residents live. They are full of personality, each making an important contribution to the character of Byron Shire and offering an attractive range of lifestyle options.

Rural communities, an important part of the essence of the Shire, boast many community groups that bring farm fresh produce to local residents.<sup>46</sup> There are also rural villages where residents benefit from the additional services that closer living brings, such as parks, bus services and community halls, with the general store a key community hub.

#### High reliance on car travel for non-work trips

Many non-work trips occur every day across Byron Shire and the wider Northern Rivers region for a variety of purposes. While being able to choose multiple options for their reason for making their most regular non-work trip, the primary reason identified for regular trips was for shopping (72%), with other main travel motivations being personal reasons (38%), visiting family or friends (34%), health appointments (33%), social/cultural events (32%), and recreation (30%).<sup>47</sup>

For regular trips other than for work, the dependency of the region's residents on cars is clear, with almost 70% driving, with bus the most common form of public transport used (9%). It was found that Byron Shire residents also hitchhiked (10%) and cycled (12%) more than walking (6%), and no Byron respondents reported using taxis, community or youth transport. It was also found that car drivers were more likely to be employed, earning a relatively good wage and were middle aged, while public transport users were more likely to be pensioners, earned a lower income and were either under 18 or over 65.

The main barriers to using more public transport were given as service provision, with frequency of service, service unavailability, timetabling constraints, inconvenience, long waiting times, cost, slowness and lack of information/timetables identified by most respondents.<sup>48</sup> The transport system in Byron Shire is therefore dependent on private vehicle use, a consequence of a dispersed population and large distances between regional centres.

<sup>44</sup> Byron Shire Sustainable Visitation Strategy 2020-2030, Byron Shire Council, 2019.

<sup>45</sup> Byron Shire Sustainable Visitation Strategy 2020-2030, Byron Shire Council, 2019

<sup>46</sup> Community Strategic Plan

<sup>47</sup> Sustainable Northern Rivers Transport Survey, Regional Development Australia – Northern Rivers 2013

<sup>48</sup> Sustainable Northern Rivers Transport Survey, Regional Development Australia – Northern Rivers 2013

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

35

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### Queuing and congestion on major roads

Some roads (particularly in and around townships) become congested at peak times on weekday mornings and afternoons, as well as during tourist periods including weekends, holidays and large events. Higher traffic volumes cause increases, or greater variability, in travel times. For example, a trip on Ewingsdale Road might take 10 minutes on one day, but 20 minutes on the next<sup>49</sup>.

### Limited transport choices for regional trips

The Byron Shire is connected to neighbouring Local Government Areas like Lismore and Ballina via some bus services. However, from Byron Shire to Lismore, only 5 services operate per day, mainly from Byron Bay, Mullumbimby, Bangalow and Lennox Head and approximately 15 services a day to Ballina.<sup>50</sup>

The bus services are largely planned around school services, limiting public transport options to key social services such as hospitals and education facilities. There is also little timetable and service integration, and this provides further disincentives to use public transport.<sup>51</sup>

The main public transport challenge in Byron Shire and the Northern Rivers region is that there is a need to provide reliable and frequent access to social services for an increasingly dependent population, across a widely dispersed area, particularly for those who do not have access to private vehicles.

### 2.4.3. Opportunities

There are several explored and unexplored opportunities to leverage across Byron Shire, including the following.

#### Activating the Rail Corridor

The Casino to Murwillumbah Rail Corridor is a 130 kilometre rail corridor that was opened in 1894 and was a main transport option for travel from Murwillumbah, through Byron Bay, Bangalow and Lismore, and continued to Sydney from 1990 as an express passenger train service. The last train service was in April 2004.<sup>52</sup>

In view of the history of the corridor, community concern and a push to optimise existing infrastructure and the opportunity for re-use and sustainable growth in the future, Byron Shire Council commissioned a Multi Use Rail Corridor (MURC) Feasibility Study in 2019 to support multiple and integrated commuter, tourism and active transport uses of the rail corridor. The MURC Study looked at different transport options within the corridor, including:

1. Very Light Rail (VLR): axle loads equal to or under ten tonnes
2. Hi-Rail passenger vehicles and/or pedal cars
3. Cycle track (rail trail, simple construction)
4. Multi use cycle track which allows for usage for motorised mobility aids, Segways and the like.

49 Google Traffic for typical weekday and weekend conditions, Google, <http://maps.google.com/>, accessed in June 2020

50 Going Places – Byron Bay; <https://goingplaces.org.au/regions/byron-shire/byron-bay/>; Blanch's Bus Company:

<https://blanchs.com.au/wp-content/uploads/timetables/640X.pdf>

51 Northern Rivers Regional Transport Plan, Transport for NSW, 2013

52 Multi Use Rail Corridor (MURC) Feasibility Study, Arcadis 2019

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

36



TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

The analysis indicated that the Hi-Rail option with active transport and travel behaviour change incentives was the preferred option.<sup>53</sup>

Following the MURC Study in 2019, Council are pursuing opportunities to enable the activation of the Byron Shire Rail Corridor as a "Rail with Trail". The MURC has the potential to be a key tourism and economic driver providing alternative transport options via a rail based service with integrated walking and cycling infrastructure. Connecting the Shire's towns and key localities via an activated multi-modal corridor will disperse tourism and economic benefits more widely throughout the region whilst lessening the impact on roads and parking.

**The Solar Train**

The Byron Bay Railroad Company has restored a 1949 heritage train, repaired three kilometres of railway line and a bridge and reinvigorated a section of the Casino to Murwillumbah rail corridor to provide a heritage rail service linking the Byron Town Centre with the North Beach precinct and the Byron Arts and Industry Estate with a journey taking 10 minutes each way.<sup>54</sup>

The train operates on energy from the sun, which is a world first. The Byron Bay Railroad Company was awarded the 2018 Rail Sustainability award at the Australasian Rail Association Awards in recognition of the work done to re-use infrastructure and rolling stock and to bring to life the world's first solar-powered conventional train.<sup>55</sup> The train has capacity for 92 seated passengers, additional standing passengers and luggage room for bikes, prams and surfboards, carried free of charge.

The Solar Train also allows for a Rail Trail within the rail corridor and clear of the operating rail line as the corridor is typically 40 metres wide.<sup>56</sup>

**Figure 2.20: Belongil Creek Railway Bridge after restoration by Byron Bay Railway Company<sup>57</sup>**



<sup>53</sup> Multi Use Rail Corridor (MURC) Feasibility Study, Arcadis 2019

<sup>54</sup> Byron Solar Train <https://byronbaytrain.com.au/>, accessed July 2020

<sup>55</sup> <https://byronbaytrain.com.au/sustainability/>

<sup>56</sup> <https://byronbaytrain.com.au/>

<sup>57</sup> <https://byronbaytrain.com.au/sustainability>, accessed July 2020

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

**Byron Bay Town Centre Bypass**

The Byron Bay Bypass is currently under construction. As the existing road network within Byron Bay has little to no spare capacity and is restricted by the rail line, which runs parallel to Jonson Street, all through traffic is forced to travel via the Byron Bay town centre over the rail crossing on Lawson Street. Currently the infrastructure of Lawson and Jonson Streets cannot adequately support the traffic volumes, with heavy congestion experienced during peak periods.<sup>58</sup> Heavy pedestrian use of the intersections further enhances congestion issues.

As a result, the bypass will:

- Improve traffic efficiency on the road network within Byron Bay particularly at the Lawson and Jonson Street roundabouts.
- Support future growth associated with predicted land use changes in the Byron Shire.
- Maximise road safety benefits by improving pedestrian connectivity and reducing conflicts.
- Enhance in-town amenity.

There is an opportunity to build upon the bypass to improve conditions within the Byron Bay town centre.

**Figure 2.21: Traffic in Byron Bay Town Centre**



**Byron Bay Transport Interchange**

In conjunction with the Byron Bay Bypass, a new bus interchange is being constructed as part of the Transport Access Program by Transport for NSW to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure where it is needed most. The aim of the TAP is to provide commuters with an integrated transport system where customers are able to change from one mode of transport to another with ease.<sup>59</sup>

<sup>58</sup> Byron Bay Bypass Environmental Impact Statement, GHD 2016

<sup>59</sup> Rural and Regional Interchange – Byron Bay Bus Interchange Review of Environmental Factors

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

The bus interchange is being constructed on Butler Street, adjacent to the rail corridor. The proposal involves the construction of a covered canopy area to accommodate up to three buses/coaches at a time, public amenities and kiss and ride facilities. This will tie in the bypass and remove many buses, vans and coaches from Jonson Street, making it a more pleasant environment for pedestrians, shoppers and outdoor dining.

### Master Plans – an opportunity to build the Byron DNA into fundamental transport changes

Like many regional areas, the cores of townships in Byron Shire are centred around main streets which have become vehicle centric. These types of main streets naturally lend themselves to conflict, seeking to serve both a 'movement' function (in terms of movement of goods and people, often by vehicles) and 'place' function where people feel comfortable to spend time and shop, dine or socialise.

Guiding documents such as the *Byron Bay Town Centre Masterplan*, *Our Mullumbimby Masterplan* and the *Bangalow Village Plan* seek to deprioritise private vehicles and promote more pedestrian friendly spaces within the town centres. An opportunity exists to build upon the directions in documents such as these.

### Pedestrian Access and Mobility Plan (PAMP) & Bike Plan

The very first 10-year *Pedestrian Access and Mobility Plan* (PAMP) for Byron Shire was also adopted in 2019. The aim of the PAMP is to look at existing footpath networks and identify and prioritise proposed future walk and roll networks that will improve access, mobility, safety and connectedness for the whole community.<sup>60</sup>

Over the years, Council has taken steps to develop its cycle network and encourage increases in the uptake of cycling across the Shire. Central to this was the development and adoption of the Byron Shire Bike Strategy and Action Plan in 2008. This document confirmed Council's commitment to cycling and outlined strategies and actions to increase cycling in Byron Shire.

The new and updated 2019 *Bike Plan* considers cycling within the existing larger settlements of Mullumbimby, Byron Bay, Suffolk Park, Bangalow, Ocean Shores, Brunswick Heads, within smaller villages and in rural locations and between key settlements. It will help provide a coordinated and strategic approach to the delivery of cycling infrastructure and promotional programs in Byron Shire for the benefit of the community.<sup>61</sup> Collaboration and partnerships between the community, state and local governments, developers and other stakeholders will also be critical to ensure the Bike Plan is representative of community needs and aspirations and supports the continual improvement of Byron Shire.

There is a great opportunity to build upon both the PAMP and Bike Plan to improve walking and cycling across the Shire.

### Popcar Car Share Trial

In 2018 Council resolved to trial a 12 month car sharing pilot program in Byron Shire. Popcar was selected as the most suitable operator for the pilot and launched on 5 June 2019, providing 8 cars in Byron Bay and 2 in Mullumbimby.

<sup>60</sup> Byron Shire Pedestrian Access & Mobility Plan, Byron Shire Council 2019

<sup>61</sup> Byron Shire Bike Plan 2019, Byron Shire Council 2019

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

During the 12-month pilot, the share cars were used over 500 times with bookings totalling 6,000 hours.<sup>62</sup> Usage has been steadily growing over the 12 months with a slight reduction in the final months likely due to COVID-19. Over 200 members from Byron Shire have subscribed to the service.

Council also received an award from Local Government NSW for cultural change innovation and excellence for being the first regional council to introduce a car sharing program.

The inclusion of the share cars in Byron Shire provides an alternative transport option for the community, can help to reduce the need for private car ownership and when coupled with other mechanisms, facilitate the people first, cars second vision of the Byron Town Centre Master Plan.

Figure 2.22: Popcars in Mullumbimby



### Public-Private Partnerships

Where a market exists, the private sector is already providing a range of alternate transport options, such as airport shuttle buses, e-bike hire, ride hailing services and the world's only Solar Train.

#### Valkree e-bike Case Study

As an example, Valkree is an Australian owned and operated e-bike or electric bike company located in the creative and inspiring arts and industry area of Byron Bay. The company originated to avoid the traffic coming into Byron Bay during the rush of summer while needing to support a fun ecofriendly commute. In its purest form an e-bike or electric bike is a bicycle that can be powered by electricity, most commonly in battery form, as well as propelled by pedals. Valkree's mantra is that "the Valkree bike rider is a people person who likes an opportunity to take a risk and beat the system by being ecofriendly to avoid the everyday rat race."<sup>63</sup> An opportunity exists to partner with companies like Valkree to provide e-bikes for hire.

<sup>62</sup> Agenda of Ordinary (Planning) Meeting – 18 June 2020  
([https://byron.infocouncil.biz/Open/2020/06/PLAN\\_18062020\\_AGN\\_1163.PDF](https://byron.infocouncil.biz/Open/2020/06/PLAN_18062020_AGN_1163.PDF))

<sup>63</sup> Valkree <https://valkree.com/about> accessed in June 2020



## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

### 2.4.4. Threats

There are also several threats and challenges to consider for Byron Shire, as outlined below.

#### Regional population growth and tourism

Over 12 million people visit the North Coast annually and the region will remain a major tourism destination, particularly given greater access from an upgraded Gold Coast Airport, however it is recognised that tourism can both benefit and increase pressure on the environment and smaller communities.<sup>64</sup>

Gold Coast Airport passengers are expected to increase from approximately 6 million in 2016 to approximately 16 million in 2036, an increase of 167%. This will place more pressure on towns and key tourist destinations such as Tweed Heads, Ballina, Byron Bay, Coffs Harbour and Port Macquarie.<sup>65</sup>

Most international tourists come from the Gold Coast Airport, while Ballina Byron Airport plays an important role as a domestic tourism gateway. The continued growth of the Gold Coast Airport is likely to contribute to the need for better cross border transport services.

Further, most visitors to Byron Shire come by car, which is a significant contributor to congestion in Byron Bay.<sup>66</sup> It is unlikely that public transport can directly compete with private operators that provide a user pays, needs based service. However, visitors could play a role in supporting regular town shuttle services in Byron, Tweed, and Ballina.

#### Population growth in Byron Shire

Projected population growth is set to occur in Byron Shire, which has the potential to impact the local community in the form of housing availability, increased residential development and a greater demand for services and infrastructure.<sup>67</sup> A challenge facing Byron Shire is meeting future housing and employment demands with limited available land and balancing the needs of and preserving the environment, diverse community, distinctive character and special sense of place, whilst ensuring an adequate capacity of infrastructure to support future growth.

It is forecast that there will be an increase in Byron Shire's population of around 10 percent to 37,950 by 2036, anticipating a need for an additional 3,150 dwellings.<sup>68</sup> Not all of these homes will be delivered in the urban areas, with over 400 new dwellings expected in our rural areas. Population growth will primarily occur in Bayside, Brunswick Heads, Mullumbimby and West Byron.

#### Regional transport integration

Transport for NSW are working with stakeholders in both NSW and Queensland on improving transport connections between the North Coast and the Gold Coast<sup>69</sup>, including investigating:

- Extension of light rail from Gold Coast airport to Tweed Heads.
- Corridor protection for higher speed connections along the east coast.
- Bus and coach improvements to improve connectivity.

<sup>64</sup> North Coast Regional Plan, Department of Planning and Environment 2017

<sup>65</sup> North Coast Regional Plan, Department of Planning and Environment 2017

<sup>66</sup> Northern Rivers Regional Transport Plan, Transport for NSW 2013

<sup>67</sup> Community Strategic Plan, Byron Shire Council 2019

<sup>68</sup> North Coast Regional Plan, Department of Planning and Environment 2017

<sup>69</sup> Regional NSW Services and Infrastructure Plan, Transport for NSW, 2018

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

- New servicing patterns and infrastructure to enable better connections and day return opportunities for regional communities.
- Integrating and harmonising fares for cross border regions.
- Harmonising cross border licencing, registration and regulatory requirements.
- Jointly prioritising infrastructure investment on either side of the state border.

