

Report No. 13.14 **Brunswick Heads Parking Schemes - Performance Review**
Directorate: Infrastructure Services
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File No: I2019/597

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Summary:

- 10 Council has undertaken a performance review of the parking schemes at Bangalow, Brunswick Heads and Mullumbimby in accordance with Council resolution 18-626.

The purpose of this report is to advise Council of the observations and recommendations associated with Brunswick Heads parking scheme only.

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The observations and recommendations associated with the Bangalow and Mullumbimby parking schemes are presented in separate reports.

RECOMMENDATION:**That Council:**

1. **Expand the Brunswick Heads parking schemes, as follows:**
 - i) **West along Fawcett St, Mullumbimbi Street and Fingal Street through to Tweed Street**
 - ii) **East across the South Arm Bridge through to the Surf Life Saving Club**
 - iii) **South along Park St from Fingal Street to Booyun Street.**
2. **Modify the Brunswick Heads parking scheme time limits, as follows:**
 - i) **Increase the number of 1P spaces from 81 to 97**
 - ii) **Increase the number of 2P spaces from 151 to 244**
 - iii) **Change all 31 * 3P time limited space to 2P**
3. **Undertake an expanded Automated Number Plate Recognition (ANPR) survey of the Brunswick Heads parking scheme to assess if the above modifications result in a change in demand, duration rates and parking patterns. The expanded ANPR survey area is to include:**
 - i) **The existing Brunswick Heads parking scheme area**
 - ii) **Fawcett St, Mullumbimbi Street and Fingal Street through to Tweed Street**
 - iii) **East across the South Arm Bridge through to the Surf Life Saving Club****South along Park St through to Booyun Street.**

The survey is to commence after items 1 and 2 have been implemented and the survey is to be done for a minimum of six (6) months.
4. **Investigate options to help increase compliance within the Brunswick Heads parking scheme through a combination of the following options:**
 - a) **Increased patrolling through increasing the number of enforcement officers and associated patrolling equipment.**
 - b) **Introduce parking technology, such as:**
 - i) **In ground parking sensors**
 - ii) **Parking meters.**

- 5. Investigate which combination of the above options is the most cost effective and appropriate for the parking scheme and report recommendations back to Council approximately seven months after ANPR survey commences.**
- 6. Complete an economic assessment into the potential impact of parking technology on Brunswick Heads.**

Attachments:

- 1 Existing & Expanded Parking Schemes - Mullumbimby & Brunswick Heads, E2019/26786
- 5 2 Parking Schemes - Mullumbimby, Bangalow and Brunswick Heads, E2019/24128
- 3 Brunswick Heads Parking Scheme Review.pdf, E2019/24122
- 4 Byron-Shire-Council-Tourism-scale-and-impact-analysis-November-2018-powerpoint-from-.id, E2019/13317

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REPORT

Council Resolution 18-626

Council has undertaken a performance review of the parking schemes at Brunswick Heads in accordance with item 2 of Council resolution 18-626:

1. *That Council note the status and proposed actions relating to the parking schemes in Bangalow, Brunswick Heads and Mullumbimby.*
2. *That Council receive a further report detailing the performance review of the parking schemes at Bangalow, Brunswick Heads and Mullumbimby at the April 2019 Council meeting.*
3. *That within the current inactive zones associated with current parking layouts and existing kerb blisters, Council undertake a 12 month trial to provide free motorcycle and scooter parking spaces in the following:*
 - *Western edge of the beach front car park at the north end of Jonson St.*
 - *On southern edge of Bay St in front of the Beach Hotel.*
 - *The eastern end of Lateen Lane (aka Lawson Lane in Google maps)*
 - *Council car park at the north end of Middleton St.*
4. *That the current parking spaces for motorbike / scooter parking in Wategos be provided free of charge during the trial*

Items 3 and 4 relate to the installation of motorcycle parks within the Byron Bay and Wategos parking scheme and are not considered part of the Brunswick Heads parking schemes. As a result, these items were not considered as part of this review.

1. Report Structure

To address item 2 of the above resolution Council undertook a sustained Automated Number Plate Recognition (ANPR) survey of the Brunswick Heads Parking Scheme from April 2018 through to 28 January 2019.

Data collected from this survey and from Council's parking permit system was collated by Staff and provided to our consultant for statistical analysis and recommendations.

Based on the above process the report has, therefore, been structured in the following way:

- i. An overview of the ANPR survey and type of data collected.
- ii. An overview of the surrounding context to better understand the potential impact regionally significant developments may have on parking schemes in the near future.
- iii. An overview of TPS observations and recommendations for the Brunswick Heads parking scheme.
- iv. Observations and recommendations for Brunswick Heads are then combined into a succinct summary.
- v. An approximate cost estimate is then provided for three common parking scheme compliance monitoring methods.
- vi. An estimated timeframe to implement the recommendations presented within this report.

