

# Byron Bay Township Open Space Service Review 2019

## FINAL REPORT

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BYRON SHIRE  
COUNCIL

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March 2019





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## EXECUTIVE SUMMARY

The study undertook an independent review of open space levels of services and operations in the Byron Bay Township.

### BYRON BAY TOWNSHIP OPEN SPACE NETWORK

The Byron Bay Township is an integral part of Byron Bay. Containing iconic and signature parklands, beach, outstanding views and the CBD hub, it is a significant drawcard to the region.

Within the < 1 km<sup>2</sup> area are five hectares of parklands, one hectare of 151 garden beds, roundabouts, median strips and other traffic control devices; and streetscapes.

Byron Township's open space network includes highly used spaces such as Apex Park, Peace Park, Denning Park, Butler Street Reserve and Railway Park.

The Main Beach area is popular with locals and visitors, due to its proximity to the central district, a spectacular beach, outstanding scenery and open spaces. The area also contains the Surf Lifesaving Club.

Apex Park is Byron's iconic beachfront park and attracts very high usage levels (thousands in any one day), in addition to hosting community events. Apex Park toilet usage exceeds 60,000 uses per month over the festive seasons.

Denning Park is a popular linear recreation park adjoining the foreshore.

Butler Street Reserve is utilised as a flexible car parking facility that alleviates parking issues within the town centre, and currently caters for regular community markets.

Railway Park receives heavy use on a daily basis, as well as hosting regular markets.

### OVERVIEW OF OPEN SPACE TASKS

Landscape maintenance is generally the most investment intensive activity over a landscape's lifecycle. It is an essential requirement to the achievement of a landscape's purpose, design, usability and user satisfaction.

The high number of visitors, places a very high demand on the Township's open space and infrastructure maintenance services and far exceeds what would normally be expected of a NSW coastal township.

The Byron Bay Township open space maintenance tasks are undertaken by:

- Council staff: Better Byron Crew, Council Works.
- Contractors: cleaning and broad-scale mowing.

The focus of maintenance expenditure within the Byron Bay Town Centre is heavily weighted towards cleaning. High usage, visitor perceptions of Byron as a "party town", and increased usage at peak holiday periods and Schoolies have significant impacts on the maintenance budget.

Peak usage times, such as Easter, public holidays, school holidays and schoolies require additional staff for parks, streets and foreshore litter collection.



## EXECUTIVE SUMMARY

35% of the Byron CBD maintenance budget in 2016/17 went towards cleaning, compared to 11% of the total open space maintenance budget.

74% of the open space cleansing and cleaning expenditure in 2017 was allocated to the Byron CBD.

### EXISTING LEVELS OF SERVICE

Cleansing tasks receive the highest level of service. Public toilet cleaning occurs 820 times per year and street bin emptying 450 times per year. Beach cleaning, street litter pick-up, street sweeping all occur 365 times per year. Maintaining beach access points occurs 156 times per year, whilst cleaning street bins occurs 27 times per year.

Cleaning of infrastructure receive the next highest level of service within the Byron Bay Township, which involves BBQ cleaning (365 times per year), park path cleaning (104), playground cleaning (104), outdoor shower cleaning (52), drinking fountain cleaning (12) and seats and tables cleaning (12).

Green space management tasks receive the lowest level of service, with lawn raking (40 times per year), brush cutting and mowing the street verges (18), proactive pruning of street/carpark palms (18), manual lawn weeding (18), herbicide weeding of street garden beds and median strips (15), steam weeding of street garden beds and median strips (15), manual weeding of street garden beds and median strips (9), proactive pruning of park shrubs (6), proactive pruning of park palms (3), proactive pruning of park trees (3), proactive pruning of street/carpark shrubs (3), and proactive pruning of street/carpark trees (3).

### INDUSTRY STANDARDS

Information was collected and analysed from six benchmarking partners relating to level of service for key maintenance operational tasks undertaken within high visitor precincts, service providers, modes of delivery, funding sources, and customer request responses.

The benchmarking partners are:

- Ballina Shire Council (NSW).
- Clarence Valley Council (NSW).
- Douglas Shire Council (QLD).
- City of Gold Coast (QLD).
- Noosa Council (QLD).
- Whitsunday Regional Council (QLD).

### *Annual Visitor to Resident Population Ratio*

Each benchmarking partner was assigned a ratio of annual visitors to resident population, which were based on the 2017 National Visitor Survey and 2016 Census data. This gave an indication of proportion of visitors to resident population, the implication being that the higher the proportion the more rateable cost burden that is placed on the Local Government Authority to manage the impacts of high visitation.

Byron Shire Council and Douglas Shire Council (QLD) have the highest annual visitor to resident population ratio (60:1), followed by Noosa Council (40:1) and Whitsunday Regional Council (30:1).

Clarence Valley Council (19:1), City of Gold Coast (19:1) and Ballina Shire Council (17:1) have the lowest annual visitor to population ratio.



### *Open Space Maintenance Service Levels – High Tourist Visitation Precincts*

Levels of service vary due to climatic conditions (eg rainfall, temperatures), soil profiles, planting density, species selection, quantity of specific species (eg palm trees which continually shed fronds, trees that require regular pruning for safety), materials selection, available funding, population density, usage levels, urban design, streetscape design, park design, number and type of tourist accommodation within precinct, and profile of tourist precincts.

Byron Shire Council has a **higher level of service** than other LGAs for self-cleaning toilet maintenance, park path cleaning and lawn raking.

Byron Shire Council has **comparable high level of service** for beach cleaning, street bin emptying, non self-cleaning toilet maintenance, street garden bed and median strip weeding by steam, BBQ cleaning, manual street litter pick-up, machine operated street litter pick-up, proactive pruning of street and carpark palm trees, proactive pruning of park shrubs, playground cleaning, and maintenance of beach access points.

Byron Shire Council has a **mid-range level of service** for street garden bed and median strip weeding by herbicide, lawn weeding by manual labour, proactive pruning of park trees, drinking fountain cleaning, and outdoor shower cleaning.

Byron Shire Council has a **lower level of service** for street garden bed and median strip weeding by manual labour, street verge mowing / brush cutting, proactive pruning of street and carpark shrubs, proactive pruning of street and carpark trees, and proactive pruning of park palm trees.

Byron Shire Council has a **low level of service** for seats and tables cleaning.

Overall, **cleansing tasks** recorded high levels of service, with all but one task (beach access points maintenance <sup>1</sup>) scoring high to very high.

Overall, **infrastructure tasks** recorded mixed levels of service, with three tasks recording high to very high (park path cleaning, BBQ cleaning and playground cleaning); drinking fountain and outdoor shower cleaning recording mid-range level of service; and seats/tables cleaning a very low level of service.

Generally, the majority of **green space tasks** recorded mid to lower levels of service (proactive pruning of park trees and palms, street/carpark shrubs and trees; weeding of street/median strip beds by manual labour and herbicide; manual lawn weeding; and street verge mowing/brush cutting).