While reactivating the Casino to Murwillumbah railway line is a regional transport issue, there are noted differences between the Byron Shire Council and Tweed Shire Council approach to take advantage of the opportunities of this linear transport infrastructure corridor.

Tweed Shire Council has planned a 24-kilometre rail trail (shared-user path) along the rail corridor from Murwillumbah to Crabbes Creek for cycling and pedestrians, which might be the first stage of 134-kilometre trail from Murwillumbah to Casino<sup>70</sup>. However, the rail corridor within Byron Shire is potentially re-activating the corridor for both public transport and active transport; there will need to be ongoing communication to ensure that the active transport component in Byron Shire is compatible with the section of the rail corridor in Tweed.

### A diverse and dispersed population leads to high car use and is difficult to serve by public transport

For a range of reasons, people are very much reliant on cars for mobility in Byron Shire - almost nine in ten residents drive a car to work and three-quarters of tourists self-drive<sup>71,72</sup>. Local residents are owning more private vehicles, with growing numbers of two- or three-car households and fewer households with no vehicles<sup>73</sup>.

Very few people use public transport, with existing services relatively limited and irregular<sup>71</sup>. Poor use is compounded by low population densities, which make it difficult to justify a more comprehensive or frequent public transport network to encourage regular use.

A regular and consistent public transport network would improve community connectivity, provide convenient access to employment and education and also improve safety for commuters, however it is recognised that as a region there are challenges with economies of scale and what is achievable.<sup>74</sup>

### Maintenance and funding

As more than 2 million people a year work and visit Byron Shire, high car use deteriorates road surfaces. This quantum of travellers places a tremendous demand on the infrastructure and roads in Byron Shire.

<sup>70</sup> <http://www.northernriversrailtrail.org.au/tweed-media-release-may-28/>

<sup>71</sup> GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016 – Method of Travel to Work for Byron Shire.

<sup>72</sup> Byron Shire Tourism Visitor Profile and Satisfaction Survey: Summary and Discussion of Results, Tourism Research Australia, October 2011, <https://www.destinationnsw.com.au/wp-content/uploads/2014/05/Byron.pdf>, accessed December 2019

<sup>73</sup> Change in Car Ownership 2011 to 2016, Byron Shire, Australian Bureau of Statistics, Census of Population and Housing, 2011 and 2016 (Enumerated data). Compiled and presented in profile.id by .id, the population experts, <https://profile.id.com.au/byron/car-ownership>, accessed January 2020.

<sup>74</sup> Community Strategic Plan, Byron Shire Council 2019

## TRANSPORT SNAPSHOT OF BYRON SHIRE

DRAFT

The cost of maintaining and upgrading existing assets, as well as providing new infrastructure, is typically borne by Council and rate payers. This demand, combined with limited resources, means it is essential to have effective asset management plans to meet community expectations in the best way possible. It is also important to find other ways of providing improved infrastructure, including other revenue sources linked to tourism and government grants.<sup>75</sup>

The *Country Passenger Transport Infrastructure Grants Scheme* is a state fund which subsidises support for the construction or upgrade of bus stop infrastructure (generally owned and maintained by local councils) across regional NSW, of which Byron Shire is eligible<sup>76</sup>. *Fixing Country Roads 2020* is also NSW state fund providing up to the \$150 million for roads, bridges, bridge and route load assessments; and Byron Shire Council is also one of 92 eligible local councils to apply for this fund.<sup>77</sup>

### Climate and sustainability

Byron Shire enjoys many beautiful natural features, including its beaches, waterways, bushland and forests. The community is very conscious of protecting and conserving this natural beauty. Ensuring the conservation of these features goes beyond physical maintenance, and strategies for behaviour change, innovation and sustainable initiatives should be encouraged to ensure the natural beauty of Byron Shire can be enjoyed by the community in years to come."<sup>78</sup>

Weather events impacting the transport network affect connectivity and can have significant social and economic costs for regional communities and businesses. Regional and remote areas face significant resilience challenges. Increased resilience in the transport system will improve access and reduce isolation for communities affected by severe weather events and avoid service disruptions and associated negative impacts on business costs and the regional economy.<sup>79</sup>

In 2018, Council declared a state of climate emergency.<sup>80</sup> Road transport accounts for 30 per cent of the Byron Shire community's greenhouse gas emissions.<sup>81</sup> Switching to more sustainable ways of travel can go some way to protecting and preserving the precious environment.

<sup>75</sup> Community Strategic Plan, Byron Shire Council 2019

<sup>76</sup> <https://www.transport.nsw.gov.au/operations/community-transport-operators/country-passenger-transport-infrastructure-grants-scheme>

<sup>77</sup> <https://www.transport.nsw.gov.au/projects/programs/fixing-country-roads>

<sup>78</sup> Community Strategic Plan, Byron Shire Council 2019

<sup>79</sup> Regional NSW Services and Infrastructure Plan, Transport for NSW, 2018

<sup>80</sup> Climate Emergency Declaration, Byron Shire Council, <https://www.byron.nsw.gov.au/Services/Environment/Climate-change/Adaptation/Climate-emergency-declaration>, accessed January 2020

<sup>81</sup> Byron Shire Council Community Emissions Profile Report 2018, Ironbark Sustainability, cited in To Zero Together – Byron Shire Council Net Zero Emissions Strategy for Council Operations 2025, Byron Shire Council, February 2019, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/environmental-management-planning-plan-development-emissions-reduction-strategy/draft-net-zero-emissions-strategy-for-council-operations-2025-version-for-public-exhibition-february-2019.pdf>, accessed January 2020

TRANSPORT SNAPSHOT OF  
BYRON SHIRE

DRAFT

2.4.5. Byron Shire Transport SWOT Summary

A summary of the Shire's Strengths, Weaknesses, Opportunities and Threats is shown in Table 2.4.

Table 2.4: Byron Shire Transport SWOT Summary

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>Byron's international brand</li> <li>An emerging direction – master plans, walking plans, bike plans and the Byron Bay Bypass</li> <li>Some Active Transport Use and a culture of sustainability</li> </ul>	<ul style="list-style-type: none"> <li>Council has limited money and ability to pay for transport</li> <li>Asset investment backlog</li> <li>Dispersed Population</li> <li>Inadequate public transport provision for non-work trips</li> <li>Queuing and Congestion on Major Roads</li> <li>Limited Regional Public Transport System</li> </ul>	<ul style="list-style-type: none"> <li>A rail corridor exists</li> <li>Byron Bay Town Centre Bypass</li> <li>Byron Bay Transport Interchange</li> <li>Master Plans – an opportunity to build the Byron DNA into fundamental transport changes</li> <li>Pedestrian Access and Mobility Plan (PAMP) &amp; Bike Plan</li> <li>Public-Private Partnerships</li> </ul>	<ul style="list-style-type: none"> <li>Regional Population Growth and Tourism</li> <li>Population Growth in Byron Shire</li> <li>Regional Transport Integration</li> <li>A Diverse and Dispersed Population leads to high car use and is difficult to serve by public transport</li> <li>Maintenance and Funding</li> <li>Climate and Sustainability</li> </ul>

GOAL AND OBJECTIVES OF  
THE STRATEGY

DRAFT

### 3. GOAL AND OBJECTIVES OF THE STRATEGY

3

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

45

## GOAL AND OBJECTIVES OF THE STRATEGY

DRAFT

### 3.1. Policy Context

The Byron Shire Integrated Transport Strategy (BSITS) will provide a clear direction to improve the Shire's transport network over the next 20 years and facilitate a coordinated approach by all relevant agencies to the planning, implementation and monitoring of our transport programs and projects. The primary social, economic and environmental needs of the community are reflected in the suite of plans, strategies and reports developed and being developed by Council, including:

- Byron Shire Community Strategic Plan
- Draft Byron Shire Residential Strategy
- Byron Shire Business and Industrial Lands Strategy
- Byron Shire Rural Land Use Strategy
- Byron Shire Open Space and Recreation Needs Assessment and Action Plan 2017-2036
- Byron Shire Pedestrian Access and Mobility Plan 2019
- Byron Shire Bike Plan
- Strategic Transport Statement (Transport Policy) 2019
- Multi Use Rail Corridor Feasibility Study
- Byron Bay Town Centre Masterplan
- Byron Arts & Industrial Estate Precinct Plan
- Bangalow Village Plan
- Our Mullumbimby Masterplan
- Sustainable Visitation Strategy
- Net Zero Emissions Strategy
- Biodiversity Conservation Strategy
- Business and Industrial Lands Strategy
- Economic Development Strategy
- Electric Vehicle Strategy
- Development Control Plans and LEP's
- Car share policy
- Paid parking
- Transport Asset Management Plan
- Strategic Asset Management Plan 2016-2026
- Delivery Program 2017-2021 and Operational Plan 2019-2020.

The Delivery Program 2017-2021 and Operational Plan 2019-2020 bring together Council's strategies, plans and budgets to provide services and infrastructure, and to ensure future sustainability.

The Delivery Program turns the strategic goals found in the Community Strategic Plan into actions and the Operational Plan spells out the detail of the Delivery Program, identifying individual projects and activities that will be undertaken in a specific year to achieve the commitments made in the Delivery Program.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

46

## GOAL AND OBJECTIVES OF THE STRATEGY

DRAFT

The BSITS will be supported by the above documents, including the *Byron Shire Bike Plan* and *Pedestrian Access and Mobility Plan* (PAMP), and will inform other Council plans and strategies, while also functioning as a mechanism by which to support projects and initiatives identified in this report.

The BSITS also considers the following NSW State Government plans and strategies:

- Northern Rivers Regional Transport Plan, Transport for NSW, 2013
- Regional NSW Services and Infrastructure Plan, Transport for NSW, 2018
- North Coast Regional Plan, Department of Planning and Environment 2017.

### 3.2. The Goal of the Byron Shire Integrated Transport Strategy

Based upon the earlier sections of the Strategy, the goal of the Byron Shire Integrated Transport Strategy (BSITS) is to:

**Develop an interconnected transport network that encourages travel that strengthens and supports the social, economic and environmental needs of the community**

### 3.3. Objectives

Based on the above plans, strategies and report, and including the Strengths, Weaknesses, Opportunities and Threats (SWOT) review, the requirements of the BSITS are to:

- Integrate regional and local transport
- Drive change towards environmentally and economically sustainable transport modes
- Provide efficient and equitable connections between community hubs
- Provide efficient and equitable connections for disadvantaged user groups
- Prioritise active transport options within towns
- Prioritise active transport options between strategically connected communities, such as:
  - Mullumbimby / Brunswick Heads
  - Brunswick Heads / Ocean Shores
  - Suffolk Park / Byron Bay
  - Byron Bay / Arts & Industrial Estate.
- Establish a transport network that builds and develops a "Byron" experience
- Build a network that strengthens, supports and grows economic drivers such as tourism and industry
- Integrate the transport network with the rail corridor and associated measures such as parking
- Leverage community and economic partnerships with advanced technology
- Accommodate future transport trends.



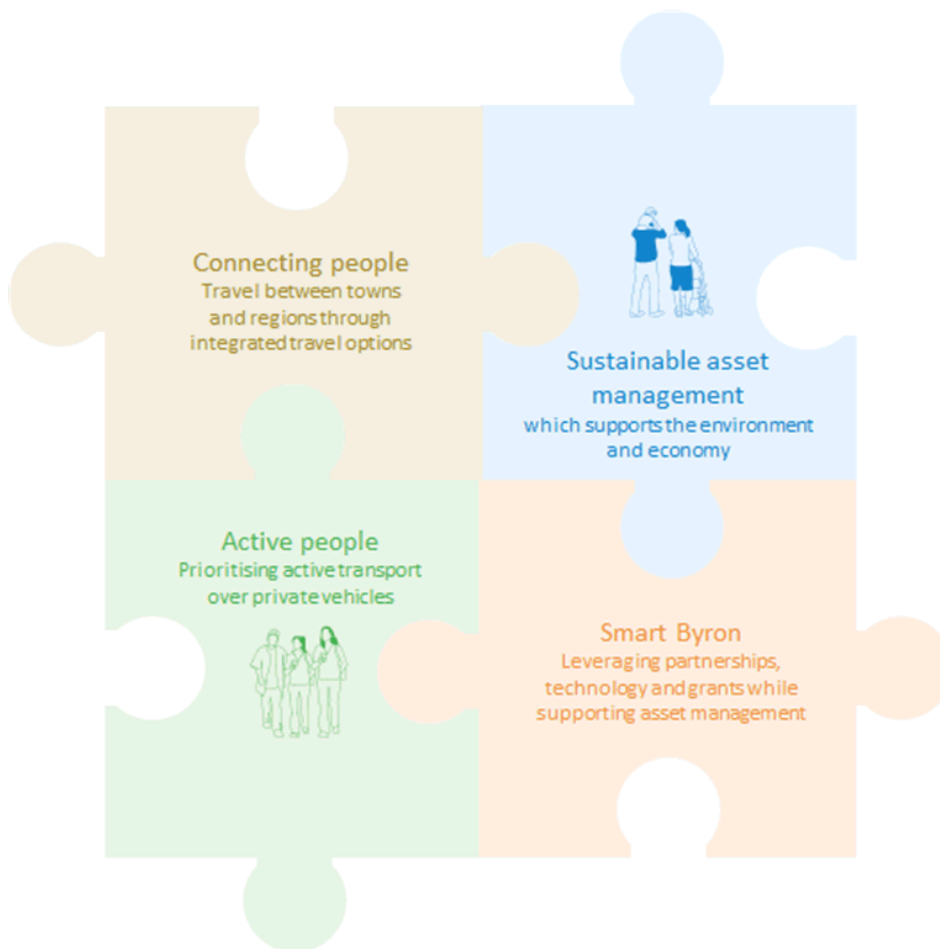
GOAL AND OBJECTIVES OF  
THE STRATEGY

DRAFT

### 3.4. Byron Shire Integrated Transport Strategy Themes

Combining the above SWOT, strategies, plans, policies, transport studies and key requirements the following strategic themes emerged:

- Connecting people – travel between towns and regions through integrated travel options
- Active people – promoting and prioritising active transport over private vehicles
- Sustainable asset management – which supports the environment and economy
- Smart Byron - leveraging partnerships, technology and grants, while supporting asset management.



N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

48



## GOAL AND OBJECTIVES OF THE STRATEGY

This means continuing to provide a greater range of choices in walking, cycling, wheeling, public transport and shared mobility to reduce reliance on the car and make travel in Byron more sustainable, safe and connected.

This Strategy aims to provide options for those that are able to choose the way they travel, enable the people that need to drive the ability to do so and make transport more efficient and effective.

Greater travel alternatives will also enable residents and workers to leave the car at home and will also enable people who are unable to drive (including those under driving age) to have greater mobility and independence.

This document brings together Council's projects, local and state government policies and initiatives to create a cohesive, integrated approach to planning our transport future.

The strategy focuses on what *Council and the community can do* to promote meaningful mode shift towards more sustainable travel and sets out a clear set of choices and direction for the coming decades.

Figure 3.1: Brunswick Heads



Courtesy of Byron Shire Council

DRAFT

CONNECTING PEOPLE

DRAFT

## 4. CONNECTING PEOPLE

Travel Between Towns and Regions  
Through Integrated Travel Options

# 4

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

50

## CONNECTING PEOPLE

DRAFT

## 4.1. Guiding Principles

- Provide better public transport options and more opportunities to walk and cycle, giving greater travel choices for locals, workers and tourists alike.
- Make strategic improvements which align with Council's direction and bring social, environmental and economic benefits.
- Consider new infrastructure (particularly roads) with restraint, as the cost of maintenance over the life of the project (borne by Council and taxpayers) typically exceeds the initial construction cost.
- Use trials to understand how various new proposals are likely to perform in the local conditions and adapt.