2. Data Collection

2.1. ANPR Survey

Council staff went to each town and counted the total number of car spaces physically available within each parking scheme.

Between 27 April 2018 and 28 January 2019 Council undertook 87 ANPR surveys within Brunswick Heads. Each ANPR survey is able to identify information, such as: a cars number plate, its location, the time of the survey and how many cars were parked within each parking scheme.

Through comparing the ANPR survey data against the number of spaces physically available TPS was able to analyse information such as: demand versus supply, turn over frequency, what percentage of cars are overstaying time limits and develop appropriate recommendations.

2.2. Infringements

Council has two sources of information in relation to infringements. ANPR data assists in estimating the extent to which cars infringe the posted time limits. Councils parking enforcement team also maintain data based on infringements. Based on these two sources of information TPS was able to assess what percentage of cars typically infringe time limits and identify which streets and towns attracted the most time overstay infringements.

2.3. Permits

Through cross checking ANPR data with number plates registered within Councils e-permit system Council was able to assess what percentage of cars parked within a parking scheme were e-permit holders. This information provides Council with a snapshot of how many vehicles within a parking scheme belong to locals versus non-locals. This snapshot was required to help investigate the three different enforcement options common to most local governments.

It is noted a number of locals parked within Brunswick Heads may not own a permit. Therefore, calculating what percentage of cars parked within a parking scheme are e-permit holders provides an approximate lower end estimate only.

3. Surrounding Context

As stated within the TPS reports and summarised in Section 4, the Brunswick Heads parking scheme is approaching capacity and expected to be at or exceed capacity within the next 5 years. To understand the source of current and future demands on parking within Brunswick Heads the surrounding context of Byron Shire must be considered.

As presented within Attachment 6, Byron Shire Council has a population of approximately 33,624 residents with over 2,000,000 international and domestic tourists for 2017/18 financial year. Between 2014 and 2018, total visitation to Byron Shire was estimated to have grown by 49% to the current figure of over 2,000,000, compared to 11% growth for NSW. This is reflected in the significant unpredicted increase in traffic congestion within key places like Ewingsdale Road and Mullumbimby Road.

Given the surrounding economic development occurring close to Byron Shire, the number of tourists coming to Brunswick Heads is expected to increase substantially. As a result, these

developments are expected to contribute to the existing parking schemes reach or exceed capacity within the near future, particularly within Brunswick Heads and Mullumbimby.

3.1. Major Developments within Byron Shire

3.1.1. Brunswick Heads

Within Brunswick Heads the following developments have been approved or are currently under assessment / planning.

- i. Brunswick Heads Marina redevelopment.
- ii. Brunswick Heads Fishermen's Coop redevelopment – designed to attract larger functions and events.
- iii. SLSC redevelopment – this development proposes to substantially expand storage facilities, functions rooms and a training centre to cater for an increased number of events. The types of events that may reasonably be anticipated to occur at the SLC are weddings, parties, nippers training, surf carnivals and general functions.
- iv. Bayside Estate and Mills Estate Subdivision – up to 56 residential lots have currently been approved with another 150 residential lots anticipated.

3.1.2. Mullumbimby

- i. "Lot 22" – Proposed rezoning of land adjacent to Mullumbimby tennis courts with the potential capacity to accommodate over 200 new lots.
- ii. Tallowood Estate – additional stages are planned to accommodate additional low density and medium density residential developments. While the future capacity of these additional stages is not finalised these stages are anticipated to accommodate up to 100-200 new residents.
- iii. Former Mullumbimby Hospital Site.

3.1.3. Byron Bay

- i. Western Byron Urban Release Area (WBURA) – Development applications have recently been submitted to Council to develop the WBURA. While one application has been refused and the under still under review by Council, the WBURA represents a potentially significant population increase within Byron Bay.

3.2. Major Regional Developments

Outside the Shire but within a relatively short distance there are a number of very significant changes underway. It is reasonable to expect these large changes to result in a substantial increase in tourist numbers.

3.2.1. Gold Coast Airport

Gold Coast airport has begun works to expand its capacity from 6.6 million passengers to 16.6 million. Given Byron Shire is 45 minutes from the southern end of the Gold Coast it is reasonable to expect a significant flow on effect in regards to tourist number visiting our Shire.

3.2.2. Ballina Byron Gateway Airport

Ballina Byron Gateway Airport (BBGA) has experienced an 8% per annum growth rate since 2010 taking the total number of passengers per annum from 272,000 in 2010 to 529,000. To better manage the significant increase in passenger numbers the BBGA has commenced work to expand the passenger terminal and carpark. This expansion is designed to

accommodate substantially more passengers and provide improved transport connectivity. Given BBGA airport is a key entry point for Byron Bay visitors these works are expected to have a substantial impact on the number of tourists.