Lawn raking, weeding of street/median bed by steam, and proactive pruning of street/carpark palms and shrubs scored high to very high levels of service.

### *Funding Sources*

The majority of funding for open space maintenance of high profile tourist precincts is sourced from general rates.

Four LGAs source funds for open space maintenance in high profile tourist precincts from general rates only: Ballina Shire Council, Clarence Valley Council, Douglas Shire Council and Whitsunday Regional Council.

Byron Shire Council and City of Gold Coast utilise parking fees to fund open space maintenance in high profile tourist precincts.

<sup>1</sup> Four LGAs undertake this task on As Required basis, Byron's level of service is 156 times/year, Douglas' 52 times/year, and Gold Coast 365 times/year.

Noosa Council obtains funds from a business levy to fund open space maintenance in high profile tourist precincts. Whilst Byron Shire Council obtains funds from a business levy, this is not utilised for streetscape beautification or maintenance within the Township.

### EXPECTED LEVELS OF SERVICE

For most of the stakeholders that were interviewed as part of this study, the expected open space maintenance service levels for the Byron Bay Township align with the current levels of services.

Concern was raised with the level of investment in providing extra service levels, given the on-the-ground outcomes, and shortfalls in expected response rates to reactive tasks.

The levels of maintenance services for the Township are significantly higher the rest of the Shire but have been justified due to the increased impact of tourism. There is a mixed history of design and construction outcomes within the Township that takes away from an underlying theme or character capable of unifying the Townscape experience. This has tended to exasperate landscape maintenance activities, with personnel having to develop maintenance solutions for a diverse array of themed plantings and, in many cases, poor growing conditions.

A number of recommendations have been made to assist in alleviating these issues and create a more productive environment for landscape maintenance.

### GAP ANALYSIS

Over half of the tasks reviewed scored high or comparably high levels of service.

However, some gaps exist between existing levels of service, industry standards and expected levels of service were identified during the study.

The level of service for four tasks could be reviewed in light of the benchmarking findings:

- Proactive pruning of street and carpark shrubs
- Proactive pruning of street and carpark trees
- Proactive pruning of park palm trees
- Seats and tables cleaning

### *Mode of Service Provision*

The number of services contracted out ranged from 0 (Ballina), to 1 (Whitsunday), to 2 (Clarence Valley), to 6 (Byron), to 8 (Douglas), to 9 (Gold Coast), to 12 (Noosa).

Services most likely to be contracted out are street bin emptying (6 LGAs), beach cleaning (3 LGAs), and lawn weeding by herbicide (3 LGAs).

## POTENTIAL IMPROVEMENTS AND EFFICIENCY GAINS

- Recommendation 1** Continue to encourage a culture of innovation and continuous improvement.
- Recommendation 2** Develop agreed service levels for cleansing, infrastructure maintenance and green space maintenance within the Byron Township.
- Recommendation 3** Agree and implement a planting theme that characterises and unifies the Byron Township.
- Recommendation 4** Develop a suite of construction details for road islands and median strips that allows for healthy plant growth and longevity.
- Recommendation 5** Develop a suite of construction details for street furniture and paving solutions that allow for efficient maintenance.
- Recommendation 6** As part of the overall theme for the Town Centre Streetscape and Parks, a Picturesque landscape outcome is adopted.
- Recommendation 7** When developing landscape design and construction plans, consider factors that will enhance landscape maintenance productivity and sustainability.
- Recommendation 8** Improve the productivity of green space management through trialling the use of larger plants in planting programs for improving the resilience of plants in the establishment phase to droughting, accidental damage and vandalism.
- Recommendation 9** Investigate volunteering options for the undertaking of green space management tasks that sit outside existing levels of service, that Council has the resources to manage on an ongoing basis, and within their ability to manage the WHS aspects.
- Recommendation 10** Consider developing partnership agreements with local businesses in the Byron Town Centre to develop and care for the streetscape abutting their business to an agreed design intent and standard.
- Recommendation 11** Apply for grant funding to accelerate the implementation of the Byron Town Centre Masterplan and ensure landscape design and construction solutions include consideration of productive landscape maintenance.
- Recommendation 12** As part of corporate CRM improvement process, consider changes that:
- Reduce manual processes.
  - Allows for staff absences, public holidays, weekends etc that delay the timeframe of non-urgent customer request, CRM generation and response.
  - Minimise the risk of flagging urgent requests as non-urgent.
  - Feeds back the remedial action to the originator of the request (where known).

## GLOSSARY

Asset	Particular item of infrastructure.
Asset Life Cycle	The process of planning, acquiring, operating, maintaining, renewing, upgrading and disposing assets.
Asset Management	Managing the asset life cycle in a manner that meets the community's desired level of service in the most cost-effective way.
Asset Management Plan	Evidence-based plan developed in accordance with Institute of Public Works Australia.
Community Strategic Plan	Identifies the community's long-term aspirations.
Delivery Program	Identifies all of the key activities the Council has committed to undertake over its four-year term. All plans, projects, activities and funding allocations are directly linked to the Delivery Program. Reviewed annually, in preparation for development of the annual Operational plan.
Infrastructure	Services or facilities provided to an area to enhance its liveability.
Long-lived Assets	Generally have a lifespan of > 20 years, e.g. reinforced concrete pathway.
Maintenance Works	Maintenance is work performed on an asset to keep it in a useable condition.
New Works	(Capital works) Work undertaken to create a new asset or additional work undertaken on an existing asset to provide more than what currently exists.
Operational Plan	Identifies the detail of the Delivery Program, including the individual projects and activities that will be undertaken in a specific year.
Parks	Land and infrastructure accessible to the public for recreation, leisure and sport, generally free of charge. May be used for community events or other community activities.
Renewal Works	Renewal is work undertaken on an asset to bring it back to a good or good condition. Includes both repairing or replacing an existing asset (like for like) or repairing and upgrading an existing asset.
Resourcing Strategy	Identifies the elements of the Community Strategic Plan that the Council is taking responsibility for. Consists of three inter-related elements:

## GLOSSARY

- Long-Term Financial Planning
- Asset Management Planning
- Workforce Planning.

Short-lived Assets

Generally have a lifespan of < 20 years, e.g. mulch surface in a playground.

Township / Town Centre

Used interchangeably. Contains the twelve precincts outlined in the Byron Bay Town Centre masterplan.

## RELATED DOCUMENTS

Byron Shire Council (2018). *Plan of Management, Byron Bay Railway Park.*

Byron Shire Council (2018). 'Open Space and Resource Recovery September 2018 E2015/84321.'

Byron Shire Council (2018). *Integrated Pest Management Policy 2018.*

Byron Shire Council (2018). *Byron Shire Council Fees and Charges 2018/19*

Byron Shire Council (2018). *Byron Shire Community Solutions Panel Final Report.*

Byron Shire Council (2018). *Byron Shire Community Solutions Panel Briefing Book.*

Byron Shire Council (2017). 'Parks Assets Breakdown October 2017'.