**Most tourists drive to Byron, which means that roads can become busy during peak holiday periods**

There is no doubt Byron Shire is a popular tourist destination. More than one million day-trippers and 800,000 overnight visitors travel from other parts of Australia to Byron Shire each year, with three-quarters of domestic visitors arriving from Queensland or NSW. The region also attracts a further 200,000 international visitors each year. Tourism brings a range of benefits to the region, with flow-on effects from visitation generating 1,600 jobs and \$193 million in economic output.<sup>82,83</sup>

Most visitors (72 per cent) arrive by car, with a smaller share arriving by air or coach. In part, this may be because many key destinations are spread across the Shire and difficult to access without a vehicle, including beaches, festival and event sites and other nature, farm, art or cultural activities.<sup>82</sup>

Public transport can also be significantly more time-consuming, which is a deterrent for time-sensitive day-trippers. There may also be a perception that driving provides a flexibility and ability to carry family members and goods that other modes are unable to offer.

As a result, some of the Shire's roads can experience considerable queuing and delays during peak holiday and event periods, compounded by the tidal nature of traffic (time of year and direction of travel). Queues and congestion impact on productivity, can cause frustration and reduce the enjoyment and liveability of the region.<sup>84</sup>

**Many locals also take the car to work or serve daily needs, which means busier roads are becoming the new norm**

There are about 13,000 employed people living in Byron Shire.<sup>85</sup> Half of the Shire's working residents travel to another town, city or region to access employment, with about a quarter of residents travelling outside the municipality for work (predominantly to Ballina, Lismore, Tweed Heads and the Gold Coast). Brunswick Heads residents, in particular, tend to travel outside of the town for work, largely to Byron Bay or Mullumbimby. On the contrary, Byron Bay residents tend to work locally, as well as attracting people from other towns for employment.<sup>86</sup>

<sup>82</sup> Byron Shire Council – Tourism Scale and Impact Analysis, .id – the population experts, November 2018, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-promotion-programs-and-activities-byron-shire-identity-program-2019/byron-shire-council-tourism-scale-and-impact-analysis-november-2018-powerpoint-from-.id-the-population-experts-see-revision-1-for-full-powerpoint-revision-2-minus-slide-38-for-web-version.pdf>, accessed January 2020

<sup>83</sup> Byron Shire Tourism Visitor Profile and Satisfaction Survey: Summary and Discussion of Results, Tourism Research Australia, October 2011, <https://www.destinationnsw.com.au/wp-content/uploads/2014/05/Byron.pdf>, accessed December 2019

<sup>84</sup> Google Traffic for typical weekday and weekend conditions, Google, <http://maps.google.com/>

<sup>85</sup> Byron Shire Council – Workers place of residence by occupation – All occupations, profile.id by .id, the population experts, based on Australian Bureau of Statistics – Census 2016 – by Journey to Work, <https://economy.id.com.au/byron/workers-place-of-residence-occupation>, accessed February 2020

<sup>86</sup> GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, counting employed persons by place of work and usual residence (SA2 level). 'Town' taken as SA2 level.

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

51

## CONNECTING PEOPLE

DRAFT

Across the Shire, nine in ten trips to work are undertaken by private vehicle, with very low levels of public transport use.<sup>87</sup> Towns where more people live and work locally tend to have shorter travel distances and higher levels of walking and cycling to work, however even the most localised workforces still make more than eight out of ten trips to work by car.<sup>87,88,89</sup> This may be due to perceptions of infrequent services, longer journey times or the costs of public transport. It may also be because car travel is convenient and relatively unconstrained by comparison, with inexpensive permits exempting residents and workers from paying for parking in key locations.

As a result, some key roads (particularly into and out of Byron Bay, which attracts workers from other towns) can experience congested traffic conditions during morning and afternoon peak hours.<sup>90</sup> Ongoing congestion can cause uncertainty in travel times and reduce the resilience of the region's transport network in the event of an emergency or natural disaster.

#### **There is an increasing focus on what Council and operators can do to improve public transport in the region**

While there is a bus network in Byron Shire servicing different towns, routes are generally planned by respective operators, generally in isolation and within designated operating areas. Services are also relatively infrequent, particularly in off-peak, evening or weekend periods. Studies show that time and effort are significant contributors to a person's transport choice, and the need to review timetables, interchange between services, travel for longer periods and pay for services all detract from the appeal of public transport.<sup>91</sup> Indeed, the *Byron Shire Community Survey* found that public transport was important to the community, but fell significantly short of expectations.<sup>92</sup>

While public transport has traditionally been the realm of state government, there is an increasing focus on what Council and private operators can do to improve transport outcomes in the region, particularly given established state planning programs and timelines.

Continuing to provide options for people to travel between towns and regions will enable workers to connect to jobs and workplaces to function productively. More generally, providing options for travel between destinations will enable everyone to access the services and amenities they need, whether locally, within the Shire or in larger centres and cities.

#### **Changing travel behaviour**

Understanding the current travel experience into Byron Shire is a critical prerequisite prior to any meaningful mode shift away from the private car. Further, it is important to consider which specific type of transport user is likely to use and benefit from a specific type of public or shared transport service.

87 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016 – Method of Travel to Work for Byron Shire. 'Worked from home', 'did not go to work', 'not stated' and 'not applicable' responses excluded (i.e. only those travelling for work).

88 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, counting employed persons by place of work and usual residence (SA2 level). 'Town' taken as SA2 level.

89 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, distance to work at SA2 level. 'Towns' taken to be SA2 areas.

90 Google Traffic for typical weekday and weekend conditions, Google, <http://maps.google.com/>

91 Stradling, S., Hine, J. and Wardman, M. (2000). Physical, cognitive and affective effort in travel mode choices. In: International Conference on Traffic and Transport Psychology. Swiss Council For Accident Prevention

92 Byron Shire Community Survey 2016, Micromex Research, August 2016, <https://www.byron.nsw.gov.au/files/assets/public/hprtm/community-relations-community-consultation-arrangements-informal-records-2016/e201677989-community-satisfaction-survey-2016.pdf>, accessed February 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Draft  
Byron Shire Council, Draft Report

52

## CONNECTING PEOPLE

DRAFT

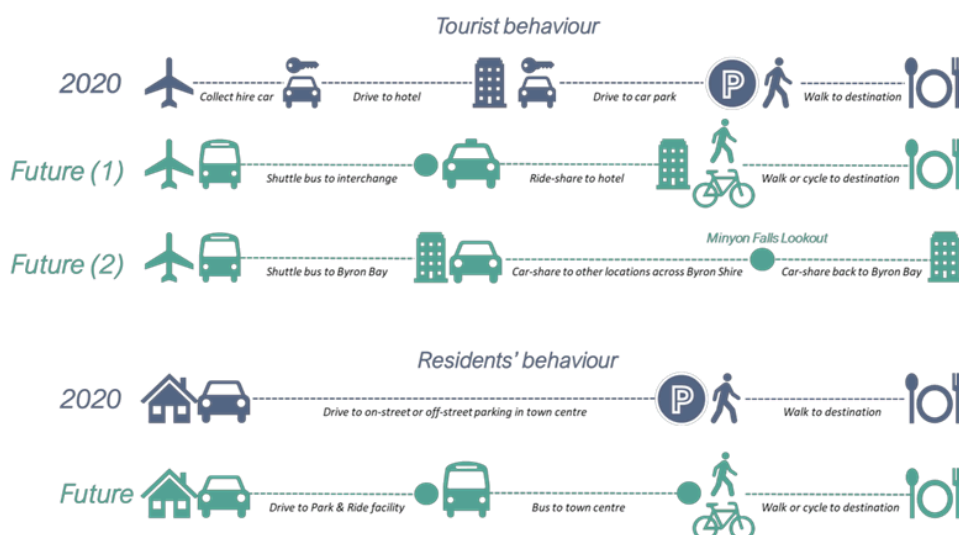
For example, a Park & Ride bus shuttle or train service is more likely to attract ridership from locals working in Byron Bay.

On the other hand, active transport and car share infrastructure within the Byron Bay town centre is beneficial for residents but is especially useful for tourists. Here, an improvement in walking and cycling facilities, public transport options and a car sharing network diminishes the need to hire a rental car or self-drive into Byron Shire.

**Car vs. Park & Ride example**

Studies demonstrate that two key determinants of customers' modal choice are time savings and effort savings (physical, cognitive and affective effort). As case study, for example we have prepared a comparison between current and expected travel times by car and a future Park & Ride facility, at a central location such as Ewingsdale or Tyagarah. While the overall travel time is essentially the same, there is a time penalty for an interchange.

Without any current bus priority on Ewingsdale Road, there is not an opportunity to recover any transfer time and therefore travel by the car remains faster than by using a Park & Ride facility to transfer to a shuttle bus. However, if bus priority is able to be introduced on Ewingsdale Road (or sections of the road), then faster travel speeds with more priority may be able to be reached and provide an alternative option to driving to Byron Bay.

**Transport Emissions and Electric Vehicles**

Based on Byron Shire Council's report for 2016/2017, the total annual community emissions were calculated as 349 kt CO<sub>2e</sub><sup>93</sup>. Transportation was the second highest source of carbon emission with 30% across the Shire.

<sup>93</sup> Byron Shire Council Community Emissions Profile Report, 2018



## CONNECTING PEOPLE

DRAFT

In contrast, the majority of emissions in NSW are derived from electricity generation, followed by transport (21%)<sup>94</sup>. This indicates transport emissions are higher in Byron Shire than the NSW state average.

In Australia, electric vehicles are forecast to reach price parity with traditional combustion engine vehicles from 2024. Electric vehicles present a significant opportunity for motorists to reduce their yearly car operating costs and emissions. Despite the falling prices and lower costs, there are two primary barriers to widespread electric vehicle adoption in New South Wales: the lack of convenient, fast charging infrastructure and the limited range of affordable electric vehicle models in the market. In January 2019, the NSW Government released its *Electric and Hybrid Vehicle Plan* to help overcome these barriers in NSW. The NSW Government will expand that Plan by developing an *Electric Vehicle Infrastructure and Model Availability Program* to fast-track the growth of the electric vehicle market in NSW.<sup>95</sup>

## 4.2. Short Term Actions (0 to 5 years)

### 4.2.1. Develop Transport Options that Reduce the Need to Rely on Private Vehicles

The following actions are subsets of the overarching action to reactivate the rail corridor and reduce the dependence for travel on private vehicles to, from and within Byron Shire. A summary figure of proposed actions for this sub-section is shown in Figure 4.1.

#### Continue to develop the Rail Corridor to provide a public and active transport spine

Building upon the Multi Use Rail Corridor (MURC) Study, a key component of increasing travel by public and active transport in Byron Shire is to accelerate the reactivation of the Casino to Murwillumbah disused rail corridor. At present, the Solar Train only runs from North Beach at Byron Bay's Arts and Industrial Precinct to Byron Bay town centre, with a limited capacity of 96 seated passengers plus standing room and a limited half-hourly to hourly frequency<sup>96</sup>.

The reactivation of the rail corridor would help ease the increasing traffic growth on the road network and continued forecast growth associated with the Gold Coast region and expected tourists from within the Northern Rivers region, broader domestic tourists across Australia and international visitors. There would be potentially associated environmental benefits such as emissions reduction with fewer car trips and increased health benefits with an active transport corridor.

A potential first stage of the corridor reactivation could be from Mullumbimby to North Byron, where the Solar Train currently operates to. This could be linked to a new Park & Ride facility at Mullumbimby, which would also provide a staging area and connection for festival goers to the Tyagarah/Yelgun area. The first stage should include a business case to further investigate the MURC Hi-Rail/Active Transport preferred option. A second stage could continue south and south-west from Byron Bay to Bangalow.

The reactivation of the rail corridor would provide fast, direct and separated connections to key centres across the Shire by both public and active transport. Bus routes would also potentially need to be restructured to accommodate the reactivated rail line.

<sup>94</sup> Department of Planning, Industry and Environment, Net Zero Plan Stage 1: 2020–2030

<sup>95</sup> Department of Planning, Industry and Environment, Net Zero Plan Stage 1: 2020–2030

<sup>96</sup> <https://byronbaytrain.com.au/>

## CONNECTING PEOPLE

DRAFT

**Trial two shuttle bus routes between key townships**

Two higher-frequency shuttle bus routes between selected towns in Byron Shire could be trialled to provide a reliable alternative travel mode for residents and visitors. Subject to further investigation, the services could run express between Byron Bay and Mullumbimby and between Bangalow and Brunswick Heads, with an interchange at a central location. Indicative costs are provided in Table 4.1.

Services would be closely monitored for viability and opportunities for improvement. Depending on the outcome of the trials, further adaptations could be made, such as on-demand shuttles in smaller towns to provide public transport access to the rail corridor, bus priority along key corridors such as Ewingsdale Road and further Park & Ride facilities.

This would be a first step towards restructuring the public transport network with the view towards these shuttle bus services using the rail corridor in the longer term.

**Table 4.1: Indicative Shuttle Bus Costs\***

Route	Trip Time	Proposed Frequency	Estimated Annual Cost*
Mullumbimby to Byron Bay via Ewingsdale	20 minutes	Every 15 minutes	\$1,850,000 - \$2,000,000
Ocean Shores to Bangalow, via Brunswick Heads and Ewingsdale	25-30 minutes	Every 30 minutes	\$1,150,000 - \$1,300,000

Source: GTA Consultant calculations. \* Estimated annual cost assumes that the service is free to the customer and that there is no revenue to offset operational costs.

**Introduce a new central Park & Ride facility**

Should trials prove successful (or as an adaptation to the shuttle services), enhancing access and patronage to the bus services would be supported by a Park & Ride facility. Ideally, the selected site would intercept car traffic in advance of congestion along Ewingsdale Road and Byron Bay, and enabling interchange between trial services, such as at Ewingsdale or Tyagarah. Council has run trial Park & Ride services over the summer period in previous years, with good levels of uptake, positive feedback and repeat patronage, despite residents being generally exempt from in-town parking restrictions.<sup>97,98,99,100</sup>

Detailed investigations would be required to determine a suitable site which balances other needs, such as land availability and environmental impacts. Proposed connections within the *Byron Shire Bike Plan* could then enable Park & Ride facilities to function as a 'Park & Bike' hub where both visitors and Shire residents can park and then continue their journey by bike. Alternatively, users could cycle to their nearest public transport stop and use shuttle services to complete their journey.

97 Trick to beat traffic drama', Mayor Simon Richardson, January 2015, <https://mayorsimonrichardson.com/issues-and-actions/getting-around-roads-tracks-and-paths/sustainable-traffic-parking-project-park-and-ride-pedestrian-zones-parking-management/>, accessed January 2020

98 Agenda – Ordinary Meeting Thursday 26 February 2015, Byron Shire Council, [http://byron.infocouncil.biz/Open/2015/02/OC\\_26022015\\_AGN\\_377\\_AT\\_WEB.HTM](http://byron.infocouncil.biz/Open/2015/02/OC_26022015_AGN_377_AT_WEB.HTM), accessed January 2020

99 Agenda – Ordinary Meeting Thursday 25 February 2016, Byron Shire Council, [https://byron.infocouncil.biz/Open/2016/02/OC\\_25022016\\_AGN\\_524.PDF](https://byron.infocouncil.biz/Open/2016/02/OC_25022016_AGN_524.PDF), accessed January 2020

100 Minutes – Ordinary Meeting Thursday 17 September 2015, Byron Shire Council, [https://byron.infocouncil.biz/Open/2015/09/OC\\_17092015\\_MIN\\_385.PDF](https://byron.infocouncil.biz/Open/2015/09/OC_17092015_MIN_385.PDF), accessed January 2020

## CONNECTING PEOPLE

DRAFT

## CASE STUDY

**PARK & RIDE TO ALLEVIATE PARKING AND CONGESTION IN NEWCASTLE, NSW**

Park & Ride Shuttle bus in Newcastle, NSW to relieve congestion: Newcastle City Council established a Park & Ride between the main sports stadium and the city centre to relieve parking demand and congestion until the Newcastle light rail was delivered. The service used the stadium car park and operated every 15 minutes in peak times.