5 3.2.3. *South East Queensland Population*

10 The Gold City Council population is predicted to increase from 577,000 in 2016 to 650,000 in 2021 and 723,342 by 2026. In addition, greater Brisbane and Logan are predicted to increase from 2,288,423 in 2016 to 2,509,872 by 2021 and 2,757,003 by 2026. This represents a predicted population increase of approximately 295,000 by 2021 and 615,000 by 2026.

 3.2.4. *Tweed Shire*

15 Through the future development of areas such as Kings Forest, Pottsville, Cobaki Lakes and Terranora's Altitude Estate Tweed shire is predicted to increase from 93,500 in 2016 to 99,500 by 2021 and 107,500 by 2026. This represents a population increase of approximately 6000 by 2021 and 14,000 by 2026.

4. TPS Parking Scheme Review

20 It is important to note that the proper operation and performance of a parking scheme depends on a number of issues, such as:

- i. Adequate supply and distribution of different time zones;
- ii. Supply vs Demand;
- iii. Turnover rates;

25 iv. Number and type of infringements;

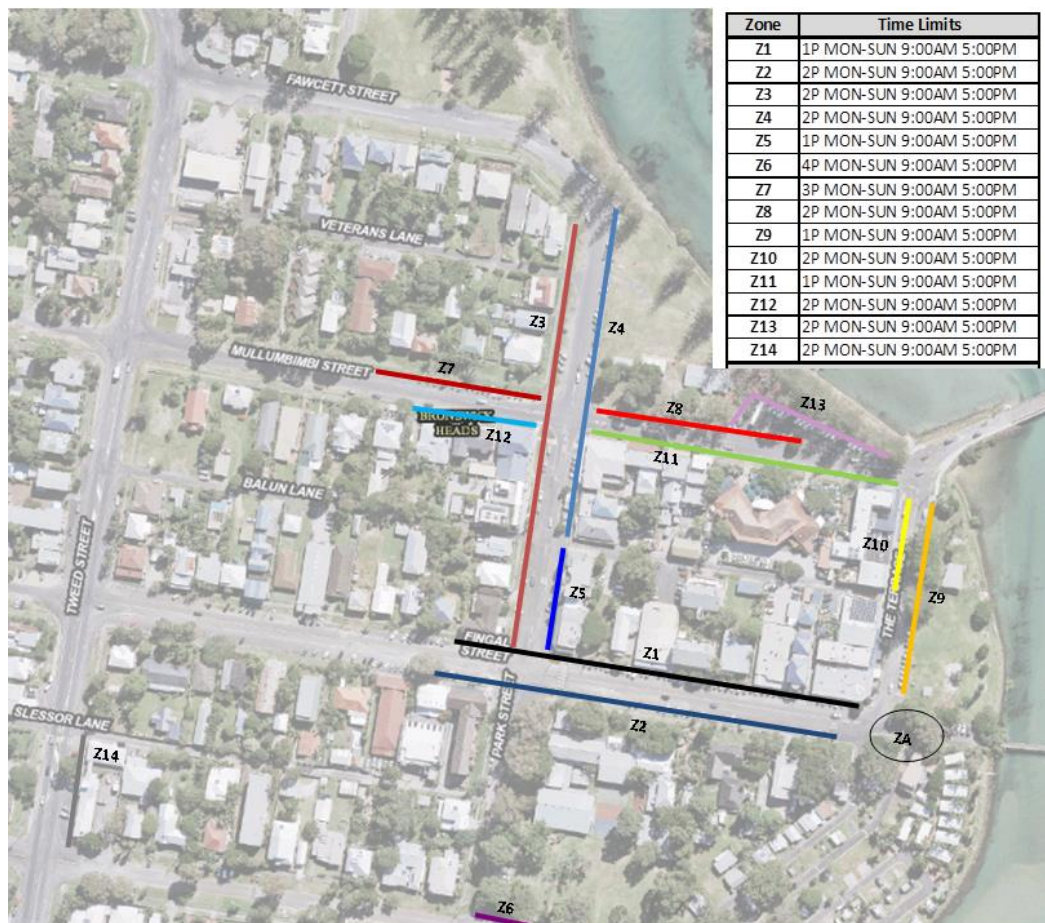
- v. Adequate number and location of bus zones, loading zones, mobility spaces, EV charging stations, car share spaces and taxi ranks.
- vi. Ability to efficiently monitor and enforce compliance;

30 Traffic and Parking Systems (TPS) were engaged by Council to undertake a Parking Scheme Review of Brunswick Heads. Below is a summary of the Brunswick Heads parking scheme observations and recommendations presented within the TPS report.