Byron Shire Council (2017). *Our Byron Our Future: Delivery Program 2017-2021 (revised) and Operational Plan 2018-2019.*

Byron Shire Council (2016). *Strategic Asset Management Plan: General Fund Assets 2016-2026. Version 3.02.*

Byron Shire Council (2010). *Byron Shire Council Policy No. 10,006. Events on Public and Private Land.*

Byron Shire Council (2001). *Byron Shire Council Policy No. 5.52. Commercial Activities on Coastal and Riparian Crown Reserves.* (amended 2017).

Byron Shire Council (1994). *Byron Shire Council Policy 12/007. Business and Commercial Activities.* (amended 2018).

Byron Shire Council (1994). *Byron Shire Council Policy 5.37. Commercial and Other Activities on Public Land and Roads.*

Byron Shire Council (undated). *Parks Level of Service.*

McGreggor Coxall et al (undated). *Byron Bay Town Centre Masterplan, Final Masterplan Report.*

Independent Pricing and Regulatory Tribunal of New South Wales (2017). *Byron Shire Council's application for a special variation for 2017-18.*

Planning and Environment (2017). *North Coast Regional Plan 2036.* NSW Government.

Ross Planning (2017). *Draft Byron Shire Open Space and Recreation Needs Assessment and Action Plan 2017-2036.*

### INTERNAL DOCUMENTS:

Byron Shire Council Memo 'Better Byron Crew and Byron Town Centre', from Director Infrastructure Services (16.04.2018).

# STUDY OVERVIEW

## Introduction

### Byron Shire

Byron Shire is located in the Northern Rivers and is famous for its natural beauty and diverse population. The beaches and landscapes, the villages and towns readily provide for a mix of lifestyles - creative, sustainable, relaxed, professional and alternative.

Spread over 556 km<sup>2</sup> the Shire is home to 32,790 people living on 15,328 rate-paying properties within townships, villages, semi-rural and rural properties. The uniqueness of Byron easily draws over 2 million visitors annually, making it one of Australia's most popular destinations for both domestic and international tourists. Planned and potential upgrades to the Ballina-Byron airport will boost the capacity to attract even more visitors to the Byron Shire,<sup>2</sup> in addition to the upgrades already undertaken at the Coolangatta airport.

The Township area of one of the five major towns – Byron Bay – is the focus of this study.

## Background

### *Budgetary Constraints*

Byron Shire Council is faced with the challenge of managing substantial infrastructure and delivering a wide range of services to its community. Council currently does not have sufficient financial resources to sufficiently fund asset maintenance to a level that ensures that all Council controlled assets remain fit for purpose or in use. This has resulted in some assets being closed or removed, or services reduced throughout the Shire.

Additional infrastructure challenges include growth and development, high visitor numbers particularly during peak holiday periods, climate change, costs of managing Crown Lands, coastal zone management, rail corridor opportunities and gifted assets.

Ordinary rates provide < 20% of all Council revenue. Ratepayer growth is approximately 1% and does not generate sufficient revenue to keep pace with increase in maintenance costs.

IN 2017, State Government approval was granted for a Special Rate Variation of 7.5% to generate additional funds for asset renewal and maintenance. However, this amount represents the 'deteriorate option' – whereby the average condition of Council assets will be maintained in the short term but deteriorate over the longer term.

### *Byron Bay Township*

The iconic Township of Byron Bay is faced with an ever-increasing pressure with over two million visitors per annum, compared with a resident-base of just over 10,000. The high number of visitors places a very high demand on the Township's open space and infrastructure maintenance services and far exceeds what would normally be expected of a NSW coastal township. Given the low rate base, the cost burden on the Byron Shire Council's recurrent budget to maintain the Township's tourist precinct is disproportionately high.

Council addresses this challenge in a number of ways including:

<sup>2</sup> Planning and Environment (2017). *North Coast Regional Plan 2036*. NSW Government.



1. The development and integration of the Byron Bay Town Centre Masterplan into strategic and operational plans.
2. Establishment of higher open space and infrastructure maintenance levels of service for the Township precinct compared with other areas within the Shire.
3. Continuously seeking to improve and review systems and levels of services across all service areas.

However, Council has identified a need to review the levels of service and operations delivery for the Township of Byron Bay arising from significant concerns raised about the standard of maintenance of public areas and open space in the Township.

In considering this issue during the preparation of the 2018/2019 budget, Council resolved (Part Res 18-429) to amend the budget to include carrying out:

“... an independent service review that identifies levels of service ... along with service costs and efficiencies for all maintenance activities within the Byron Bay Township and that a report be provided to Council by February 2019.”

### Purpose of Study

The objectives of the project were to:

1. Carry out an independent review of open space levels of services and operations in the town of Byron Bay and, having regard to existing budgets, undertake a gap analysis for:
  - (a) Levels of services.
  - (b) Service programming and management.
  - (c) Support systems such as Customer Request Management systems, service programming and reactive response systems.
  - (d) Operations.
2. Focus the service review on operations, including minor enhancement works which are carried out as part of operations for efficiency reasons, but not capital works – as capital works services are carried out using different systems and resources so are beyond the scope of this review.
3. Review and receive advice on emerging industry innovations and/or established efficient systems/approaches to management of high-profile open space networks.

### Methodology

The project tasks included:

1. For each of the identified Open Space areas of operation, and taking into account Byron Shire policy and operational needs and existing budgets, review the:
  - (a) Current levels of service and resourcing.
  - (b) Expected levels of service and resourcing, following consultation with Councillors, General Manager and Directors.
  - (c) Levels of service and resourcing for levels of services for comparable open space areas, industry standard levels of service and resourcing or local government benchmarking etc.

2. Identify opportunities, within the existing resourcing, to optimise operations and levels of service for each categories of the pubic space in the town of Byron Bay being:
  - (a) Premium/high profile and high usage public spaces of the foreshore area, including beaches, and Railway Park;
  - (b) High usage public reserves including Butler Street Reserve, Railway Corridor and Sandhills Reserve; and
  - (c) Streetscapes and carparks.

Across each of the following operational tasks:

- i. Cleaning (litter collection, illegal waste and cleaning services);
  - ii. Infrastructure Maintenance (park and streetscape shelters, furniture and equipment);  
and
  - iii. Green space Maintenance (lawns, gardens and trees).
3. Undertake a desktop audit of all service provisions supplied to the town of Byron Bay.
4. Review and evaluate information and communications technology (ICT) systems and delivery that support operations.
5. Undertake interviews and any necessary follow up engagement with the following stakeholders for the purpose of informing the development of expected levels of service and industry standards:
  - (a) Councillors.
  - (b) Council management including Director Infrastructure Services, Manager Open Space, Manager of Finance and Executive Management Team.
  - (c) Council field staff.
  - (d) Contractors that perform services.