The service cost Council approximately \$500,000 p.a. to run, co-funded with the Transport for NSW, with passengers paying \$4.60 for a return trip. The service was used by approximately 1,000 passengers weekly.<sup>101, 102, 103, 104</sup>

Council has been adapting the service to local feedback and a recent survey found 93 per cent of users were overall satisfied with the service, finding it easier, more relaxing and more cost effective than finding and paying for parking.<sup>105</sup>

Figure 4.1 shows a summary of the key actions and sub-actions associated with the overarching action to reactivate the rail corridor and reduce the dependence for travel on private vehicles to, from and within Byron Shire.

<sup>101</sup> "City steps up to fund Park and Ride", City of Newcastle, March 2019, <https://www.newcastle.nsw.gov.au/Council/News/Latest-News/City-steps-up-to-fund-Park-and-Ride>, accessed January 2020

<sup>102</sup> "Park and Ride locked in", City of Newcastle, July 2019, <https://www.newcastle.nsw.gov.au/Council/News/Latest-News/Park-and-Ride-locked-in>, accessed January 2020

<sup>103</sup> Park & Ride Map 2019, City of Newcastle, [https://www.newcastle.nsw.gov.au/getattachment/Living/Transport/Park-and-Ride/3057-Park-Ride-Map-2019\\_2-\(1\).pdf.aspx?lang=en-AU](https://www.newcastle.nsw.gov.au/getattachment/Living/Transport/Park-and-Ride/3057-Park-Ride-Map-2019_2-(1).pdf.aspx?lang=en-AU), accessed January 2020

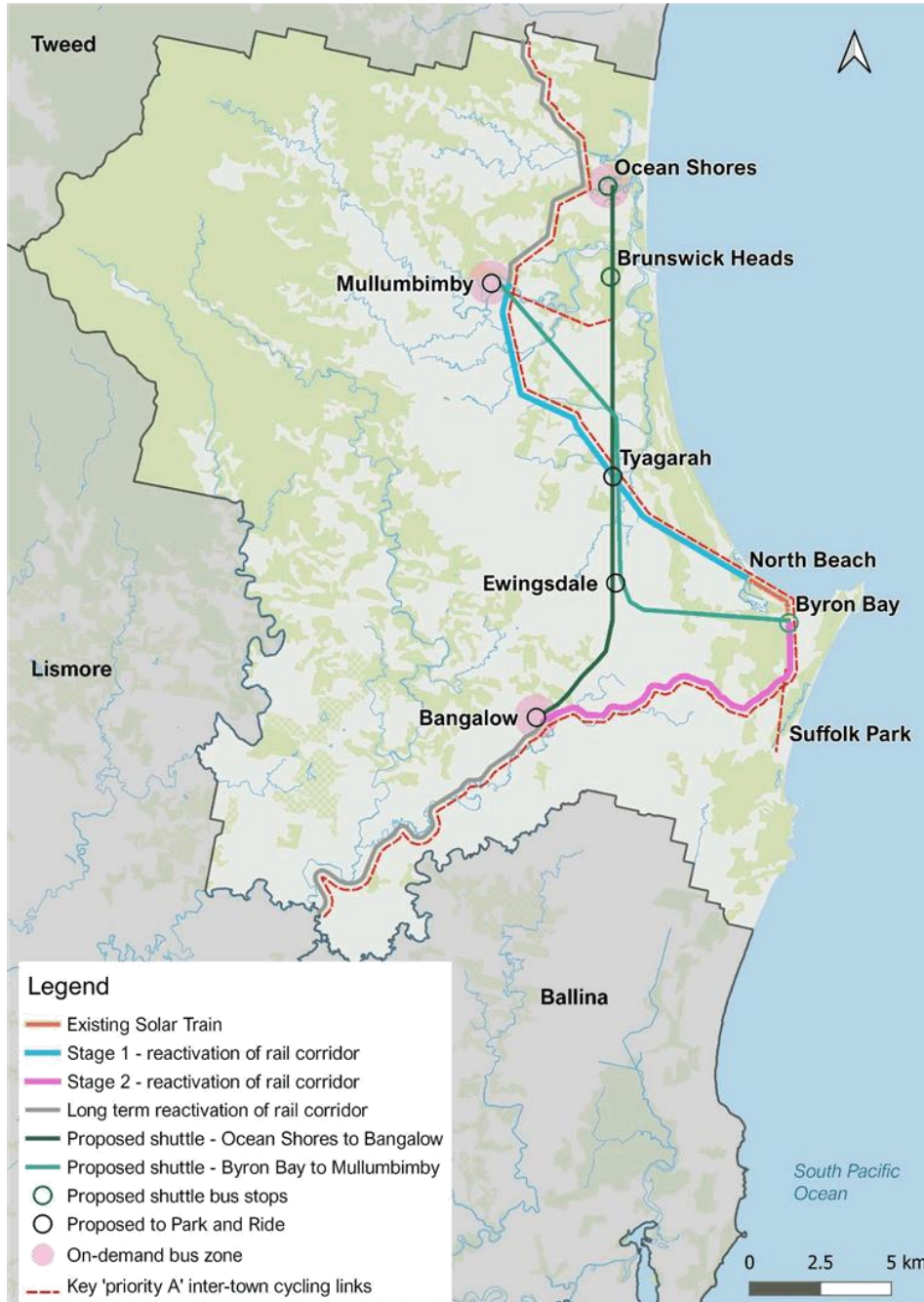
<sup>104</sup> "Newcastle's park-and-ride to finish come month's end", Newcastle Herald, March 2019, <https://www.newcastleherald.com.au/story/5966197/last-stop-looms-for-park-and-ride-service/>, accessed January 2020

<sup>105</sup> Park and Ride Survey Report, City of Newcastle, January 2018, <https://www.newcastle.nsw.gov.au/Newcastle/media/Documents/Reports/Survey-report-Park-and-Ride.pdf>, accessed February 2020



### CONNECTING PEOPLE

Figure 4.1: Proposed inter-town connectivity



DRAFT

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

57

## CONNECTING PEOPLE

DRAFT

**4.2.2. Adapt parking arrangements to capitalise on benefits of broader changes**

For a year-round Park & Ride service to be viable in support of the proposed bus services, it would require an adjustment of the parking arrangements in the Byron Bay town centre and other centres such as Mullumbimby, Bangalow and Brunswick Heads to provide the financial incentives to use the bus and/or Park & Ride. This may include adjusting pricing, implementing further paid parking, adapting permit schemes or changing restrictions and supply to discourage driving into towns during peak periods. For instance, if parking prices in towns are undervalued relative to the level of driving and parking demand, then there will be little incentive to use other modes, with associated adverse effects of congestion from drivers looking for scarce parking spaces.

**4.2.3. Leverage Smart Byron to build hubs**

Innovative companies continue to roll out a range of alternate mobility options which are being delivered or trialled across the Shire, including solar-powered e-bike hire, ride share and car share. The additional mobility options will make it even easier for day-trippers and tourists to travel to Byron Shire without a car. Through the Smart Byron program (see the Smart Byron chapter), mobility options could be leveraged to help to transform public transport stops into 'mobility hubs', where users are provided multi-modal travel options to suit local contexts.

**4.2.4. Continue to strengthen partnerships with external agencies**

Council is currently involved in the Bus Operators Working Group, Transport and Infrastructure Advisory Committee and a cross-border commission with Queensland. Council will continue to work with these groups to seek better transport outcomes for the Shire, including exploring electric bus technology and improved advocacy outside of Byron where outcomes impact the Shire (such as airports).

One example to build upon is that eligible concession card holders can access discounted bus fares in regional NSW with a Regional Excursion Daily (RED) ticket. The RED ticket provides unlimited local daily bus travel for \$2.50, making it affordable to travel by bus. RED tickets are accepted by more than 600 local bus operators in regional centres around NSW.<sup>106</sup> Council should continue to work with and confirm that all Byron Shire bus operators use the RED ticket as lower fares can help improve transport disadvantaged residents to access destinations and activities across the Shire.

Council will also work with partners to understand how we can better facilitate and accommodate improvements in the region. This is discussed further in the Smart Byron section.

<sup>106</sup> Regional Bus Tickets and Fares, <https://transportnsw.info/tickets-opal/regional-tickets-fares/regional-bus-tickets-fares>

## CONNECTING PEOPLE

DRAFT

## CASE STUDY

## INTEGRATED APPROACH TO CONGESTION IN QUEENSTOWN, NZ

Queenstown, one of the major tourist destinations in New Zealand, attracts millions of visitors annually.

To reduce the demand for car travel and parking, different levels of government worked together to increase parking prices to reflect parking demand, removed long-stay parking and took major steps to improve the bus network<sup>107, 108, 109</sup>

Fares were also subsidised to a flat rate of \$2 and the bus services were revamped to provide frequent routes between the airport and city centre. Based on this, bus patronage increased by 64% and fare revenue increased by 17% despite a lower fare.<sup>110</sup>

The success of Queenstown's coordinated approach shows the potential transport benefits that Byron Shire could realise if a similar package of measures proposed in this strategy are implemented.

## 4.2.5. Focus on delivering Bike Plan actions

Overall the 'Priority A' works identified in the *Byron Shire Bike Plan* total \$58.7m<sup>111</sup>, which Council may not be able to fund on its own. However, the NSW State Government has released new funding guidelines for active transport projects, including new walking and cycling infrastructure.<sup>112</sup> These new guidelines make it clearer that state funding favours travel to and within towns, and Council will align funding arrangements accordingly.

This means that Council will seek State Government funding for in-town improvements and focus Council funds on key inter-town links in the short term, starting with Byron Bay to Suffolk Park and Brunswick Heads to Mullumbimby.

Walking and cycling infrastructure should also be further investigated within the rail corridor as part of the Bike Plan and PAMP.

107 Parking Changes, Queenstown Lakes District Council, <https://www.qldc.govt.nz/services/parking/parking-changes/>, accessed February 2020

108 Queenstown Town Centre Transport Strategy Parking Changes, Queenstown Lakes District Council, <https://www.qldc.govt.nz/assets/Uploads/News/QLDC-Parking-changes.pdf>, accessed February 2020

109 Queenstown's new \$2 bus arrives, Otago Regional Council, November 2017, <https://www.orc.govt.nz/news-and-events/news-and-media-releases/2017/november/queenstown-s-new-2-bus-arrives>, accessed February 2020

110 Queenstown's new \$2 bus arrives, Otago Regional Council, November 2017, <https://www.orc.govt.nz/news-and-events/news-and-media-releases/2017/november/queenstown-s-new-2-bus-arrives>, accessed February 2020

111 Byron Shire Bike Plan, <https://www.byron.nsw.gov.au/Services/Footpaths-and-cycleways/Footpaths-and-cycleway-documents/Byron-Shire-Bike-Plan/Byron-Shire-Bike-Plan>

112 Walking and Cycling Program, Transport for New South Wales, January 2020, <https://www.transport.nsw.gov.au/projects/programs/walking-and-cycling-program>, accessed February 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

59

## CONNECTING PEOPLE

DRAFT

## CASE STUDY

## CYCLING POTENTIAL IN BRUNSWICK HEADS, NSW

Although many people travel between towns for work in Byron Shire, about 45% of commuting trips are less than ten kilometres in distance, achievable for many people by bike.<sup>113</sup>

For example, one in six employed people living in Brunswick Heads travel to Mullumbimby for work – a trip which would take about 25 to 30 minutes by bike and is mostly flat.<sup>114,115</sup>

The increasing availability of e-bikes (including for hire), such as Valkree, makes it easier for locals and tourists to cycle between towns.

## 4.2.6. Continue to roll out Electric Vehicle charging stations

There have been Electric Vehicle charging stations introduced in Byron Bay and Mullumbimby. Under the NSW *Electric and Hybrid Vehicle Plan*, the State Government is co-investing in fast chargers on major regional corridors, including the Pacific Motorway, in partnership with charging suppliers and councils.

There is an opportunity for Council to work with the NSW State Government to increase the number of charging stations in the Shire and help regional residents and businesses to share in the cost savings and other benefits of EVs, improve access to regional NSW by EV owners including freight operators, and reinforce the regional tourism economy.

## 4.2.7. Continue to expand car sharing across the Shire

The Popcar/car sharing trial has been embraced by the community based upon results for the past year. There is an opportunity now for Council to work with Popcar or another car-sharing service provider to expand the number and network of car sharing vehicles more broadly across the Shire. This will help reduce private car ownerships and travel in the Shire.

## 4.3. Medium Term Actions (5 to 10 Years)

## 4.3.1. Evaluate the outcome of shuttle trials and trial on-demand transport service

On-demand services use a central phone app or booking service to arrange door-to-door transport within small areas. The services are useful in smaller communities that would otherwise struggle to support a higher-capacity scheduled public transport service, as on-demand vehicles typically have a small capacity and travel along routes according to passenger demand. On-demand services could be used to take passengers from smaller communities to the larger towns, or for movement within townships, to access shops, supermarkets or other transport services. A trial would provide an understanding of usage patterns and build support for a more permanent service.

<sup>113</sup> GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, distance to work at SA2 level. 'Towns' taken to be SA2 areas.

<sup>114</sup> GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, counting employed persons by place of work and usual residence (SA2 level). 'Town' taken as SA2 level.

<sup>115</sup> Travel time and terrain based on Google Maps routing along a similar route to a proposed cycle route.

## CONNECTING PEOPLE

DRAFT

## CASE STUDY

## ON-DEMAND PROVIDING CONNECTIONS IN REGIONAL NSW

B-ConX is an on-demand bus service that can be requested via mobile app, where the passenger can be picked up and dropped off anywhere within the service area or at a transport hub for regular route service buses.

The on-demand bus service that launched in Moree, NSW has been a success story with a patronage level of around 5,000 passengers per month – the second most popular pilot service in all of NSW (including Sydney) and is now a permanent service in 2020.<sup>116</sup>

#### 4.3.2. Continue to develop supporting facilities and services for the rail line reactivation with accompanying Park & Ride facilities

The MURC Study investigated the engineering feasibility and the economic and social impacts of renewing the rail corridor through a variety of public and active transport options. Therefore, in the short-term there is limited opportunity to leverage the corridor as a reliable and viable public transport option for Byron Shire's residents and visitors due to the current Solar Train coverage and service constraints.

It is therefore more advantageous to implement the short term actions highlighted earlier to build the necessary public transport service and patronage conditions and support as well as transport pricing incentives, before pursuing a high capacity train service on the rail corridor.

In the medium term, Council should be developing supporting facilities and services, such as Park & Ride locations and modified public transport services to enable the opening of the rail corridor to public transport in the long term. This includes identifying and future-proofing locations for Park & Ride facilities.

#### 4.3.3. Introduction of Active Transport Facilities into the Rail Corridor

The reactivation of the rail corridor includes the provision of active transport facilities parallel to any public transport infrastructure. There is an opportunity to deliver a shared path or a 'rail trail' connection from Mullumbimby to Byron Bay prior to the first stage of public transport in the corridor.

This link is identified in the Bike Plan and would provide a regional connection across the Shire; for many types of trips, including recreational and exercise, as well as a commuter function. Later stages could connect south to Bangalow from Byron Bay and north to Tweed from Mullumbimby.

More detailed planning for the introduction of the active transport facilities could potentially commence in the short term and not preclude any options in the long term.

<sup>116</sup> Permanent On Demand Public Transport service to be established in Moree, Moree Champion, October 2019, <https://www.moreechampion.com.au/story/6445467/permanent-on-demand-service-to-be-established/>, accessed February 2020



## CONNECTING PEOPLE

DRAFT

**4.4. Long term (10+ Years)****4.4.1. Support the Introduction of Public Transport Services into the Rail Corridor**

Following the introduction of active transport facilities into the rail corridor (in the form of a shared path or a 'rail trail'), it is expected that public transport services would operate within the corridor in the longer term from Mullumbimby to Byron Bay. To support this, public transport services would need to have been reconfigured in conjunction with operators and appropriate supporting facilities such as Park & Ride facilities. Council and the operators would need to prepare messaging and advertising material to promote the opening of public transport services within the corridor and the associated changes.