In addition to recommendations provided by TPS a number of Council recommendations are also presented in response to community issues by Council.

4.1. Brunswick Heads

The figure below illustrates the location of each time zone and time limits within each zone.



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Figure 1: Existing time limits and parking zones

Below is a summary of the number of car spaces within Brunswick Heads parking scheme.

Zone	Time Limits	Number of Car Spaces
Z1	1P MON-SUN 9:00AM 5:00PM	42
Z2	2P MON-SUN 9:00AM 5:00PM	36
Z3	2P MON-SUN 9:00AM 5:00PM	28
Z4	2P MON-SUN 9:00AM 5:00PM	28
Z5	1P MON-SUN 9:00AM 5:00PM	4
Z6	4P MON-SUN 9:00AM 5:00PM	24
Z7	3P MON-SUN 9:00AM 5:00PM	31
Z8	2P MON-SUN 9:00AM 5:00PM	14
Z9	1P MON-SUN 9:00AM 5:00PM	19
Z10	2P MON-SUN 9:00AM 5:00PM	4
Z11	1P MON-SUN 9:00AM 5:00PM	16
Z12	2P MON-SUN 9:00AM 5:00PM	7
Z13	2P MON-SUN 9:00AM 5:00PM	23
Z14	2P MON-SUN 9:00AM 5:00PM	11
TOTAL		287

Parking supply within Brunswick Heads is currently adequate, though a majority of time zones are operating at or near capacity (capacity is defined as 90% of available spaces). It is expected that all zones will approach capacity in the next 5 years. Based on the expected population growth discussed above in *Surrounding Context* and the observations regarding time infringements (discussed below) this is considered to be an accurate assessment.

TPS observed the following time infringement concerns within the following zones:

- a) Medium to longer time zones 6, 7 and 13 (which have 4hr, 3 hr and 2hr time limits, respectively) had considerable time infringements.
- b) Medium time zone 12 (2 hr on the periphery of the parking scheme) had a high level of time infringement during low demand periods.
- c) Shorter time zone 11 (in the centre of the parking scheme) had a high level of time infringement during high demand periods.
- d) Shorter term zones 1, 3 and 9 (1hr, 2hr and 1 hr, respectively, in the centre of the parking scheme) had a high level of time infringement during both low and high demand periods.

TPS concluded the over stay of time limits within the medium and longer term time zones (located on the periphery of the parking scheme) are probably forcing people to over stay time limits within the central, shorter time zones. This is because people wanting to stay longer may not find available longer term spaces so they resort to parking in short time zones, and over stay the time limits. Given the parking scheme is operating at or near capacity any time infringement has an amplified impact as there is limited to no vacant spots to ensure regular turnover.

In addition to the above TPS observations there are a number of community issues associated with the area east of South Arm Bridge. Of particular consideration is the potential re-categorisation of Crown Land managed by Council, namely: the land on which the Brunswick Heads Surf Club and Tennis Club are located. The categorisation of this land is currently under review with the land potentially becoming classified as Natural Area. If this area is re-categorised as Natural Area the majority of car spaces located adjacent to the surf club and tennis court will be lost

4.1.1. Recommendations for Brunswick Heads

Based on the above observations TPS and Council propose the following three recommendations be considered. To ensure maximum effect of these recommendations it is proposed to adopt recommendation 1 in combination with recommendation 2 and 3.

Recommendation 1: Modify Parking Scheme

To increase the capacity and vehicle turnover of the Parking Scheme it is recommended to modify the parking scheme as follows:

- R1a) Expand the parking scheme:
 - i. Introduce 4P time limits along Fawcett Street, Mullumbimbi Street and Fingal Street, all the way from Park St to Tweed St.
 - ii. Introduce a mix of 2P and 4P to the parking areas east of South Arm Bridge from the bridge through to the Surf Club.
 - iii. Introduce 2P along Park Street adjacent to Brunswick Public School, from Fingal Street through to Booyun Street.

Note: Expanding the parking scheme as described above may require the creation of a Permit system. In accordance with Road Transport (General) Regulation 2013 Council must not issue a permit except in accordance with this Regulation and RMS Permit Parking Guidelines.