# BYRON BAY TOWNSHIP OPEN SPACE NETWORK

## Introduction

The Byron Bay Township is an integral part of Byron Bay. Containing iconic and signature parklands, beach, outstanding views and the CBD hub, it is a significant drawcard to the region.

Within the < 1 km<sup>2</sup> area are five hectares of parklands, one hectare of 151 garden beds, roundabouts, median strips and other traffic control devices; and streetscapes.

## Open Space Network

Byron Township’s open space network includes highly used spaces such as Apex Park, Peace Park, Denning Park, Butler Street Reserve and Railway Park.

The Main Beach area is a popular with locals and visitors, due to vicinity to the central district, a spectacular beach, outstanding scenery and open spaces. The area also contains the Surf Lifesaving Club.

Apex Park is Byron’s iconic beachfront park and attracts very high usage levels (thousands in any one day), in addition to hosting community events. Apex Park toilets usage exceed 60,000 uses per month over the festive seasons.

Denning Park is a popular linear recreation park adjoining the foreshore.

Butler Street Reserve is utilised as a flexible car parking facility that alleviates parking issues within the town centre, and currently caters for regular community markets.

Railway Park receives heavy use on a daily basis, as well as hosting regular markets.

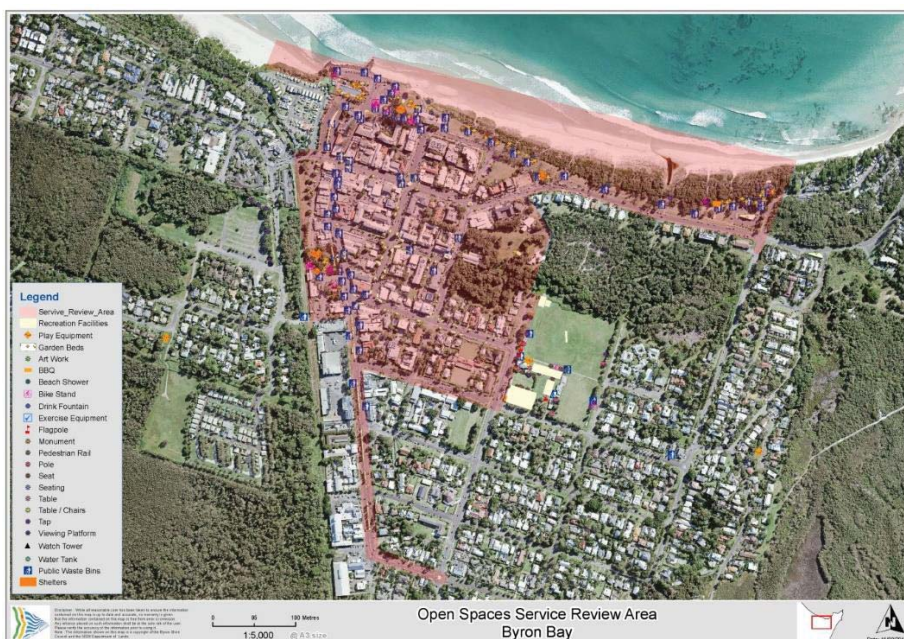


Figure 1. Open Space Service Review Area of Byron Bay Township



Figure 2. Apex Park

## Town Centre Infrastructure

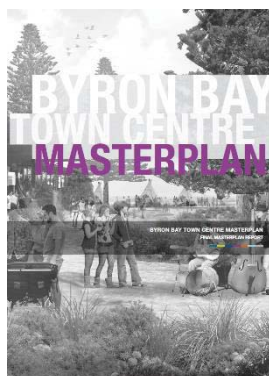
The Town Centre contains the following infrastructure:

- Amenity blocks
- BBQ installations (2)
- Beach access points (9)
- Beach showers (10)
- Bench seats in parks (12)
- Bench seats in streetscape (28)
- Bike stands parks (5)
- Bike stands in streetscape (27)
- Bus shelters (3)
- Electrical lighting across parks



- Electrical distribution boards for event access (4)
- Fences / balustrades / gates and bollards across parklands and streetscapes.
- Park shelters (3)
- Pathways, paved areas and hardscapes
- Playgrounds (4)
- Picnic tables in parks (38).

## Byron Bay Township Masterplan Precincts



In 2011, Byron Shire Council undertook research to determine resident and visitor satisfaction levels with the Town Centre. 81% of residents stated that Council should renew and maintain its existing infrastructure, while 49 % requested that Council develop new infrastructure. In response, Council undertook a master planning and placemaking initiative.

The purpose of the Byron Bay Town Centre Masterplan (BBTCM) is to present a vision and strategy to guide the future form of Byron's Town Centre, and to set out realistic actions and projects to achieve that vision.

The planning objectives of the BBTCM are to:

- Present a compelling vision for the future of the town centre of Byron Bay that reflects and enhances the Byron identity through sound placemaking principles.
- Review, evaluate and synthesize the relevant goals and objectives of existing projects, plans, technical studies and background materials.
- Work in partnership with Byron Shire Council's BBTCM working group/committee to generate and integrate technical content into the BBTCM.
- Engage and inspire community and stakeholders to be involved with the formulation of the vision and strategies.
- Develop a strategy incorporating contemporary urban design principles and practices, that addresses, but is not limited to the key urban design themes and principles.
- Present a suite of actions and catalyst projects that will achieve the vision in an innovative, affordable and practical manner.
- Include a robust staged implementation plan with governance and funding recommendations.

The Byron Bay Town Centre Masterplan divides the area into twelve precincts.<sup>3</sup> Each precinct reflects the varying identity and character of Byron Bay Town Centre. The precincts are carefully composed to manage the transition from the town centre core to its peripheral edges, establishing a diverse and complimentary mix of land uses that support diversity and public life.

<sup>3</sup> McGreggor Coxall et al (undated). *Byron Bay Town Centre Masterplan, Final Masterplan Report*.