**4.4.2. Rail Corridor extension and further Park & Ride locations**

In the long term once public transport behaviour becomes more established among residents and visitors, there is the opportunity for comprehensive transformation of the entire corridor following established running of buses, Park & Rides, on-demand buses and an extended Solar Train within Byron Shire. Stage 2 of the rail corridor re-activation would potentially be from Byron Bay to Bangalow.

Additionally, whether it be light rail, hi-rail, autonomous vehicles or a guided busway, amongst other options, the MURC Study concluded that provision of active transport facilities parallel to any public transport infrastructure would be economically, socially and environmentally beneficial.

ACTIVE PEOPLE

DRAFT

## 5. ACTIVE PEOPLE

Promoting and Prioritising Active  
Transport Over Private Vehicles

5

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

63



## ACTIVE PEOPLE

DRAFT

## 5.1. Guiding Principles

- Continue to build the walking and cycling network and support cycling as a more accessible, comfortable and attractive environment for everyone, particularly to town centres.
- Reduce the number of vehicles entering town centres, through initiatives such as the Byron Bay Bypass and Park & Rides. This includes making changes to lock in the benefits of investment, such as transformations to public space and road use in step with delivery of the Bypass.
- Manage parking demands to reflect the true cost of parking and discourage car use.
- Ensure development is aligned to, and delivers outcomes which support, the objectives of this strategy.

**Many streets within townships are trying to do too much.**

Like many regional areas, the cores of townships in Byron Shire are centred around main streets which often try to service many roles – carrying cars, loading and waste traffic, providing access to properties and on-street car parking, buzzing with people walking and riding bikes and providing a place for people to dine, sit or shop. In some cases, these streets function organically, with a successful blend of activity, vibrance and accessibility.

In other cases, the mix can result in congested streets, difficulty accessing car parking, unsafe or unpleasant walking and cycling environments and uninviting places to spend time. Some streets in Byron's towns are beginning to shift towards the latter scenario, particularly during busier holiday periods.

Consultation for the Byron Bay Town Centre Masterplan found that traffic congestion, high parking demand and lack of pedestrian streets and cycle routes were key community concerns.<sup>117</sup>

Increasingly, these concerns are becoming prevalent in other townships, including Bangalow, Mullumbimby and Brunswick Heads. The consequences impact the environment (air quality, noise, emissions), economic activity (fewer wallets past shops and cafes) and safety (poor walking, cycling and personal safety outcomes).

**Car parking has been an ongoing challenge and is continuing to emerge as a problem in other townships, particularly during key holiday periods.**

Community Survey results consistently rank parking as a top five issue, increasing in importance to the community over recent years. Half of respondents were 'not at all' or 'not very' satisfied with the current state of parking in the Shire.<sup>118</sup>

In general, parking supply is generally adequate much of the time, however challenges are compounded by acute spikes in demand during weekend and peak holiday visitation periods.

<sup>117</sup> Byron Bay Town Centre Masterplan – Final Masterplan Report, McGregor Coxall (Sydney), July 2016, [https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-industries-development-tourist-strategies-byron-bay-town-centre-masterplan/e201665664-16.07.20\\_422su\\_mp\\_report\\_final\\_reduced-byron-bay-town-centre-masterplan.pdf](https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-industries-development-tourist-strategies-byron-bay-town-centre-masterplan/e201665664-16.07.20_422su_mp_report_final_reduced-byron-bay-town-centre-masterplan.pdf), accessed February 2020

<sup>118</sup> Byron Shire Community Survey 2016, Micromex Research, August 2016, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/community-relations-community-consultation-arrangements-informal-records-2016/e201677989-community-satisfaction-survey-2016.pdf>, accessed February 2020

## ACTIVE PEOPLE

DRAFT

A recent study of parking in Brunswick Heads found that more than 90% of spaces in the town are occupied during peak weekend and holiday days and at some times, there were more parked vehicles than spaces available.<sup>119, 120, 121, 122, 123, 124</sup>

A similar study found that there are areas in Mullumbimby and Bangalow that approach, or reach, capacity in peak periods (weekends, school holidays). In all three towns, the vast majority of parking lasted less than one hour in duration (typically 30 minutes on average), which reflects high turnover, but also high levels of parking manoeuvres and traffic movements affecting other street activities.<sup>120, 121, 122</sup>

Poor parking management can result in some of the symptoms currently experienced in towns and villages, including increased circulation as users seek a space, illegal or unsafe parking outcomes and reduce the amenity and liveability.

A recent study of parking in Brunswick Heads found that more than 90% of spaces in the town are occupied during peak weekend and holiday days.



<sup>119</sup> Brunswick Heads Town Centre and Beachside Parking Management Strategy, TPS Group, August 2016, <https://www.yoursaybyronshire.com.au/30122/documents/63404>, accessed February 2020

<sup>120</sup> Review of Parking Management (In Period to end of January 2019) – Mullumbimby, TPS Group, March 2019

<sup>121</sup> Review of Parking Management (In Period to end of January 2019) – Brunswick Heads, TPS Group, March 2019

<sup>122</sup> Review of Parking Management (In Period to end of January 2019) – Bangalow, TPS Group, March 2019

<sup>123</sup> Mullumbimby Town Centre Parking Management Strategy, TPS Group, August 2016, <https://www.yoursaybyronshire.com.au/30126/documents/63400>, accessed February 2020

<sup>124</sup> Bangalow Parking Management Strategy, TPS Group, August 2016, as incorporated into Local Traffic Committee Meeting Agenda, 31 October 2017, [http://byron.infocouncil.biz/Open/2017/10/LTC\\_31102017\\_AGN\\_738\\_AT\\_WEB.htm](http://byron.infocouncil.biz/Open/2017/10/LTC_31102017_AGN_738_AT_WEB.htm), accessed February 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

65

## ACTIVE PEOPLE

DRAFT

Many short trips within towns are being made by car, which could be made by other modes.

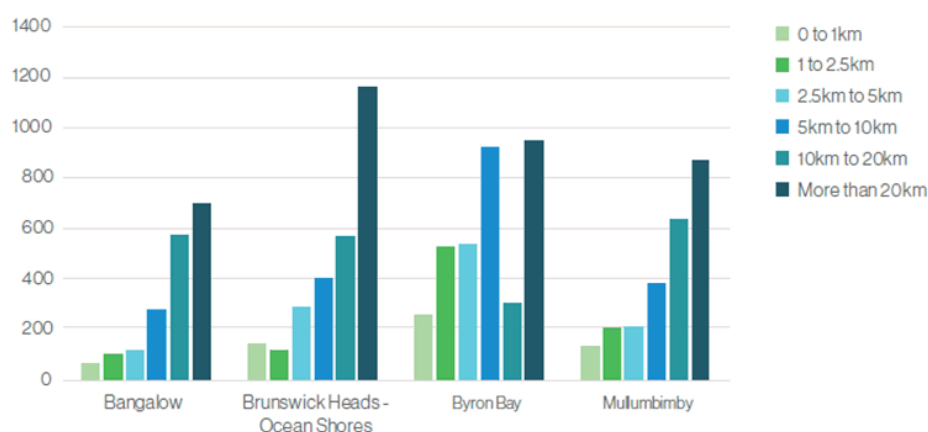
In the Byron Bay area, almost a quarter of trips to work are within walking distance and two-thirds of work trips are of less than ten kilometres, achievable by cycling. In other towns, about 10 per cent of trips are within walking distance and 30 to 40 per cent are within cycling distance of work, yet actual uptake remains much lower.<sup>125, 126, 127</sup>

There are many reasons why people may choose not to walk or cycle, but in many cases, it is simply because there is no infrastructure, or conditions are unsafe or stressful. In many cases, this means people can feel obliged to drive, or uncomfortable to use certain public parts of the Shire.

Feedback received for the Byron Arts & Industry Estate Precinct Plan demonstrated the desire for more footpaths and bike infrastructure, better connections to surrounds and more comfortable alternatives to busy traffic routes.<sup>128</sup>

Other initiatives, such as narrower roads, dedicated cycling space, reduced speeds, more crossing opportunities and more pleasant and shaded walkways can also overcome many of the barriers that prevent people from walking and cycling.

Figure 5.1: Travel distance to work by area<sup>129</sup>



125 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016 – Method of Travel to Work for Byron Shire. 'Worked from home', 'did not go to work', 'not stated' and 'not applicable' responses excluded (i.e. only those travelling for work).

126 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, distance to work at SA2 level. 'Towns' taken to be SA2 areas.

127 'Walking distance' taken to be 2.5 kilometres, 'cycling distance' taken to be 10 kilometres, about half an hour of travel respectively.

128 Opportunities and Challenges in the Arts and Industry Estate (web map), Your Say Byron Shire, Byron Shire Council, <https://www.yoursaybyronshire.com.au/byron-arts-and-industry-estate/maps/opportunities-and-challenges-in-the-arts-and-industry-estate>, accessed February 2020

129 GTA Consultants analysis of Australian Bureau of Statistics Census of Population and Housing 2016, distance to work at SA2 level. 'Towns' taken to be SA2 areas.

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

66

ACTIVE PEOPLE

DRAFT

Figure 5.2: Parking demand on Burringbar Street, Mullumbimby on a Saturday during school holidays (Sept 2015)<sup>123</sup>

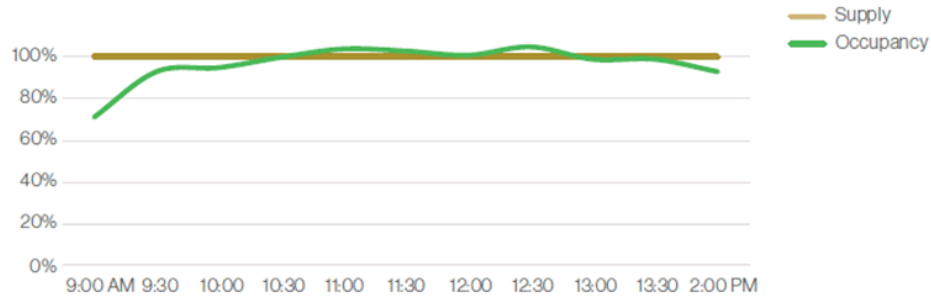


Figure 5.3: Average parking demand in Brunswick Heads, Friday & Saturday during school holidays (Oct 2015)<sup>119</sup>

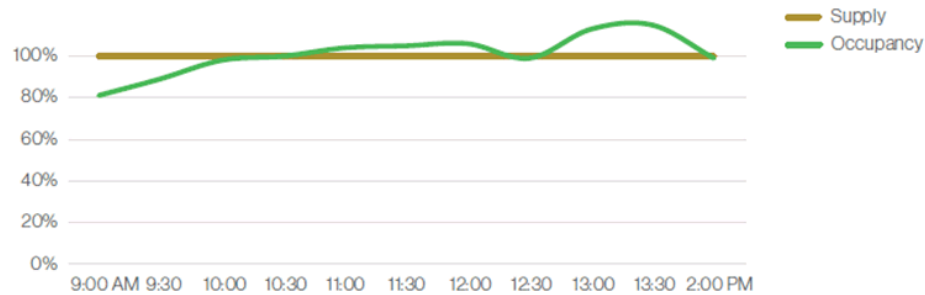
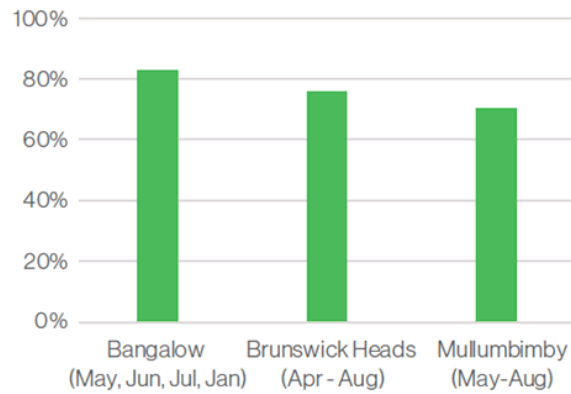


Figure 5.4: Average parking occupancy during various 'typical' periods (2018-19)<sup>120,121,122</sup>



## ACTIVE PEOPLE

DRAFT

**5.2. Short Term Actions (0 to 5 Years)****5.2.1. Proactively identify opportunities to create better pedestrian and cycling environments**

There is a need to identify opportunities to enhance the pedestrian environment in suitable areas, particularly in town centres.

This includes creating pedestrian laneway spaces, providing footpaths on both sides of the road, greater pedestrian priority in towns, more frequent pedestrian crossings, median islands for staged crossing and building out kerbs to reduce crossing width. It may also include identifying opportunities to reduce road space to provide areas for street activities such as outdoor dining, wider footpaths or shared paths and public space.

Likewise, Council will identify opportunities to provide more bicycle parking and more cycling paths and facilities (per the Bike Plan). Such improvements will be reflected in Town, Precinct or Place Plans and delivered in conjunction with the Place Planning Committee.

**5.2.2. Leverage small interventions to lock in the benefits of investment**

Council will also make changes to lock in benefits of investment, such as reducing car access to the town centre following the delivery of the Byron Bay Bypass or increasing the cost of driving (parking) following an increase in public transport provision.

**5.2.3. Seek state government funding for links to town centres**

Part of the attraction of townships are that many jobs, services and attractions are consolidated within a short distance. Most of the Shire's townships are relatively small, meaning that walking or wheeling between shops, services and home is achievable for many people. There are higher numbers of car use to work generated on the peripheries of more populated centres, such as Suffolk Park, Ocean Shores, west of Bangalow, outskirts of Mullumbimby and the Byron Arts & Industry Estate.<sup>130</sup>

Peripheries of towns are also where there is the highest level of cycling to work, albeit relatively low as a percentage of all travel.<sup>131</sup> Council will continue to deliver better access to town, consistent with the Bike Plan and Pedestrian Access and Mobility Plan. The NSW State Government has released guidelines in the 2020/21 *Walking and Cycling Program*. Council should align projects with these criteria and outcomes.<sup>132</sup>

**5.2.4. Enable delivery of the PAMP and Bike Plan through associated works**

Where possible, Council will reallocate road space to enable items from the PAMP and Bike Plan to be delivered, such as new or upgraded footpaths, cycle paths or on-road cycle lanes.

<sup>130</sup> Byron Shire Social Atlas – Travelled to Work by Car (Usual Residence/Persons/2016/Number), .id consulting – the population experts, based on Australian Bureau of Statistics Census of Population and Housing 2016, <https://atlas.id.com.au/byron>, accessed December 2019

<sup>131</sup> Byron Shire Social Atlas – Cycled to Work (Usual Residence/Persons/2016/Percent), .id consulting – the population experts, based on Australian Bureau of Statistics Census of Population and Housing 2016, <https://atlas.id.com.au/byron>, accessed December 2019

<sup>132</sup> Walking and Cycling Program, Transport for New South Wales, January 2020, <https://www.transport.nsw.gov.au/projects/programs/walking-and-cycling-program>, accessed February 2020

### ACTIVE PEOPLE

This could be undertaken as part of road reconstruction or resurfacing works Development Applications for specific sites must also incorporate existing and future footpaths and cycleways as part of their development.

DRAFT

Figure 5.5: Priority walking and cycling routes to major towns<sup>133</sup>



<sup>133</sup> Byron Shire Bike Plan, <https://www.byron.nsw.gov.au/Services/Footpaths-and-cycleways/Footpaths-and-cycleway-documents/Byron-Shire-Bike-Plan/Byron-Shire-Bike-Plan>



## ACTIVE PEOPLE

DRAFT

**5.2.5. Influence new development to shape sustainable travel habits**

Council has direct control over the maintenance and management of local roads, footpaths and shared paths for pedestrians and cyclists and are charged with reviewing and approving Development Applications.

When reviewing applications, Council's role is to ensure development is consistent with local and state planning policies. Council can also propose changes to influence car parking, the provision of footpaths, bicycle parking and land use planning controls can shape and influence the way our towns develop in the future.