Figure 2: Extent of existing and recommended expanded parking scheme

R1b) Modify time limits:

i. Increase the number of 1P spaces:

TPS recommends increasing the number of 1P spaces by approximately 16 spaces (i.e. 20%), taking the total number from 81 to 97 spaces. To achieve this Council recommends converting all 2P spaces along Park St (between Fingal St and Mullumbimbi St) and 2P spaces along The Terrace.

ii. Increase the number of 2P spaces:

Currently there are 151 * 2P spaces. If the above option to increase the number of 1P spaces is adopted this will reduce to 135 spaces. It is, therefore, recommended to introduce 30 * 2P spaces along both sides Park Street, adjacent to the Brunswick Heads Public School and introduce an additional 12 * 2P spaces along both sides of Fingal Street (between Park Street and Tweed Street). This would provide a total of 177 * 2P spaces. This excludes the number of spaces created under point iii) below and the 36 spaces at Torakina Beach car park.

iii. Convert 3P spaces to 2P to simplify the parking scheme.

While not discussed by TPS, it is recommended to modify the existing 3P spaces along Mullumbimbi Street to 2P. The purpose is to simplify the parking scheme and help improve turnover.

- 5 The changes discussed above are presented in the map below with yellow indicating 1P zones, red indicating 2P zones and blue indicating 4P zone.

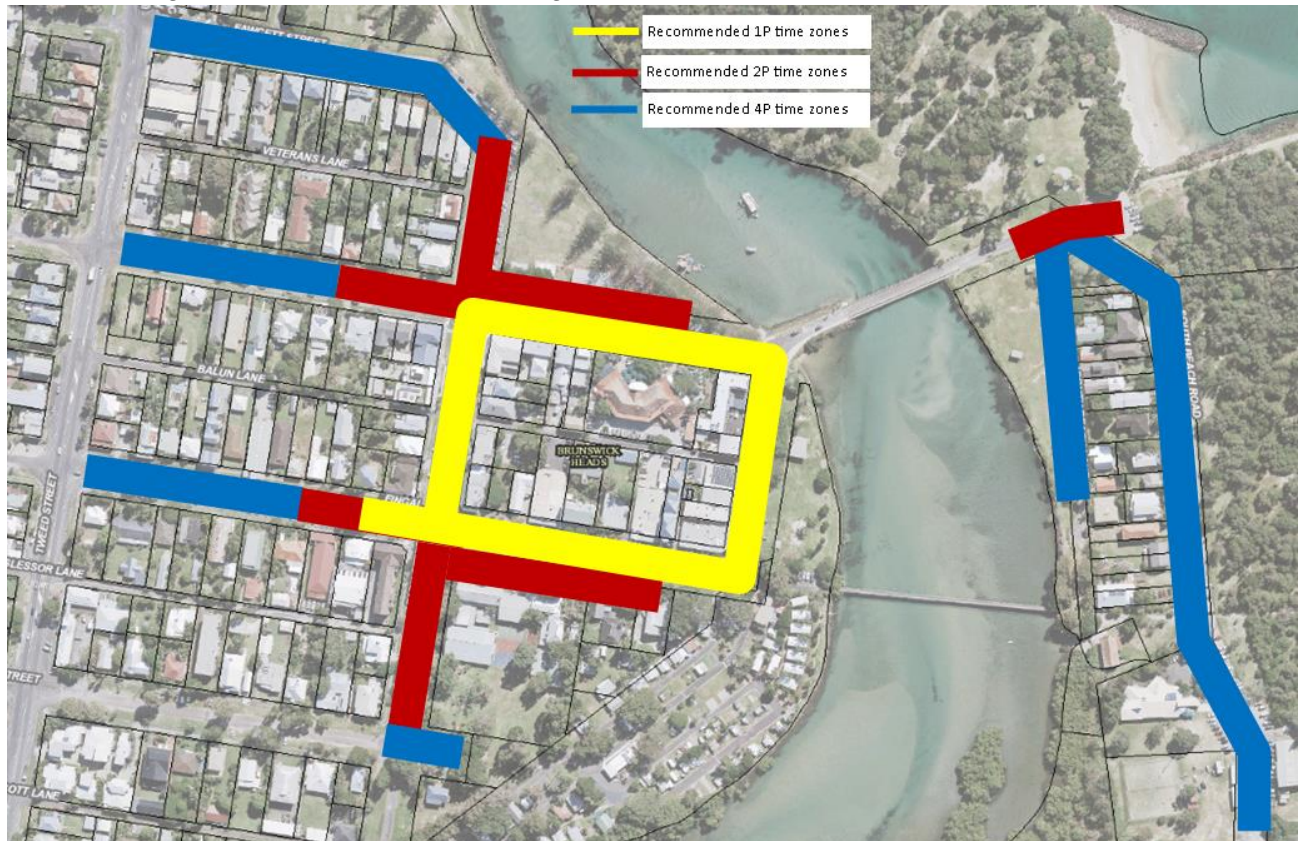


Figure 3: Recommended layout of modified time limits

- 10 Modifying the parking scheme in accordance with the above recommendations may require some zones to be appropriately constructed and bitumen sealed. These works may add to the cost of any modifications.