**Figure 3. Byron Bay Township Masterplan Area**

The Byron Bay Masterplan Town Centre precincts are:

1. **Butler Street and Railway Square Interchange:** The Butler Street and Railway Square Interchange forms the critical infrastructure that can unlock the local potential of Byron Bay Town Centre by supporting alternate modes of transport and an array of cultural uses. Butler Street Reserve has been transformed into a flexible car parking facility that alleviates parking issues within the town centre. Railway Park is planned to become the town square and one of the arrival points for those who park in Butler Street Reserve or further south along Butler Street. The overall layout of Railway Park is planned to support the diverse needs of both the local and tourist community.
2. **Lawson Street Car Park Precinct:** As a large site along the foreshore the Lawson Street Car Park Precinct is planned to be a sympathetic extension of the Town Centre and Main Beach. Catering for creative businesses, residential living, local retail and outdoor dining.
3. **Main Beach:** Main Beach is planned to form a seamless connection between Apex Park, Peace Park, Denning Park and Foreshore Park. A new play space and inter-generational zone is planned to sensitively integrate into the open space supporting a greater array of community uses for all ages. The Surf Lifesaving Club is planned to be upgraded as a new modern facility that strengthens Main Beach’s role as Byron Bay’s most popular asset.
4. **Bay Lane Precinct:** Bay Lane Precinct is planned to be Byron Bay Town Centre’s main pedestrian prioritised area through offering shared, flexible surface treatments on Jonson Street North and Bay Lane. These initiatives are to encourage a people friendly environment that includes (but is not limited to) al fresco dining, markets, events, building activation and temporary seating.
5. **Sandhills Community Hub:** The Sandhills Community Hub is to be established as a community destination for all ages, integrated within an eco-friendly setting, linking to

the regenerated Sandhills Scrub. A refurbished youth centre, reoriented library, local community gardens, a children’s play space, adult learning facilities, Environmental Centre and eco residential living will contribute to establishing Sandhills as the community’s environmental hub. A skate park is soon to be constructed in the precinct.

6. **Byron Recreation Ground:** The Byron Recreation Ground will retain its role as a local sporting, recreation and community resource that is used for a range of compatible activities for all ages, with a focus on children and youth. The Recreation Ground is to be strongly linked to the Town Centre, Sandhills Estate and foreshore reserves, local schools and adjoining residential areas.
7. **Village Centre:** As the economic heart to Byron Bay Town Centre this precinct aims to respond to the diverse people that live in and visit the centre. By offering a variety of uses along the streets and laneways the village centre can support different business models that encourage local business and allows investment and a diversity of development opportunities. The village centre is to be incrementally converted from a place dominated by cars to a place where pedestrians and cyclists have priority. Opportunities for introducing residential living within this precinct may also be explored into the future.
8. **Clarkes Beach:** Clarkes Beach will remain a favourite spot for locals and tourists alike. The existing sand dune regeneration will continue, as well as improved opportunities for BBQ spaces, picnicking, public domain treatments, and car parking. The present character that is dominated by endemic vegetation and ‘bush tracks’ to the beach will be retained.
9. **Sandhills Scrubland Walk:** In collaboration with Crown Land and the local Indigenous Groups, the Sandhills Scrubland Walk is planned to be regenerated, strengthening the east west links for wildlife across the town centre. Educational opportunities, including integrated Indigenous learning and cultural experiences could be made available. The Sandhills Scrubland Walk is planned to seamlessly integrate the urban and natural together establishing stronger town centre connections to the Arakwal National Park.
10. **Western Residential Precinct:** The western residential precinct is to retain its role as an area for residential living, thereby ensuring a local living population within the town centre. Existing streetscapes are to be improved through low maintenance surface treatments, passive stormwater treatment, cycle lanes and large grass verges to retain the natural character of the precinct.
11. **Jonson Street South:** The south of Jonson Street will gradually transition into a mixed use district that supports medium density living and local business. By achieving this outcome, a greater population of residents and workers can be located within walking distance of the village centre and the new Mercato Shopping development. Additionally, the economic vibrancy of the town centre can be concentrated in and around the Village Centre ensuring a more compact and walkable town centre environment.
12. **Village Entry:** This precinct holds many opportunities to build the character of Byron Bay. With a number of publicly owned sites in this area, the opportunity for future redevelopment and regeneration presents the opportunity to create a unique gateway to the Byron Bay Town Centre. Existing heritage buildings are planned for retention and active tenancies encouraged along Butler Street and the railway corridor to strengthen the village centre’s arrival experience.



# OVERVIEW OF OPEN SPACE TASKS

## Introduction

Landscape maintenance is generally the most investment intensive activity over a landscape’s lifecycle. It is an essential requirement to the achievement of a landscape’s purpose, design, useability and user satisfaction.

As mentioned previously, the high number of visitors, places a very high demand on the Township’s open space and infrastructure maintenance services and far exceeds what would normally be expected of a NSW coastal township.

The Byron Bay Township open space maintenance tasks are undertaken by:

- Council staff: Better Byron Crew, Council Works.
- Contractors: cleaning and broad-scale mowing.

## Open Space Tasks

The open space maintenance tasks undertaken within the Township are listed in the following table.

**Table 1. Overview of Open Space Maintenance Tasks**

Open Space Maintenance Task	Overview
Audits	
Beach access maintenance	Reactive maintenance due to sand movement & beach washouts, causing pedestrian hazards. Mechanical & manual excavation. Foreshore fencing. Pruning vegetation for access.
Beach cleaning	Litter removal from foreshore. Daily inspection.
BBQ cleaning	Daily cleaning of BBQ units. Weekly gurney.
Bin cleaning	Extra services occur during events or due to vandalism
Bin emptying	Public litter bin emptying – recycle, waste, organic, cigarette bins. Removal of excess litter stacked immediately adjacent to the bin enclosures. Extra services during peak periods, festivals.
Bus shelter cleaning	Weekly gurney.
Drinking fountain cleaning	Weekly gurney.
Garden maintenance	3 monthly cycle thru all beds. Replacement of damaged / missing plants. Garden bed inspection every 3 weeks rotation, replant as necessary as plants getting damaged mostly high peak season, school holidays, schoolies and long weekends. Pest & disease management. Pruning & shaping of plants. Undertaking repairs to edging.

## OVERVIEW OF OPEN SPACE TASKS

Open Space Maintenance Task	Overview
Garden refurbishment & renewal works	Upgrade of garden beds. Minimum of 1 bed/month. Soil conditioning, planting, mulching. Installation of protective borders to discourage pedestrians, bicycles & portable signs.
Graffiti removal	
Inspections	Daily safety inspections of all facilities as part of litter control.
Lawn raking	In the Byron Township, most of the lawn raking is associated with the removal of leaves shed by the Norfolk Island Pines at Apex Park. <i>Araucaria heterophylly</i> dropping pine needles after storms or heavy wind mostly in spring and summer on Main Beach.
Litter collection	Manual removal of litter (food & drink containers, foodstuffs), micro litter (bottle tops, pop rings, cigarette butts), hazardous waste (broken glass, human waste, used drug paraphernalia), waste from itinerant campers from footpaths, streets, gutters, carparks, median strips, parks & garden beds. Additional litter collections for peak usage times - public holidays, school holidays, Schoolies, community events.
Maintenance of litter bin surrounds	
Maintenance of signs	
Maintenance of wire balustrades & park bollards	
Minor paving repairs & concreting	
Mowing / Brush cutting	Hand mowing Broad-scale mowing Weekly monitoring of street verges.
Mulching	Component of chemical free weed program. Tri-annual mulching program.
Outdoor park & street furniture	Daily inspection & cleaning as necessary. Cleaning monthly. Annual sand and oil of all timber tables and seats.
Outdoor shower cleaning	Weekly gurney.
Park path cleaning	Ride on sweeper / vacuum machine litter removal from footpaths & parks. Leaf blower leaf's & debris off path & playground 2 times weekly – high profile paths.
Pest control	Quarterly pest treatment of accessible power outlets.
Picnic shelter maintenance	Annual gurney clean and re-oil timbers of picnic shelters.
Playground & softfall cleaning	Leaf blower leaf's and debris of path and playground 2 times weekly. Fortnightly gurney.
Pruning	Streetscape & park shrubs. Proactive. Prune park. Streetscape/carpark hedges & grasses every 2 months. Reactive.
Renewal works	
Street path cleaning	Ride on sweeper / vacuum machine litter removal from footpaths & parks.
Street sweeping	Sweeping of streets & carparks with purpose built truck.
Tree management	Daily pick-up of leaf drop of park palms & prune as necessary. Leaf drop of street/carpark palms pick-up weekly. Removal of fallen branches.