Council should also pursue opportunities for large sites to provide new pedestrian and cyclist connections as part of new development applications and to ensure new developments create attractive environments for walking and cycling and demonstrate a commitment to more sustainable travel.

**5.2.6. Reduce speed limits in key town centres to improve road safety and urban amenity**

Impact forces of just 30km/h are enough to be fatal to a pedestrian, with chance of a fatal outcome increasing significantly at higher speeds.<sup>134</sup>

Reducing speed limits to 30-40km/h in town centres will reduce the probability of crashes, reduce the chance of fatal consequences and create a more comfortable environment for people to walk, ride and relax.

In Sydney, busy centres such as Manly and Liverpool have recently announced 30km/h speed limits to provide a safer environment.<sup>135</sup> To support the increase in activity and improve safety, the existing 50km/h and 40km/h speed limits will be reduced and school zones will also be reduced to 30km/h, with special 30km/h orange school zone signs and road markings to emphasise the reduced school zone speed limit.

**5.2.7. Review and Align Council Planning Documentation**

As demonstrated in the outline of relevant Council planning documents in Section 3.1, there are many documents with different priorities and implementation schedules.

As these documents come up for renewal, Council is to regularly review the planning documents to ensure they are aligned with this Strategy and associated transport goals of including Net Zero Emissions. When Council documents are being updated, they should also embed disability and mobility accessibility into all infrastructure projects.

Additionally, actions identified in this Strategy should be included in the *Byron Shire Council Operational Plan* going forward to ensure they are appropriately disseminated across Council.

<sup>134</sup> The Broader Context, Towards Zero – Project Graham, Transport Accident Commission, <http://www.meetgraham.com.au/the-broader-context>, accessed February 2020

<sup>135</sup> Safer speed zones for Liverpool, <https://www.transport.nsw.gov.au/news-and-events/media-releases/safer-speed-zones-for-liverpool>, accessed July 2020



## ACTIVE PEOPLE

DRAFT

## CASE STUDY

## STRIKING THE BALANCE IN MAITLAND, NSW

In 1988, the Maitland Mall was converted from a riverside retail street to a pedestrian mall, removing all vehicles.

The conversion was not successful and by 2010, retail vacancy rates along the street had increased and business confidence was low. Through the 'Levee' project, the pedestrian mall was converted into a 10km/h shared zone with a focus on the public realm.

Retail vacancies dropped to close to zero and average daily pedestrian traffic has increased by about a third.<sup>136,137,138,139</sup>

## CASE STUDY

## CONSISTENCY AND PERSISTENCE PAY OFF IN KEMPSEY, NSW

Until Kempsey was bypassed in 2013, the Pacific Highway cut the town in half bringing tourists and trucks through the centre of town.

Council's master plan set out to improve the urban environment in the town in conjunction with the introduction of the bypass. This included 30 different projects of various sizes to enhance the town centre through changing local traffic routes and adding more green space and landscaping, working cohesively to achieve an end goal.

Between 2013 and 2017 after the bypass opened, there has been an increase of 250 jobs - an increase of 22% over 2013 levels.<sup>140</sup>

<sup>136</sup> The Shared Zone, The Levee Central Maitland, <https://www.theleveemaitland.com.au/information/the-shared-zone/#1476310692433-054fb897-0aca>, accessed February 2020

<sup>137</sup> The Levee Central Maitland, Visit NSW, <https://www.visitnsw.com/destinations/hunter/hunter-valley/maitland/attractions/the-levee-central-maitland>, accessed February 2020

<sup>138</sup> Maitland High Street Revitalisation Masterplan, Archello, <https://archello.com/project/maitland-high-street-revitalisation-master-plan>, accessed February 2020

<sup>139</sup> Maitland Levee, McGregor Coxall, <https://mcgregorcoxall.com/project-detail/280>, accessed February 2020

<sup>140</sup> Kempsey business sector set for growth after town bypass success story, ABC News, October 2017, <https://www.abc.net.au/news/2017-09-29/kempsey-disadvantaged-town-now-bypass-success-story/9001840>, accessed February 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

71

## ACTIVE PEOPLE

DRAFT



Image courtesy of Byron Shire Council

### 5.3. Medium Term Actions (5 to 10 Years)

#### 5.3.1. Progressively relocate car parking outside of town centres

This may include implementing parking management measures which enforce use of Park & Ride facilities or making better use of peripheral car parking stations outside of town cores.

#### 5.3.2. Continue to work with the community to manage parking demand

Parking demand pressures in Byron Bay have led to Council implementing priced parking in Byron Bay. Despite peak pressures in Brunswick Heads, Bangalow and Mullumbimby, there is an absence of mechanisms in these towns to deter parking demand.

Parking management is also one of few mechanisms available to Council to capture revenue from visitors to the region – it is estimated that the cost to Council of the additional tourist population using the Shire's public facilities is \$23 million per year – almost half of the annual road and water construction and maintenance budget.<sup>141,142</sup>

<sup>141</sup> Byron Shire Council – Tourism Scale and Impact Analysis, .id – the population experts, November 2018, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-promotion-programs-and-activities-byron-shire-identity-program-2019/byron-shire-council-tourism-scale-and-impact-analysis-november-2018-powerpoint-from-.id-the-population-experts-see-revision-1-for-full-powerpoint-revision-2-minus-slide-38-for-web-version.pdf>, accessed January 2020

<sup>142</sup> Something To Talk About, Issue 2, December 2019, Byron Shire Council, [https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about\\_issue2\\_lowres-1.pdf](https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about_issue2_lowres-1.pdf), accessed February 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

72

## ACTIVE PEOPLE

Managing parking demand and supply more evenly across the Shire would also represent a fairer outcome where road users pay for the usage of Council assets (rather than being subsidised by local residents) and where the benefits of revenue can be reinvested back into townships – at present, one third of Byron Bay's parking revenue is spent in other parts of the municipality.<sup>143</sup>

DRAFT



Image courtesy of Byron Shire Council

<sup>143</sup> Our Plan for 2019/20, Community Conversation, Byron Shire Council, May 2019

SUSTAINABLE ASSET  
MANAGEMENT

DRAFT

## 6. SUSTAINABLE ASSET MANAGEMENT

Which Supports the Environment and  
Economy

6

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

74

SUSTAINABLE ASSET  
MANAGEMENT

DRAFT

## 6.1. Guiding Principles

- Put emphasis on being both financially and environmentally sustainable.
- Continually review new and emerging alternative materials as they continue to emerge.
- Continue to work to meet community expectations of asset quality and condition.
- Improve communication of works, progress and asset improvement to the community.

**The challenges of road and path maintenance (and associated infrastructure, like bridges) in Byron Shire are well-known and publicised.**

Roads and paths carry the vast majority of Byron Shire's movements. Council is responsible for the maintenance of more than 500 kilometres of sealed road, 96 kilometres of unsealed roads, 89 kilometres of paths and 45 bridges and footbridges, as well as kerbs, barriers, shelters, walls, car parks, roundabouts, signs and other infrastructure.<sup>144</sup>

The low number of rateable assets, high tourism volumes, historical underinvestment and environmental factors add pressure to assets and the maintenance task. Recent data collected in 2019 shows that 68 per cent of the Shire's road network is rated 'fair' to 'very poor' – that is, requires improvements beyond cyclical maintenance to prevent further deterioration. Some of these roads include key regional links between destinations, towns and villages.<sup>145,146</sup>

Funding for road maintenance has continued to increase and on average, Council replaces more than 5,000 potholes every month<sup>147</sup>

Feedback for the *Byron Shire Community Strategic Plan 2028* indicated that renewal of roads is clearly the most pressing component of Council's infrastructure renewal and maintenance task. Community Survey results also show a consistent gap between community expectations and satisfaction with respect to local roads.<sup>148,149</sup>

**Council is constantly working to improve asset condition.**

Reviews in preparation of this strategy found that Council is currently implementing good-practice asset maintenance, using the modern technology, well-established and integrated systems and sound knowledge of local conditions. From an operational perspective, funding for road maintenance has continued to increase and on average, Council repairs more than 5,000 potholes every month.<sup>150</sup>

144 Byron Shire Council Draft Transport Asset Management Plan, May 2017, Byron Shire Council, <https://www.byron.nsw.gov.au/files/assets/public/hprtm/information-technology-data-management-co-ordination-supportrecovery-asset-management-systems/e2018-30888-draft-transport-asset-management-plan-final-pdf-for-public-exhibition.pdf>, accessed January 2020

145 Road Asset Condition Data - 2019, Byron Shire Council

146 "Pothole vigilantes: Fed-up residents take matters into own hands as Byron Bay shire struggles to pay for road repair", ABC, October 2019, <https://www.abc.net.au/news/2019-10-03/byron-bay-cant-shake-its-potholecurse/11562840>, accessed January 2020

147 Something To Talk About, Issue 2, December 2019, Byron Shire Council, [https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about\\_issue2\\_lowres-1.pdf](https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about_issue2_lowres-1.pdf), accessed February 2020

148 Our Byron Our Future - Community Strategic Plan 2028, Byron Shire Council, May 2018, <https://www.byron.nsw.gov.au/files/assets/public/hprtm/community-services-planning-plans-strategies-community-strategicplan-2018-2028/e201846204-community-strategic-plan-2028-adopted-170518.pdf>, accessed January 2020

149 Byron Shire Community Survey 2016, Micromex Research, August 2016, <https://www.byron.nsw.gov.au/files/assets/public/hprtm/community-relations-community-consultation-arrangements-informal-records-2016/e201677989-community-satisfaction-survey-2016.pdf>, accessed February 2020

150 Something To Talk About, Issue 2, December 2019, Byron Shire Council, [https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about\\_issue2\\_lowres-1.pdf](https://www.byron.nsw.gov.au/files/assets/public/document-resources/media-and-comms/something-to-talk-about_issue2_lowres-1.pdf), accessed February 2020



## SUSTAINABLE ASSET MANAGEMENT

DRAFT

Council recently received a grant from the NSW State Government to support road maintenance, which will go some way to holding road condition in its current state. Over the coming years, Council should continue to review operations and asset management and support shifts to modes with lower impacts on assets.



### 6.2. Short Term Actions (0 to 5 Years)

#### 6.2.1. Prepare for funding opportunities

In NSW, the State Government administers a number of funding streams and programs, including the 'Fixing Country Roads' program, annual Walking and Cycling funding streams and the 'Fixing Local Roads' program. These funding streams support Councils to repair, patch, maintain or seal local roads.

Looking forward, Council should work to ensure projects are scoped such that they meet objectives for other funding sources and with *Future Transport 2056* and freight strategies.

#### 6.2.2. Commit to continued operational improvements

Council should continue to review operations and asset maintenance and improve where possible. This could include:

- Investigating innovative solutions such as recycled materials (as the technology matures) – see Case Studies.
- Using local artists to enhance the vibrance of surfaces
- More holistic design changes, such as reducing pavement width or incorporating blue/green infrastructure into resurfacing or reconstruction works to reduce maintenance costs.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

76

SUSTAINABLE ASSET  
MANAGEMENT

DRAFT

## CASE STUDIES – RECYCLED MATERIALS IN ROAD SURFACE PRODUCTS

## CRAIGIEBURN, VIC

In May 2018, 300 metres of Rayfield Avenue, Craigieburn (VIC) was resurfaced using an asphalt product made from plastic, glass and other products destined for landfill. Producers claim the product is “cost competitive and has a 65 per cent improvement in fatigue life, which means the road lasts longer and can better handle heavy traffic”.<sup>151</sup> The new road contains the equivalent of 200,000 plastic bags, 63,000 glass bottles and toner from 4,500 printer cartridges. The cost of the product was approximately two per cent higher than standard asphalt and as of August 2018, there had been no issues with the pavement surface.<sup>151, 152</sup>

## CENTRAL COAST, NSW

Announced in May 2019, Central Coast Council is also delivering projects using a product made from recycled soft plastic, glass and toner cartridges, with data on the product “showing improved strength and resistance to deformation, which makes roads last longer and better handle heavy vehicle traffic”.<sup>153</sup>

## BENEFITS AND CHALLENGES OF RECYCLED PLASTICS IN ASPHALT (AUSTRROADS)

A recent literature review undertaken on behalf of Austroads found that waste plastics could be used to partially replace aggregate, but that there remains uncertainty in the manufacturing processes for products currently being trialled in Australia. In particular, the study notes that “there are concerns about hazards road workers could be exposed to while handling recycled plastics”, as well as concerns regarding the impacts of microplastics on waterways and marine ecosystems. As such, Austroads has recommended a precautionary approach be taken until more conclusive research has been conducted.<sup>154</sup>

## 6.2.3. Identify opportunities to hand back infrastructure to the State Government

Through consultation as part of this Strategy, Transport for NSW noted the State Government’s 2019 election commitment for more regional roads to be handed back to the State Government from Council control to minimise the maintenance costs for local roads that serve a regional function.

151 ‘On the road to tackling Australia’s waste crisis’, The Sydney Morning Herald, August 2018, <https://www.smh.com.au/environment/conservation/on-the-road-to-tackling-australia-s-waste-crisis-20180802-p4zv68.html>, accessed January 2020

152 ‘Recycled plastic bags used in asphalt laid on Old Princes Highway Engadine, Illawarra Mercury, August 2018, <https://www.illawarramercury.com.au/story/5566192/recycled-plastic-bags-used-in-asphalt-laid-on-old-princeshighway/>, accessed January 2020

153 ‘Coast’s first roads built with plastic bags and recycled glass’, Central Coast Council, <https://www.centralcoast.nsw.gov.au/council/news/media-releases/coasts-first-roads-built-plastic-bags-and-recycled-glass>, 17 May 2019, accessed July 2020.

154 ‘The benefits and challenges of using recycled plastics in asphalt and sprayed seals, Austroads, October 2019, <https://austroads.com.au/latest-news/the-benefits-and-challenges-of-using-recycled-plastics-in-asphalt-and-sprayed-seals>, accessed July 2020



## SUSTAINABLE ASSET MANAGEMENT

DRAFT

While there may be some time until selected regional roads across the state are transferred to the State Government, it is understood that “extensive consultations with councils and other key stakeholders”<sup>155</sup> will be conducted. Council should have a clear stance and be ready to make the case to the state government on the key roads in Byron Shire that may be transferrable, including key arterials such as Ewingsdale Road between Byron Bay and the Pacific Motorway.

In 2020, a panel was formed to review the regional roads that could be reclassified to state control, with recommendations to be made to the State Government in 2021.<sup>156</sup>

### 6.2.4. Communicating success

A key part of delivering works is demonstrating action to the community. Council should improve communication of maintenance efforts and initiatives to demonstrate efforts are being made to meet the 'Byron' brand. This includes through Council's website and social media channels, news releases, newsletters and magazines, as well as more bespoke opportunities through the year as major works are undertaken or milestones achieved.

<sup>155</sup> 'Up to 15,000km of council roads to be returned to state', Government News, 30 January 2020, <https://www.governmentnews.com.au/up-15000-km-of-council-roads-to-be-returned-to-state/>, accessed July 2020

<sup>156</sup> Regional Road Transfer and NSW Road Classification Review; <https://yoursay.transport.nsw.gov.au/regional-road-transfer-and-road-classification-review>, accessed July 2020

SMART BYRON

DRAFT

## 7. SMART BYRON

Leveraging Partnerships, Technology  
and Grants, while also Supporting Asset  
Management



N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

79

## SMART BYRON

DRAFT

## 7.1. Guiding Principles

- Bring together businesses, community members, innovators and technology.
- Generate new ideas and learn from experience from around the world.
- Create a framework to make the most of new technologies, and the role Council should play.
- Solve the region's transport challenges and improve liveability, efficiency and quality of life.