Recommendation 2: Increase Compliance Monitoring

- 15 The following recommendations regarding *Increase Enforcement* are the same recommendations presented under Bangalow and Brunswick Heads as each parking scheme can not be reviewed in isolation.

The primary recommendation proposed by TPS is to provide sustained increased compliance monitoring to ensure the parking scheme continues to operate efficiently into the future. Without sustained increased compliance monitoring the parking scheme is not expected to operate effectively in the near future and will experience substantial over-stays and congestion if turnover and time limits are not maintained. Rather than recommended a preferred approach TPS presented two options to consider. It is noted these options are commonly adopted within local government environments.

- 25 Council staff supports this recommendation due to the help it gives to Council's compliance team in their efforts to maintain the effective performance of all of Council's parking schemes across the

shire. Council's compliance team are required to respond to a wide range of compliance monitoring and enforcement issues (beyond just enforcing parking scheme time zones) across the entire Shire. As the popularity of the Shire increases and demands grow Council's Compliance Team will require additional support to undertake their wide variety of task as efficiently and effectively as possible. It is recommended to address this support as part of this review and before the team becomes inefficiently overstretched.

In addition, the recommendations presented below are to be seen as part of a Shire wide strategy to enable improved efficient compliance monitoring across the whole shire. As a result, it is recommended to support them through a possible combination of the following:

R2a) Increased Parking Officer Patrols

The first option presented by TPS is to increase the level of parking officer patrols. However, this option may not be considered sustainable given the need to consistently patrol all towns and the competing demand to patrol additional compliance issues, such as, illegal camping and animal compliance.

R2b) Technology Opportunities

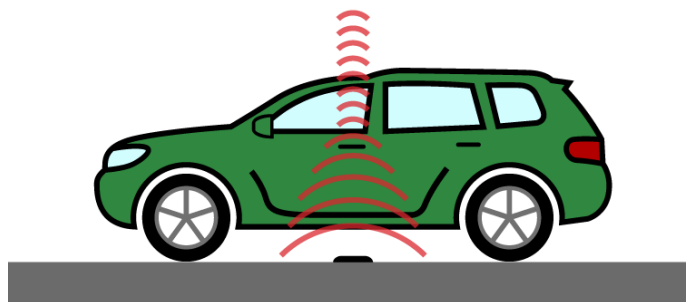
The second option presented by TPS is to adopt technology solutions. The primary purpose of technology solutions is to help free up Council's enforcement team, enabling them to undertake additional compliance roles while the aid of technology allows them to be more flexible in their parking patrols. In addition, it is designed to assist the economy of Brunswick Heads through encouraging compliance to time limits and parking turnover.

Discussions with TPS have indicated that parking enforcement officers are frequently deployed at approximately 1 officer per 200-300 car spaces, during business hours. Where parking technology is deployed in support of parking officers the deployment rate may reasonably be expected to become 0.65 officers per 200-300 spaces. This equates to 1 officer per 308-462 spaces.

Two types of technology solutions, commonly adopted within local government environments, are recommended: parking sensors and metered systems.

i. In Ground Parking Sensors

Parking sensors provide 3 principle functions, support for: compliance, parking scheme planning and real time information for potential mobile parking apps. They are small electronic devices inserted into the ground that detect and record the time a vehicle enters and leaves a parking space.



They are wirelessly linked to Council's parking management system to monitor parking in real time. When a car over-stays the time limit, information is relayed to an enforcement officer who then visits the site, confirms the infringement and may issue a fine. This potentially allows parking officers to carry out other duties while the parking sensors are monitoring the parking bays.

- 5 With an eye to the future, pods can be linked to Parking Apps that allow travellers to identify where free car spaces are located.

Consultation with product suppliers and with TPS indicates the best location to deploy parking sensors is where turnover is considered most critical. Typically this applies to 1P and 2P time limits. In addition, it considered best to allocate them to locations where regular patrolling is
10 unsustainable.

Examples of other Council's that have rolled out Parking Sensors include: Armidale, Port Macquarie, Yarra City, City of Whitehorse, Penrith, and Canberra.

ii. Metered System

- 15 Experience has shown the implementation of meter systems typically reduce infringements to approximately 5%, even without increasing patrol frequencies. This in turns helps increase parking turn over and accordingly helps reduce traffic congestion.

Recommendation 3: Further ANPR Surveys

- 20 Given that changing the parking scheme in accordance with any of the above options may impact the performance of the scheme, Council staff recommends that, post implementation of changes, a further ANPR survey be undertaken. This survey is designed to assess if these modifications result in a change in demand, duration rates and parking patterns, such as: do they cause negative flow on effects into surrounding streets.