## OVERVIEW OF OPEN SPACE TASKS

Open Space Maintenance Task	Overview
	Palm frond removal. Crown lift trees in parks & streetscapes x 3/yearly. Proactively monitor trees for tree health / safety issues. Annual program - lift canopies & prune trees adjacent to parking areas, traffic lanes & within parks. Annual pruning program of significant trees (eg Bay St Norfolk Pines).
Tree removal	Proactive. Reactive.
Toilet cleaning	Detail clean of all public toilets. Out of hours call-out.
Turf management	Aeration, topdressing & fertilisation after peak period usage (eg Schoolies) x 3/year. Turf recovery: temporary cordoning off.
Vandalism repair	Approx. 10% of budget spent on vandalism repair. Reactive maintenance. Garden bed vandalism is a particular issue.
Watering	Sprinkler irrigation, requiring manual placement & movement.
Weed control	No herbicide policy – highly frequented public areas. Garden bed, median strip weeding by hand; traffic control often required. Steam weeding of main streets & playgrounds. Lawn weeding fortnightly manual weed control, especially Main Beach.

## Service Providers

Within the service providers there is an informal communication and support network that can be found in well-functioning front line organisational cultures. It is associated with a “can do” approach to getting the job done and supporting one another in doing so. This network is made up of ground staff (including traffic infringement officers, works operations staff, Better Byron Crew), local identities, law enforcement officers, emergency service groups and others who have an awareness of what is happening on the ground within the Byron Town Centre.

Evidence of this type of network in the Byron Town Centre is drawn from the following observations:

- Many ground operators are vigilant and communicate with their counterparts when an issue is noticed, even if it is outside their jurisdiction.
- Hot spots, like Apex Park and Railway Square, are monitored on a daily, or several times a day, basis and remedial works are regularly undertaken prior to them being reported via the CRM system,
- Urgent matters are dealt with promptly.

## Better Byron Crew

The Better Byron Crew (BBC) was established to provide a higher quality landscape within the Byron Town Centre.<sup>4</sup> The intention is to develop a resort quality landscape that is low maintenance, utilises local species (where possible) and maintain the unique character of Byron Bay.

<sup>4</sup> Byron Shire Council Memo ‘Better Byron Crew and Byron Town Centre’, from Director Infrastructure Services (16.04.2018).

The BBC is based in the centre of town to avoid being delayed in traffic congestion, and is tasked with:

- Gardening, weeding, watering, mulching.
- Brush cutting, hand mowing and pruning of smaller areas.
- Beach access maintenance.
- Litter collection – focussing on removing micro litter and hazardous waste.
- Minor paving repairs and concreting.
- Graffiti removal.
- Maintenance of litter bin surrounds, signs, park furniture, wire balustrades and park bollards.

Informally, some of the staff in the BBC are very good with liaising with the longer term homeless groups that regularly frequent the open spaces within the Township.

The BBC consists of five FTE staff positions, including a horticulture trainee. The horticultural trainee position is currently vacant.

The BBC have the primary responsibility of inspecting and cleaning all public areas within the Byron CBD and foreshore areas; identifying and rectifying any safety hazards; and restoring areas to the best possible state of cleanliness and presentation as soon as possible.

Every second Monday the crew has a rostered day off. Should an urgent matter arise on their rostered day off, on weekends or public holidays, it is dealt with by another crew that is rostered on during those periods.

The Supervisor of the Better Byron Crew displays a rolling two weekly working plan that is displayed on a white board to assist the team in the planning and management of their tasks.

There is strong evidence that indicates that a culture of continuous improvement and innovation exists within the Crew, championed by their Supervisor, the Team Leader Open Space, and Manager, Open Space and Resource Recovery. Numerous innovations, emanating from this group, have been documented and in many cases implemented.

**RECOMMENDATION 1: Continue to encourage a culture of innovation and continuous improvement.**



Figure 4. Program Scheduling Board – Better Byron Crew

### Service Area of the Better Byron Crew

The BBC’s area of responsibility covers the high profile and high use areas of the Byron Bay Township, including:

- Apex Park and foreshore
- Denning Park
- Main Beach, beach accesses and foreshore
- Clarkes Beach
- Main Beach Carpark
- Beach Accesses
- Railway Park
- Lawson Street Carparks
- Byron Visitor Centre
- Byron CBD Streetscapes.

### Council Works

Council Works undertake the following tasks:

- BBQ cleaning.
- Street sweeping:
  - Undertaken on a daily basis with a purpose built machine.
  - Daily coverage includes Jonson Street, Lawson Street, Bay Street, Byron Street, Marvel Street, Fletcher Street and Carlyle Street, Main Beach Car Park and Lawson Street Car Parks.

- Railway Car Park, Lawson Lane and the median areas of Jonson and Byron streets are completed twice per week.
- Manual litter collection:
  - Undertaken along Town Centre footpaths and parks on four days per week, with a ride on sweeper / vacuum machine.
  - Undertakes litter collection across parks, gardens and car parks.
- Infrastructure cleaning and maintenance:
  - Weekly gurney clean all showers, bubblers and BBQs.
  - Weekly gurney bus shelters.
  - Fortnightly gurney clean playground equipment and rubber soft fall.
  - Quarterly pest treatment of accessible power outlets.
  - Annual sand and oil of all timber tables and seats.
  - Annual gurney clean and re-oil timbers of picnic shelters.

## Contractors

Contractors undertake the following tasks within the Township:

- Manual litter collection:  
Undertake manual litter collection along Jonson Street footpaths on weekends, public holidays and when Council cleaner is on RDO.  
Only address large items of litter on footpaths and gutters.
- Public toilet cleaning:  
Undertakes detail clean of all public toilets within Byron (Fish Heads, Apex Park, Railway Park, and Clarkes Beach) daily.
- BBQ cleaning:  
Units at Apex Park and Clarkes Beach.
- Public litter bin emptying:  
Undertaken daily.  
Remove excess litter if it is stacked immediately adjacent to the bin enclosures.
- Mowing of larger parkland areas.