**'Smart' towns, cities and regions are emerging across the globe, where technology is used to respond (at least in part) to a region's social, economic and environmental challenges**

In essence, smart cities use technology and partnerships to improve efficiency, reduce costs and provide a better quality of life. This could include new modes of transport, alternate providers or payment models, new vehicles or sensors, clever uses for smartphone apps or different ways of sharing information or assets.<sup>157,158</sup>

Some examples of 'smart' projects could include:<sup>159</sup>

- Pavement which converts traffic movements into electrical energy.
- Services which drop luggage at your hotel while you go to the beach.
- Linking up nearby construction or business sites to make deliveries more efficient.
- Renting out old or unused bikes to people who need one.
- Using an electric vehicle to power an outdoor event (or a home during an emergency).

It is recommended Council launch a new 'Smart Byron' initiative for the region, bringing together the public and private sector to come up with some creative ideas and solve some of the region's mobility challenges. This approach is directly consistent with the *Enterprising Byron 2025* action to "develop a platform for facilitating public and private partnerships to deliver economic development initiatives and enabling infrastructure".<sup>160</sup>

<sup>157</sup> Mora L., Bolici R. (2017) How to Become a Smart City: Learning from Amsterdam. In: Bisello A., Vettorato D., Stephens R., Elisei P. (eds) Smart and Sustainable Planning for Cities and Regions. SSPCR 2015. Green Energy and Technology. Springer, Cham

<sup>158</sup> Smart Cities: Digital Solutions for a more Liveable Future, McKinsey & Company – McKinsey Global Institute, <https://www.mckinsey.com/~media/McKinsey/Industries/Capital%20Projects%20and%20Infrastructure/Our%20Insights/Smart%20cities%20Digital%20solutions%20for%20a%20more%20livable%20future/MGI-Smart-Cities-Full-Report.ashx>, accessed February 2020

<sup>159</sup> Adapted from Amsterdam Smart City, Amsterdam Economic Board, <https://amsterdamsmartcity.com/themes/mobility/projects>, accessed February 2020

<sup>160</sup> Enterprising Byron 2025, Byron Shire Council, <https://www.byron.nsw.gov.au/files/assets/public/hptrim/economicdevelopment-industries-industry-policies-and-strategies-arts-creative-industries/e201715802-enterprisingbyron-2025.pdf>, accessed January 2020

N176800 // 15/07/20

Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

80

SMART BYRON

DRAFT

At its core, the aim of the Smart Byron program is to reframe the region's challenges and draw upon the region's creativity, innovation, talented people and technology to solve them.

For example, rather than seeing a 'lack of public transport' being a problem, the problem could instead be reframed as 'difficulty moving between towns without a car'. Technology could solve this problem in a number of ways, from a phone app which unlocks a share bike to a robot bus which picks up and drops off people along the route.

An independent Smart Byron group would establish a framework to choose between these outcomes, attract providers to the region and facilitate trials and implementation in a way that is low-cost or cost-neutral to Council.

Council would, however, provide initial establishing support, funding and facilitation of projects (for example, approvals).

The 'Smart Cities' model is established and proven. A new Smart Byron platform needs:

- Sufficient investment, leadership and resources to have meaningful impact
- To be separate from Council
- Incentives and effort to attract investment in the region
- To be focussed and consistent in its approach to maximise impact
- To be aligned with key priorities and Council directions.



## 7.2. Council Actions

### 7.2.1. Establish a core partnership team responsible for development, planning and implementation of the Smart Byron program

A first step will be for Council to prepare an Expression of Interest and, subsequently, tender to identify organisations who would be interested in leading or providing services to enable Smart Byron. The Expression of Interest and tender request would include two parts:

- A suitably experienced organisation/ consultant to lead Smart Byron. The leadership would manage a limited Council-funded budget to attract investment, nurture new businesses/ innovators and use partnerships to overcome the region's transport challenges.

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

81

## SMART BYRON

DRAFT

The leader is responsible for liaising with Council and others to identify and prioritise mobility goals and to co-ordinate solutions from idea to implementation.

- Relevant parties to contribute and deliver services to Smart Byron. This includes private organisations, business owners, start-ups, mobility providers, developers, volunteers, advocacy and community groups who are interested in contributing to improving transport in Byron Shire and beyond. These parties should be capable of providing solutions which are low-cost or cost-neutral to Council (i.e. ideally, commercially independent from Council), noting that Council will aim to expedite approvals and work with providers to meet needs.

### 7.3. Smart Byron Actions<sup>161</sup>

#### 7.3.1. Set Smart Byron priorities for the region

Transport priorities should align with Council's goal to "generate meaningful mode shift away from car travel to more environmentally-conscious ways of travel" and build on/work with the priorities outlined in this strategy. For example, a key priority might be 'enabling tourism movements between townships without a car'.

#### 7.3.2. Develop Tender and go to market for public-private partnership

Alternatively, a tender could be put to market to establish a public – private partnership that encompasses many or all of the actions identified in this section of the Strategy.

#### 7.3.3. Develop a method for monitoring and evaluating projects

Monitoring and evaluation of this Strategy and Council's other commitments is important to ensure long-term change. For example, projects may be monitored based on uptake (usage) or impact. Longer- term impacts of transport projects may be measured by changes in the way people travel (mode share), consistent with this Strategy. Success of other disciplines should be aligned with their respective strategies.

#### 7.3.4. Build partnerships and work with technology providers and innovators to broaden ideas and opportunities

It may be a product that exists elsewhere, or a brand new idea. Building partnerships with industry leaders will help understand what can be achieved, broaden ideas and identify opportunities which could link together.

#### 7.3.5. Resolve future priorities through existing community consultation programs

A prioritisation framework should be developed to prioritise how projects from across multiple portfolios as taken forward. For example, projects may be selected based on feasibility, cost and resources and likely contribution towards Council's plans, strategies and objectives.

<sup>161</sup> Adapted from Mora L., Bolici R. (2017) How to Become a Smart City: Learning from Amsterdam. In: Bisello A., Vettorato D., Stephens R., Elisei P. (eds) Smart and Sustainable Planning for Cities and Regions. SSPCR 2015. Green Energy and Technology. Springer, Cham

SMART BYRON

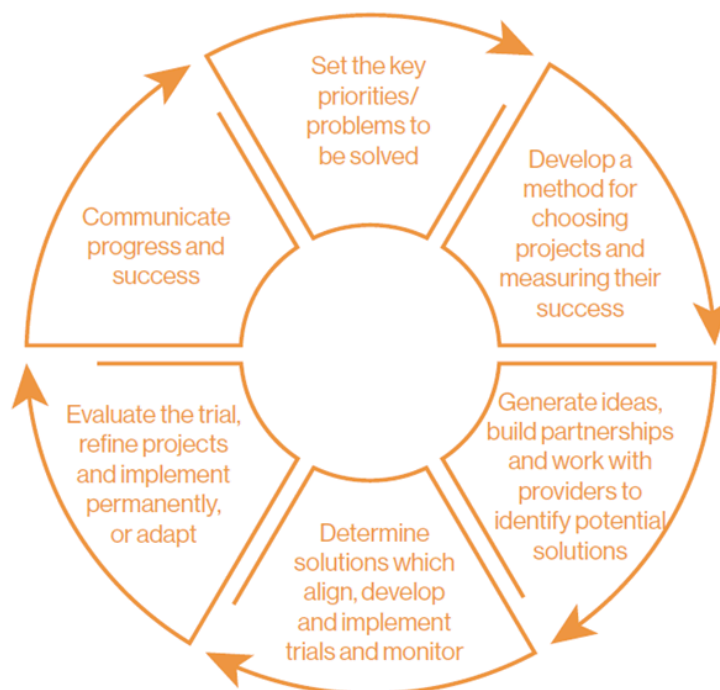
DRAFT

Some things might make an immediate difference, others might work slowly and others might not work at all, or have unintended consequences. By working dynamically, the team can explore how things work in the Shire and adapt to community feedback, improve outcomes or increase efficiency.

### 7.3.6. Monitor and refine projects

Monitor the success of projects using the established framework. Constantly update and refine the projects and programs as new innovations, technology and problems arise.

#### Smart Byron process<sup>162</sup>



<sup>162</sup> Adapted from Mora L., Bolici R. (2017) How to Become a Smart City: Learning from Amsterdam. In: Bisello A., Vettorato D., Stephens R., Elisei P. (eds) Smart and Sustainable Planning for Cities and Regions. SSPCR 2015. Green Energy and Technology. Springer, Cham

THE WAY FORWARD

DRAFT

## 8. THE WAY FORWARD



N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

84



## THE WAY FORWARD

DRAFT

## 8.1. Measures of Success

Mode shares are a useful tool measure of the overall progress of the Strategy because:

- They are directly relevant to the goal of supporting more sustainable ways of travel. Given the relationship between transport and other aspects of community life, they are also a proxy measure for many broader goals, such as environmental and social outcomes.
- They are a consistent metric and established professional tool which is easily understood.
- They are scalable and versatile – mode shares can be understood on a site, local or regional level and by different types of trip.
- They are already captured through a range of sources, including through the Australian Bureau of Statistics Census for trips to work and, subject to confirmation, for education trips from 2021.<sup>[1]</sup> Tourism research can provide similar data on tourism mode shares and household surveys can provide more nuanced insights across the region.
- They capture the overall impact of our interventions, as well as broader community travel trends, guiding how the strategy needs to adapt over time.

That said, if relied on too heavily then they may over-biased 'workers' and not take account disadvantaged communities, which are an important part of this strategy. There, alongside modes shares, we the development of a balanced scorecard.

Council could measure a range of more specific criteria, for example:

- Data from partnerships, such as public transport patronage or car share use.
- Internally-collected data, such as road condition and traffic counts
- Targeted data, such as uptake of particular initiatives, or length/quantity of new infrastructure.

However, the process of collecting, analysing and publishing data more specific data over the municipality can be effort and cost intensive (particularly ongoing over time), so Council should choose to capture metrics within its resource capabilities and which are directly relevant to determining the success of a scheme, or areas for improvement.

To overcome some of these challenges, Council could build-in data reporting requirements to agreements with providers or investigate intelligent data capture techniques through the Smart Byron program. A balanced scorecard will evolve over time but should be reported on annually.

[1] ABS tests topics for 2021 Census to reflect changing nation, Australian Bureau of Statistics, November 2018, <https://www.abs.gov.au/ausstats/abs@.nsf/lookup/2007.0.55.001Media%20Release100002021>, accessed February 2020

## THE WAY FORWARD

DRAFT

## 8.2. Summary of Actions

Table 8.1 summarises the Byron Shire Integrated Transport Strategy (BSITS) actions. The table provides an indication of the timing (short, medium and long term) as well as the type of activity required by Council, namely:

- Plan – further planning should be undertaken to enable the action
- Deliver – the action should be undertaken to deliver the action
- Plan & deliver – planning and delivery should occur within the timeframe
- Manage – the action is already underway or has been delivered.

The table also provides an indication of cost and responsibility for the actions.

Council currently seeks additional funding for transport projects through grants, for example the 'Fixing Country Roads' program, annual Walking and Cycling funding streams and the 'Fixing Local Roads' program. This Strategy will increase Council and the community's capacity to secure grant funding through providing a clear strategic framework of an overarching goal and objectives, and an action plan linked to clear themes in order to support funding applications, as well as directing priorities for grant applications. However, these funding opportunities will change over time and resources including the Byron Shire Council Grant Finder and input from Council's Grants Officer will need to be used to guide available funding options.

THE WAY FORWARD

Table 8.1: Summary of Byron Shire Integrated Transport Strategy Actions

Theme	Action	Short (0-5 years)	Medium (5-10 years)	Long (10+ years)	Cost	Responsibility
1: Connecting People	Develop Transport Options that Reduce the Need to Rely on Private Vehicles					
	<ul style="list-style-type: none"> <li>Continue to develop the Rail Corridor to provide a public and active transport spine</li> </ul>	Plan	Deliver	Manage	Medium	Council
	<ul style="list-style-type: none"> <li>Trial two Council-run shuttle bus routes between townships</li> </ul>	Plan & Deliver	Manage	Manage	High	Council with Transport for NSW and private operators
	Introduce a new central Park & Ride facility	Plan & Deliver	Manage	Manage	High	Council
	Adapt parking arrangements to capitalise on benefits of broader changes	Plan & Deliver	Manage	Manage	Medium	Council
	Leverage Smart Byron to build hubs	Plan & Deliver	Manage	Manage	Low	Council with private operators
	Continue to strengthen partnerships with external agencies	Manage	Manage	Manage	Low	Council
	Focus on Bike Plan actions which rely on Council funding	Plan & Deliver	Manage	Manage	Low	Council
	Continue to roll out Electric Vehicle charging stations	Plan & Deliver	Manage	Manage	Medium	Council with private operators
	Continue to expand Popcar/car sharing across the Shire	Plan & Deliver	Manage	Manage	Low	Council with private operators
	Evaluate the outcome of shuttle trials and trial on-demand transport service		Plan & Deliver	Manage	Low	Council
	Continue to develop supporting facilities and services for the rail line reactivation with accompanying Park & Ride facilities	Plan	Deliver	Manage	High	Council with Transport for NSW and private operators
	Introduction of Active Transport Facilities into the Rail Corridor	Plan	Deliver	Manage	High	Council

DRAFT

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

87

THE WAY FORWARD

Theme	Action	Short (0-5 years)	Medium (5-10 years)	Long (10+ years)	Cost	Responsibility
	Support the Introduction of Public Transport Services into the Rail Corridor	Plan	Plan	Deliver	High	Council, Transport for NSW, private operators
	Rail Corridor extension and further Park & Ride locations		Plan	Deliver	High	Council with Transport for NSW and private operators
2: Active People	Proactively identify opportunities to create better pedestrian environments	Plan & Deliver	Manage	Manage	Low-Medium	Council
	Leverage small interventions to lock in the benefits of investment	Plan & Deliver	Manage	Manage	Low-Medium	Council
	Seek state government funding for links to town centres	Manage	Manage	Manage	Low	Council
	Enable delivery of the PAMP and Bike Plan through associated works	Plan & Deliver	Manage	Manage	Low	Council
	Influence new development to shape sustainable travel habits	Plan & Deliver	Manage	Manage	Low	Council
	Reduce speed limits in key town centres to improve road safety and urban amenity	Plan & Deliver	Manage	Manage	Low-Medium	Council with Transport for NSW
	Review and Align Council Planning Documentation	Manage	Manage	Manage	Low	Council
	Progressively relocate car parking outside of town centres	Plan	Deliver	Manage	Medium-High	Council
	Continue to work with the community to manage parking demand	Plan	Deliver	Manage	Medium	Council
3: Sustainable Asset Management	Prepare for funding opportunities	Plan & Deliver	Manage	Manage	Low	Council
	Commit to continued operational improvements	Manage	Manage	Manage	Low	Council
	Identify opportunities to hand infrastructure back to the State Government	Plan & Deliver	Manage	Manage	Low	Council with Transport for NSW
	Communicate success	Plan & Deliver	Manage	Manage	Low-Medium	Council