- 25 This further ANPR survey is also recommended for all parking schemes (including Byron Bay) due to all schemes being generally at or near capacity. Council anticipates the need to expand several parking schemes in the near future given they are at or near capacity and the future demand is expected to grow substantially. To address this expectation the further ANPR survey will enable Council to respond efficiently and respond with accurate current information.

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4.2. Summary

Council has undertaken a performance review of the Brunswick Heads parking scheme in accordance with Council resolution 18-626.

- 35 This review identified the following:

- i. The Brunswick Heads parking schemes is currently operating at or near capacity with an expectation it will exceed capacity within 5 years;
- ii. Within Brunswick Heads motorists are noticeably infringing time limits on the outer medium term zones;
- 40 iii. In Brunswick Heads, there is evidence in the data to suggest that medium and long term parking demands are intruding significantly into 1 and 2 hour zones within the core of the Centres. This is significantly impacting on parking availability in the central core of the

centres, with the effect to accelerate the rate at which the parking demands will be at capacity.

Based on the above observations Council and TPS propose the following recommendations:

- 5 i. Modify the parking schemes, as follows:
 - a) Expand the Brunswick Heads parking schemes, as recommended within the report.
 - b) Modify the Brunswick Heads parking scheme to increase the number of 1P and 2P spaces, as recommended within the report.
- 10 ii. Increase enforcement through:
 - a) Substantially increase the level of compliance patrols and support the enforcement team in this task through additional resources, such as: personnel and equipment.
 - b) Adopting technology opportunities:

To assist Council's enforcement team, investigate the option of introducing technology, such as, parking sensors and metered system within:

 - 15 o 1P and 2P zones within Brunswick Heads.
 - o Within the carpark adjacent to Torakina Beach, Brunswick Heads.
- 20 iii. Continue the ANPR study of the Brunswick Heads Parking Scheme to assess if the above modifications result in a change in demand, duration rates and parking patterns. The study is to include the expanded areas, such as:
 - a) Fawcett St, Mullumbimbi St and Fingal St from Park St through to Tweed St.
 - b) Park St from Fingal St to Booyun St.
 - c) The area to the east of South Arm Bridge and extending through to the Surf Club

To undertake the above recommendations the following tasks are expected to be required:

- 25 1. Undertake an economic assessment of Brunswick Heads to assess the expected impact associated with improving parking technology.

5. Cost Estimates

30 As discussed in the report above, Council staff and TPS recommend the following three options used either independently or in combination to support compliance with their growing and competing demands:-

- 35 1. Increasing patrolling through employing two additional parking officers with associated equipment;
2. Installation of in ground parking sensors;
3. Installation of parking meters.

The potential financial impact of each option is shown below through a cost estimate for each option. **These estimates are based on a concept level of information and will require more detailed investigation prior to adoption.**

- 40 The cost estimates do not make any allowance for offsets associated with income from infringement notices or metered parking.

This report has not considered the possible sources for funding these options.

Option 1 – Increased Compliance Monitoring

- 5 Below is an approximate cost estimate for option 1 estimating the cost after 1 year and after 5 years. This cost estimate is based on 2 people and equipment required to deploy one team unit.

	Set up / 1st Year	5 Years
TOTAL	\$230,000 - 260,000	\$750,000 – 850,000

Option 2 – In Ground Parking Sensors

- 10 Below is an approximate cost estimate for option 2 estimating the cost after 1 year and after 5 years.

The estimate is based on information from Database Consultants Australia (DCA) who provided an indicative only estimate to supply sensors and manage data for 100 parking sensors.

- 15 The sensors are not integrated with the existing metered parking system used by Council and the assumption has been made that no additional personnel are required as part of this system. If the system is to be integrated with a metered system there may be additional costs associated with integration. Estimated costs associated with Council asset management and maintenance has
20 been added to the DCA estimate.

The estimate is based on installing 100 parking sensors.

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	Set up / 1st Year	5 Years
TOTAL	\$70,000 – 80,000	\$90,000 – 100,000

- 30 If parking sensors are installed along Park St, between Fawcett St and Mullumbimbi St, additional costs will be required to formalise and upgrade these spaces from informal gravel to bitumen sealed. These costs are not factored into the above estimates.

Option 3 – Metered System

Below is a cost estimate for option 3 estimating the cost after 1 year and after 5 years. It is recommended within the TPS reports to deploy such a system within 1P zones.

- 35 Brunswick Heads is expected to require approximately 15 parking meters each. Therefore, the cost estimate is based on 15 meters.