## Maintenance Costs

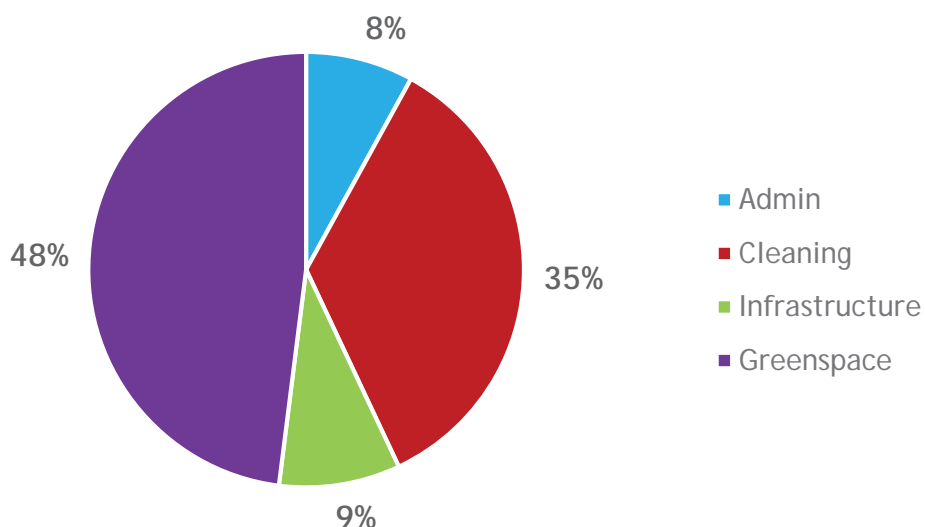
The focus of maintenance expenditure within the Byron Bay Town Centre is heavily weighted towards cleaning. High usage, visitor perceptions of Byron as a “party town”, and increased usage at peak holiday periods and Schoolies have significant impacts on the maintenance budget.

Peak usage times, such as Easter, public holidays, school holidays and schoolies require additional staff for parks, streets and foreshore litter collection.

35% of the Byron CBD maintenance budget in 2016/17 went towards cleaning, compared to 11% of the total open space maintenance budget.<sup>5</sup>

<sup>5</sup> Byron Shire Council Memo ‘Better Byron Crew and Byron Town Centre’, from Director Infrastructure Services (16.04.2018).

BYRON CBD MAINTENANCE COSTS 2016/17



OPEN SPACE MAINTENANCE COSTS 2016/17

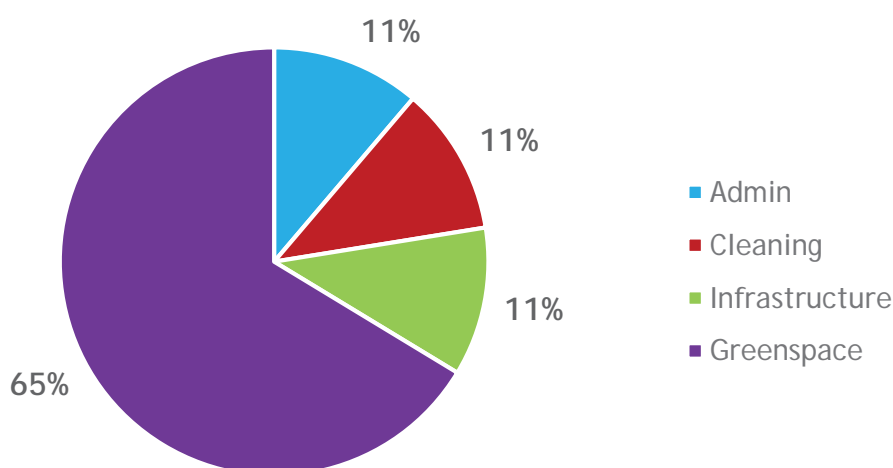


Figure 5. Breakdown of Byron CBD Budget Allocation vs. Overall Open Space Allocation

## Cleansing

74% of the open space cleansing and cleaning expenditure in 2017 was allocated to the Byron CBD.

Litter and waste include significant amounts of:

- Takeaway food and drink containers.
- Foodstuffs.
- Alcohol containers, bottle tops and ring pulls.
- Cigarette butts.
- Waste from itinerants and illegal campers.
- Hazardous waste: broke glass, human waste, used drug paraphernalia.

The high number of users also results in significant toilet cleaning costs and BBQ cleaning costs.



This higher level of service is evidenced in the section 'Industry Standards', where Byron scores high to very high on benchmarked cleaning levels of service.

## Green Space Management

### Weed Management

In accordance with Resolution 13-621, Byron Shire Council had ceased using herbicides to control weeds in highly frequented public areas. This significantly impacts on resource allocation, with weeding restricted to manual hand weeding or steam weeding.

Council's complete cessation of herbicide use within the Byron CBD has been reviewed. In many instances this approach has proven unsustainable and a more targeted approach is being proposed.

Successful chemical free weed control programs at playgrounds and on CBD streetscapes will continue and opportunities to expand these programs are being explored. Additional chemical free strategies will be implemented, including ground cover plantings and heavy mulching, but the approach will be to reduce, minimise and aspire to cease pesticide use rather than complete cessation. Where weeds that are resistant to hand or steam treatment are present, chemical free programs will be supplemented with spot application of herbicide.

Worker health and safety is being given precedence over cessation of chemical use in high risk areas such as roadsides, roundabouts and median garden beds.



Figure 6. Overgrown Weeds in Dening Park Garden Bed

## Turf Maintenance

Turf areas in Byron CBD experience significant impacts from high usage on a daily basis and salt exposure. Some parks, such as Apex Park experience regular events and community celebrations.

## Irrigation

Hand irrigation of Apex, Railway and Denning parks utilises around 200 labour hours per year. The introduction of well designed and constructed automated irrigation systems into these parks will dramatically reduce the amount of labour spent on irrigation.

Reuse water is planned to be used for unground irrigation systems across Apex Park, Denning Park and Railway Park. These projects are rolling out in late 2018 and early 2019.

This improvement will allow around 200 man hours per year that was directed at hand watering to be used for other tasks. Irrigation will alleviate the water stress that impacts the turf cover, and in turn reduce the time commitments to sectioning off and resting areas and returfing. Improved grass thatch will also open potential for more robust methods to collect micro litter, such as a ride on vacuum.