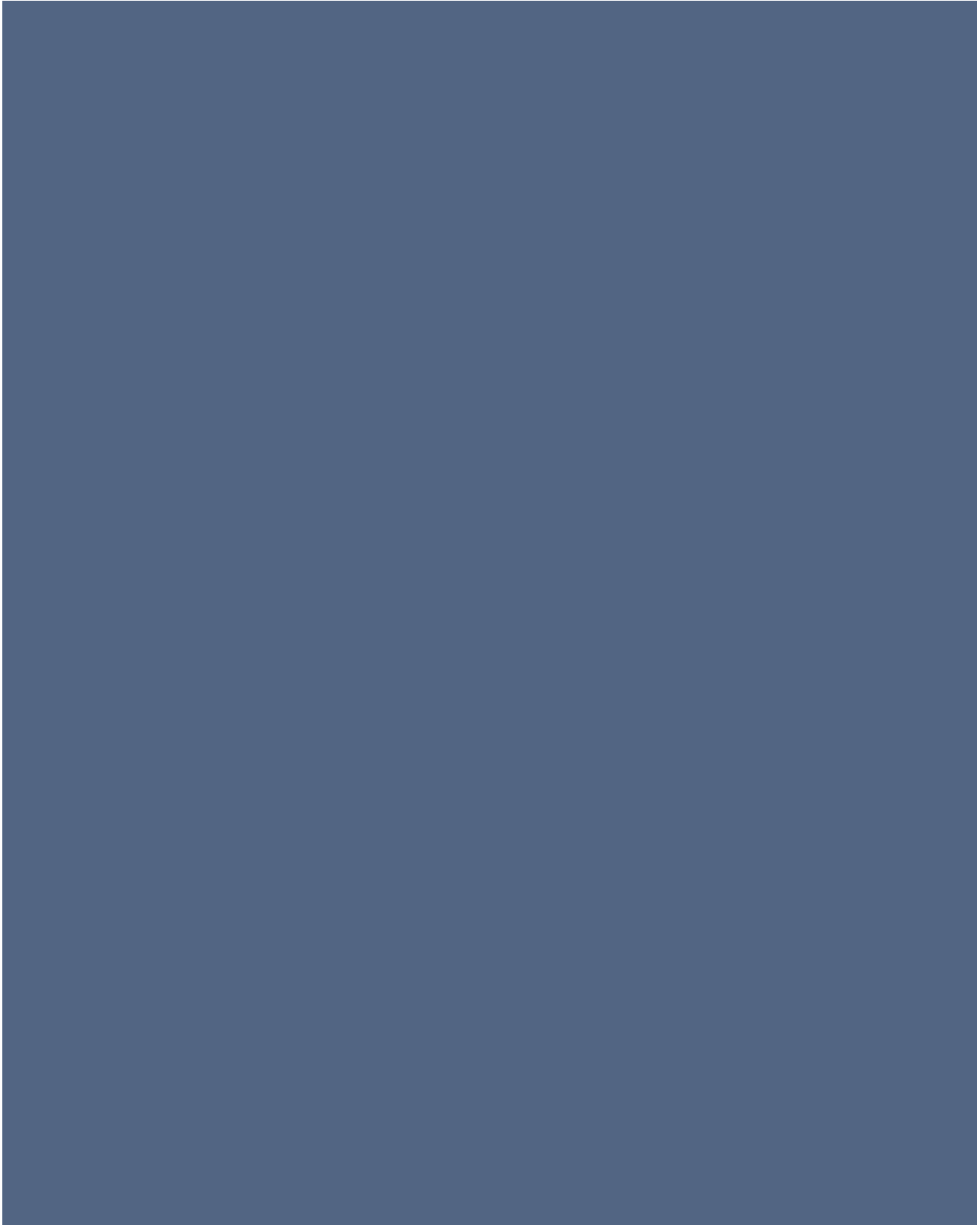
DRAFT

N176800 // 15/07/20  
Byron Shire Integrated Transport Strategy // Issue: B-Dr  
Byron Shire Council, Draft Report

88

THE WAY FORWARD						
Theme	Action	Short (0-5 years)	Medium (5-10 years)	Long (10+ years)	Cost	Responsibility
4: Smart Byron	Set Smart Byron priorities for the region	Plan & Deliver	Manage	Manage	Low	Council
	Develop Tender and go to market for public-private partnership	Plan & Deliver	Manage	Manage	Low	Council
	Develop a method for monitoring and evaluating projects	Plan & Deliver	Manage	Manage	Low-Medium	Council
	Build partnerships and work with technology providers and innovators to broaden ideas and opportunities	Manage	Manage	Manage	Medium	Council with Transport for NSW and private operators
	Resolve future priorities through existing community consultation programs	Plan	Deliver	Manage	Low-Medium	Council
	Monitor and refine projects	Plan	Deliver	Manage	Low-Medium	Council

DRAFT



**Report No. 4.4**                      **Road Safety Campaign Review**  
**Directorate:**                      Infrastructure Services  
**Report Author:**                  Andrew Pearce, Traffic Engineer  
**File No:**                              I2020/893

5

**Summary:**

10 Council resolution 19-619 directs staff to consider the development of a road safety campaign by way of a report to TIAC. This report to TIAC is in direct response to this resolution and requests TIAC feedback to help address item 5.

Resolution 19-619 item 5, in particular, states:

- 15 5. *That Council consider the development of a road safety campaign by way of a report to TIAC incorporating a discussion of items:*
- 20 a) *Development of an ongoing road safety awareness campaign to highlight access and safety for all road users with consultation at all stages with residents, active and vehicular road user groups, taking account of the steps set out in this motion.*
- b) *Conducting road safety forums with residents*
- 25 i) *To highlight the needs of all road users and promote safe practices that help to keep vulnerable road users safe, and*
- ii) *Seek feedback on safety and access issues that assist in the effective delivery of a road safety awareness campaign.*
- c) *Providing a review of effective road safety awareness campaigns/options in both rural and urban contexts*
- d) *Considering consultative actions for the development and delivery of a campaign.*
- e) *Setting out a timeline of action for the development and delivery of a campaign*
- 30 f) *Providing advice on effective general signage to raise awareness of access and safety issues for placement on rural and urban roads with particular emphasis on known issues and locations including without limitation, active transport users on rural and urban roads, school bus times on rural roads and school zones*
- 35 g) *Providing further advice on the potential employment of a Road Safety Officer to support and conduct a road safety awareness campaign*

---

**RECOMMENDATION:**

1. **That Council continue to liaise with TfNSW with regard to creating a Road Safety Officer position and planning road safety programs for the shire.**
  2. **That Council continue developing a funding model for a Road Safety Officer.**
- 
- 

40



**REPORT**

- 5 The purpose of this report is to gain feedback from the members of TIAC in regards to development of a road safety campaign raised in item 5 of resolution 19-619.

At the TIAC meeting it is proposed to discuss this resolution and receive feedback from TIAC in order to understand the way this report is envisaged to look and read. Prior to staff developing the first report.

As way of background, a Notice of Motion was raised by Cr Cameron at the November 2019 Council meeting to address access and safety for Byron Shire road users. As a result, Council passed the following resolution with the fifth item the reason for this LTC report:

1. *That Council note the report.*
2. *That Council continue consultation with RMS and internally to develop a potential position description for the role of Road Safety Officer.*
3. *That Council undertake a review of the budget to confirm there are adequate funds available to fund up to \$40,000 to \$50,000 for a Road Safety Officer with RMS to fund the other 50% of the role.*
4. *That Council support the General Manger undertaking a review of the staff structure to confirm where a Road Safety Officer would be accommodated within the organisational structure.*
5. *That Council consider the development of a road safety campaign by way of a report to TIAC incorporating a discussion of items:*
  - a) *Development of an ongoing road safety awareness campaign to highlight access and safety for all road users with consultation at all stages with residents, active and vehicular road user groups, taking account of the steps set out in this motion.*
  - b) *Conducting road safety forums with residents*
    - i) *To highlight the needs of all road users and promote safe practices that help to keep vulnerable road users safe, and*
    - ii) *Seek feedback on safety and access issues that assist in the effective delivery of a road safety awareness campaign.*
  - c) *Providing a review of effective road safety awareness campaigns/options in both rural and urban contexts*
  - d) *Considering consultative actions for the development and delivery of a campaign.*
  - e) *Setting out a timeline of action for the development and delivery of a campaign*
  - f) *Providing advice on effective general signage to raise awareness of access and safety issues for placement on rural and urban roads with particular emphasis on known issues and locations including without limitation, active transport users on rural and urban roads, school bus times on rural roads and school zones*
  - g) *Providing further advice on the potential employment of a Road Safety Officer to support and conduct a road safety awareness campaign*

6. *That Council provide a report to the next Local Traffic Committee meeting seeking advice from RMS, NSW Police and the local Member on regulatory issues, available programs, funding and compliance actions to support a road safety awareness campaign.*

5

***Key issues***

***Road Safety Officer / Staff costs***

10 Council believe the road safety campaign is best undertaken by a new role such as a Road Safety Officer (RSO) as their specific focus is road safety and undertaking TfNSW approved road safety campaigns.

15 Council's resourcing of Traffic and Transport is currently stretched due to the implementation of a new paid parking contract and the development of other paid parking scheme. The employment of a RSO would allow the Infrastructure Planning team to fully enter the road safety space with the resourcing this space deserves.

20 Council staff have been actively investigating the feasibility of a RSO for several months in the lead up to the resolution and since this resolution. In particular, staff have had meeting with TfNSW to understand the position description and financial implications of taking on a RSO. It is understood TfNSW is able to fund up to 50% of a RSO with that funding capped at \$64,000. This would go towards covering their salary and on costs.

25 In addition, Councils budget was reviewed and ability to afford a RSO was considered. Given the financial impacts of Covid-19 on Council's budget it was determined that Council could not afford a RSO within the 2020/21 financial year and did not include the position within the Council approved budget. However, discussions are still on going with TfNSW.

30 If a RSO is not able to be engaged staff costs associated with the project are still a consideration as all project work must be allocated to a project fund. This is expected to be in the order of \$60,000 or more based on the scope of works outlined in the resolution.

***TfNSW Local Government Road Safety Program***

35 Council staff are in discussion with TfNSW in regards to TfNSW funded Road Safety Programs. Investigations are currently underway in regards to a Bike Safety campaign. There are several campaign options which may be run independently or in combination to target community groups where English is not their first language, schools, bike maintenance workshops in community halls.

40 With the recent works undertaken to upgrade and expand Council's cycle network and plans to continue expanding the network staff see a great opportunity to promote these cycleways and do that through running active transport safety campaigns.

45 Some of these above mentioned campaign options may be run by Council with TfNSW funding – such as targeting different community groups. Other campaigns may be run by TfNSW, such as the school campaign where TfNSW representatives come to local schools to teach kids bike road safety and offer a helmet exchange where kids can swap unsafe helmets with approved safety helmets.

50 Similar campaigns were run in 2019, such as, School Zone road safety campaigns at Ocean Shores, Bangalow and Byron Bays pubic schools. This saw Staff undertake a 2 week educational campaign visiting the drop off zones each day to chat with parents. This was followed by a 2 week enforcement period to reinforce the need for safe driving and parking around schools. In combination TfNSW undertook school visits to conduct in class road safety campaigns for kids.

Another road safety campaign was undertaken over the 2019/20 school summer holidays via the Little Blue Dinosaur campaign targeting kids pedestrian safety around popular tourist locations.

TfNSW funding is available every year to undertake these Road Safety Campaigns.

### Campaign costs

Currently it is unknown how much it would cost to undertake the measures outlined within item 5 of resolution 19-619. However, it is recommended to not undertake the campaign until a specific budget is allocated to the campaign within the operational budget, if adopted by Council. This is to help minimise unexpected burdens to be placed on Council's finances.

In regards to cost it is expected there will be several sources of expense to Council, of unknown value.

*Consultation process:* Several points raised in the resolution are considered to be very broad and difficult to cost, such as, the step to develop an ongoing road safety awareness campaign with consultation at all stages with residents, active and vehicular user groups.

*Signs, Lines and Devices:* It is anticipated that one solution to road safety will be the deployment of additional signs, lines and devices (i.e. speed radar signs). Research undertaken by staff has confirmed speed radar signs are the most effective and affordable road safety device on the market (as opposed to road paint and street signs). To deploy additional signs, lines and devices on an ongoing basis will require a significant budget allocation.

As an example of anticipated costs:

- Speed radar signs cost approximately \$15,000 for each device with additional labour costs to install.
- Upgrading the Ocean Shores Public School with improves signs, lines, small traffic island cost approximately \$25,000.
- Undertaking school zone safety campaign cost approximately \$10,000
- To undertake an ongoing road safety campaign in consultation with the community at every stage and then deploy agreed actions could reasonable cost approximately \$100,000 per annum or more – depending on the number and type of actions. Plus the costs for an RSO to manage these works.

*Communication material:* It is anticipated that an additional solution to road safety may be undertaking a media and communication campaign. Such media and advertising campaign again will require a reasonable budget to fund graphic designed handouts, web based content, radio / media advertising as well as resource costs to host workshops.

### Mobility Spaces

A review of mobility spaces across Byron Bay and their level of accessibility is currently underway with the potential to be expanded to other towns across the Shire. This is a deliberate step by step approach already underway to help improve access and safety for a vulnerable community group.

**Next steps**

It is recommended as the next step that:

- 5       • Staff continue to liaise with TfNSW regarding a Road Safety Officer and consider funding this position as soon as Council finances sufficiently recover to expand our staffing arrangements.
- 10      • Staff continue liaise with TfNSW and plan road safety programs as discussed above under *Local Government Road Safety Program*. This would include Council run programs funded by TfNSW as well as TfNSW run programs in schools and other community groups. This is considered the most cost effective way to address resolution 19-619 under the current financial conditions and is aimed to specifically target road safety for active transport users.

**STRATEGIC CONSIDERATIONS**

15

***Community Strategic Plan and Operational Plan***

CSP Objective	L2	CSP Strategy	L3	DP Action	L4	OP Activity
---------------	----	--------------	----	-----------	----	-------------

20      It is unclear where this project would fit within Councils current Community Strategic Plan and Operational Plan as there is currently no funding allocated to such a project.

***Financial Considerations***

25      The cost of the campaign is currently unknown but expected to require a separate budget allocation to fund an extensive scope of works and tasks.

**Report No. 4.5**                      **Stormwater Assets Management**  
**Directorate:**                      Infrastructure Services  
**Report Author:**                  James Flockton, Infrastructure Planning Coordinator  
   Cameron Clark, Manager Utilities  
5   **File No:**                              I2020/1069

**Summary:**

This report is a response to the resolution 20-050 point 2.

**20-050**    **Resolved** that Council adopt the following Committee Recommendation(s):

**Report No. 4.4   Stormwater Assets Management**  
*File No: I2020/83*

Committee Recommendation 4.4.1

1.    *That Council note the report.*
2.    *That a further report regarding prioritisation and funding of shire wide urban stormwater renewals (including relationships to funding of other assets such as sewer and flood mitigation) be presented to the next available meeting of TIAC for consideration.*

---

**RECOMMENDATION:**

**That the Committee note the report.**

**REPORT**

The submission of the previous stormwater asset management report (I2020/83) to the Transport and Infrastructure Advisory Committee (TIAC) in January 2020 requested budget of \$1M for FY20/21.

This budget figure was for the urgent rectification of stormwater mains found to be in poor condition within the Mullumbimby CBD area and the ongoing assessment in parallel with the gravity sewer assessments in which efficiencies and value for money have been identified.

Since the submission of this report, discussions have been held with key stakeholders from both the Utilities and Works departments with regards to the management of the stormwater network which identified that more detailed work is still required on the prioritisation and potential funding sources for shire wide stormwater renewals.

Council have recently recruited a replacement Flooding and Drainage Engineering within Council's Works Section. This role is critical to the strategic direction and holistic approach to asset management in relation to stormwater infrastructure.

The Flooding and Drainage Engineer is currently completing two important Council projects; the North Byron Floodplain Risk Management Study and Plan, and the Byron Flood Warning Network (including disaster dashboard). It is essential he be given the time to resource the completion of these projects appropriately.

While finalising the above projects the Flood and Drainage Engineer is familiarising himself with our stormwater network and meeting with members of our community that have stormwater flooding issues. This is providing a very good understanding of the numerous drainage issues across the shire.

Towards the end of 2020 the above projects will be finalised and priorities will turn to developing more detailed programs for; resolving stormwater flooding issues, drainage renewals and flood mitigation. Further reporting to TIAC and Council will follow.

It is noted that historically of the three programs above, stormwater flooding is the only program that has received an annual ongoing works budget. This is due to Council having the ability to charge a Stormwater Levy to property owners. This levy is aimed at resolving stormwater issues for private land owners rather than drainage renewals. Therefore part of the above reporting is developing funding models to create annual funding sources for drainage renewals and flood mitigation.

The stormwater network is a critical community asset that requires funding to ensure that its function is adequately maintained and known issues are resolved. The proposed reporting will consider options in terms of Level of Service and the most difficult part, finding suitable long term funding solutions.