- 40 It is important to note that in addition to the estimate below Pay Parking Schemes also attracts additional costs when ad hoc changes are made to the scheme from time to time. Such changes may include, but not limited to: changes to the hourly tariff, resupply of paper tickets, vandalism repair and changes to the permit system.

	Set up / 1st Year	5 Years
TOTAL	\$300,000 - 400,000	\$800,000 – 900,000

Parking sensors may also be deployed as a pay parking system and require no meters. If meters are still preferred the number of meters may be significantly reduced if combined with mobile payment system and parking sensors.

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6. Time Frames

The following section provides estimated timeframes required to implement the above recommendations. Additional time for consultation with stakeholders outside of Council has not been factored into the timeframe below.

10

1. Council Meeting (23 May)

2. Establish Parking Scheme

2.1 Parking Scheme Design (24 May – 29 July)

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- i. Draft design (design plans, cost estimates, quotes) – by 21 June
- ii. Review draft design (design plans, cost estimates, quotes) – by 28 June
- iii. Final design (finalise design plans, cost estimates, quotes) – by 5 July

2.2 Local Traffic Committee (30th July)

2.3 Line-Marking (contract)

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- i. Purchase Order approval process (31 July – 6 August)
- ii. Lead time (2 weeks)
- iii. Install line-marking (20-23 August)

2.4 Signage & Posts

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- i. Purchase Order approvals (31 July – 6 August)
- ii. Lead time (between purchase and Council staff mobilisation) (2 weeks)
- iii. Construction walk-over & Installation (20 - 23 August)

3. Compliance Support Options Report to Council

3.1 ANPR Survey

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- i. Plan the survey (June-July)
- ii. Lead time (2 weeks)
- iii. Survey – 6 months (Aug – Jan 2020)
- iv. Council staff prepare ANPR data for analysis (Feb 2020)
- v. Data analysed and report (mid March 2020)
- vi. Report reviewed by Council staff (late March 2020)
- vii. This report to be used to support Report on Compliance Options to Council

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3.2 Economic Assessment – Stage 1 (Literature Review & On-line Surveys)

- i. Purchase order approval process (27 – 31 May)
- ii. Liaise between Council & SCU over survey questions (May)
- iii. Undertake & submit Economic Assessment (10 weeks) (27 May – 9 Aug)

- iv. Council review report (12 – 23 Aug)
- v. Possible SCU report refinements (26 – 30 Aug)

3.3 Economic Assessment – Stage 2 (Intercept Surveys)

- 5
 - i. Purchase order approval process (2 – 6 Sept)
 - ii. Liaise between Council & SCU over survey questions (Sept 2019)
 - iii. Confirm interviewers (Sept 2019)
 - iv. Lead Time
 - v. Undertake Intercept Surveys (1 week) (Dec or Jan 2020 peak season)
 - vi. SCU analyse data & prepare preliminary report for Council (Feb 2020)
- 10
 - vii. Supply ANPR analysis to SCU for inclusion in Economic Assessment (late March 2020)
 - viii. Council review report (early April 2020)
 - ix. Possible Assessment refinements (mid April 2020)

3.4 Report on Compliance Options to Council

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 - i. Research scope and issues associated with each option (June – Dec 2019)
 - ii. Concept Parking Scheme Design for each option (June – Dec 2019)
 - iii. Cost Estimates of materials & personnel (June – Dec 2019)
 - iv. Compare the ongoing financial cost / benefit sustainability of each option (Feb 2020)
- 20
 - v. Write Council report - enforcement option recommendations (March – April 2020)

4. Council Meeting (May 2020) – to resolve the adoption of an enforcement option (if required)

STRATEGIC CONSIDERATIONS

Community Strategic Plan and Operational Plan

CSP Objective	L2	CSP Strategy	L3	DP Action	L4	OP Activity
Community Objective 1: We have infrastructure, transport and services which meet our expectations	1.6	Manage traffic and parking in an efficient manner	1.6.2	Ensure future traffic demand and alternative solutions are addressed in major infrastructure plans	1.6.2.2	Review Bangalow parking time limit changes
					1.6.2.3	Review Mullumbimby parking time limit changes
					1.6.2.4	Review Brunswick Heads parking time limit changes

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Legal/Statutory/Policy Considerations

As outlined in the report.

10 ***Financial Considerations***

As outlined in the report.

Consultation and Engagement

- 15
- Council engaged the service of Traffic and Parking Solutions to undertake the Parking Scheme reviews.
 - ANPR data and estimates associated with increasing enforcement patrols were obtained from Council's Parking C Officer.
 - Tourist numbers were obtained through consultation with Council's Economy and Sustainability Officer and previous Council studies.
- 20
- Concept only cost estimates for 100 Parking Sensors were obtained from Database Consultants Australia (DCA)