## Recent Innovations for Productivity Improvements

Table 2. Recent Innovations Implemented by Byron Shire Council

Innovation	Recurrent Budget Impact
<p><b>Automated irrigation</b></p> <p>Implementation of a well designed and constructed irrigation systems for high profile parks will produce significant productivity gains through the reduction of hand watering (sometimes up to 75 hours per week). Installation of automated irrigation in traffic islands is being scheduled into future programs.</p>	<p>Automated irrigation systems are planned for Apex Park, Railway Square and Dening Park this financial year. Labour savings planned to be redirected into maintaining greenscape to a higher level.</p>
<p><b>Battery powered equipment</b></p> <p>In many instances, battery powered maintenance equipment (hedge trimmers, blowers, mowers, brush cutter, power saw, chain saw) are lighter, cheaper, more environmentally friendly (noise abatement and no fossil fuel use) and easier to maintain than petrol. The Better Byron Crew is currently scoping and trialling battery operated equipment to determine its usefulness.</p>	<p>Cost neutral, perhaps some small savings associated with ease of use and weight reduction.</p>
<p><b>Consolidation of green space maintenance activities</b></p> <p>Audits of green space maintenance activities have revealed that some sites were being maintained that are not within Council jurisdiction. Additionally, broader scale mowing activities have been contracted and have generated productivity gains.</p>	<p>Currently undertaken within budget requirements.</p>
<p><b>Contracting of scheduled repetitious services</b></p> <p>Many cleansing and broad acres mowing services have been contracted due to the availability of good contracting services (can be difficult in regional areas) and cost savings.</p>	<p>Currently undertaken within budget requirements.</p>
<p><b>Garden bed herbicide use</b></p> <p>Reduction in the traffic disruption and employee risk due to the shorter amount of time spent in weeding traffic islands.</p>	<p>A 500% increase in productivity with associated labour cost savings.</p>
<p><b>Regular turf renovation in high profile areas</b></p> <p>Regular aeration, fertilising, top dressing, irrigation and sod replacement of worn areas maintains a higher quality and durability of grassed areas. The turf renovation program at Apex Park bears witness to this.</p>	<p>This is a cost burden on recurrent expenditure, but leads to enhanced user experience.</p>
<p><b>Selection of hardier plants for streetscape rejuvenation</b></p> <p>As the understanding of the varied growing conditions in the streetscape garden beds becomes more apparent, more refined native species selection that are better adapted to the sites are being implemented.</p>	<p>Currently undertaken within budget requirements.</p>
<p><b>Steam weeding of non-synthetic playground undersurface</b></p> <p>When combined with a playground cleaning program, steam weeding is an efficient way to reduce weeds in non-synthetic playground undersurface.</p>	<p>Currently undertaken within budget requirements.</p>

## EXISTING LEVELS OF SERVICE

### Current Levels of Service and Resourcing

#### Cleansing

As can be seen in Table 3, cleansing tasks receive the highest level of service. Public toilet cleaning occurs 820 times per year and street bin emptying 450 times per year.

Beach cleaning, street litter pick-up, street sweeping all occur 365 times per year.

Maintaining beach access points occurs 156 times per year, whilst cleaning street bins occurs 27 times per year.

#### Infrastructure

Cleaning of infrastructure receive the next highest level of service within the Byron Bay Township, which involves BBQ cleaning (365 times per year), park path cleaning (104), playground cleaning (104), outdoor shower cleaning (52), drinking fountain cleaning (12) and seats and tables cleaning (12).

#### Green Space Management

Green space management tasks receive the lowest level of service, with lawn raking (40 times per year), brush cutting and mowing the street verges (18), proactive pruning of street/carpark palms (18), manual lawn weeding (18), herbicide weeding of street garden beds and median strips (15), steam weeding of street garden beds and median strips (15), manual weeding of street garden beds and median strips (9), proactive pruning of park shrubs (6), proactive pruning of park palms (3), proactive pruning of park trees (3), proactive pruning of street/carpark shrubs (3), and proactive pruning of street/carpark trees (3).

The following table outlines the key maintenance tasks undertaken within the Byron Bay Township, the annual frequency, and service provider.

## EXISTING LEVELS OF SERVICE

**Table 3. Byron Bay: Open Space Maintenance Service Levels, Mode of Delivery**

Item	Annual Frequency	In-house/ Contractor	Comments
<b>CLEANSING</b>			
Beach access points	156	In-house	Pruning access by BBC.
Beach Cleaning	365	Both	Foreshore litter only – daily inspection.
Street litter pick-up (including blower) - manual	365	Both	Combination of one employee.
Street litter pick-up - machine operated	365	In-house	IS Works programs.
Street bin cleaning	27	In-house	Extra services occur during events or due to vandalism.
Street bin emptying	450	Contractor	Second service for peak event periods e.g. Blues Festival / NYE.
Street sweeping	365	In-house	
Toilet maintenance - self-cleaning	820	Contractor	Also out of hours call out.
Toilet maintenance - non self-cleaning	820	Contractor	Also out of hours call out.
<b>INFRASTRUCTURE</b>			
BBQ cleaning	365	Contractor	Daily cleaning.
Drinking fountain cleaning	12	Contractor	Monthly cleaning.
Outdoor shower cleaning	52	In-house	Once a week by BBC.
Park path cleaning	104	In-house	Leaf blower - leaves and debris of path and playground 2 times weekly by BBC – high profile paths.
Playground cleaning	104	In-house	Leaf blower leaf's and debris of path and playground 2 times weekly by BBC.
Seats & tables cleaning	12	In-house	Daily inspection and cleaning as necessary monthly by BBC.
<b>GREEN SPACE MAANAGEMENT</b>			
Lawn raking	40	In-house	Araucaria heterophylly dropping pine needles after storms or heavy wind mostly in spring and summer on Main Beach by BBC.
Mowing / brush cutting: park		Both	BBC do all brush cutting and some mowing. Contractor does mowing only.
Mowing / brush cutting: street verge	18	In-house	Weekly monitoring by BBC.
Planting: street garden bed & median strip	A/R <sup>6</sup>	In-house	Garden bed inspection every 3 weeks rotation, replant as necessary as plants getting damaged mostly high peak season, school holidays, schoolies and long weekends by Better Byron Crew (BBC).
Proactive pruning: park palms	3	In-house	Daily pick up of leaf drop and prune as necessary by BBC.
Proactive pruning: park shrubs	6	In-house	Prune hedges and grasses every 2 month by BBC.
Proactive pruning: park trees	3	In-house	3 times yearly crown lift trees by BBC,
Proactive pruning; street / carpark palms	18	In-house	Leaf drop pick up weekly by BBC
Proactive pruning: street / carpark shrubs	3	In-house	Prune hedges and grasses every 2 month by BBC.
Proactive pruning: street / carpark trees	3	In-house	3 times yearly crown lift trees by BBC.
Watering: automated	A/R		Plans in place to install automated watering.
Watering - manual hand	A/R	In-house	Weather dependant – only option currently available.
Weeding: lawn - herbicide	n/a	n/a	No herbicide been used on park areas by BBC.

<sup>6</sup> As required.

## EXISTING LEVELS OF SERVICE

Item	Annual Frequency	In-house/ Contractor	Comments
Weeding: lawn - manual	18	In-house	Fortnightly manual weed control, especially Main Beach by BBC.
Weeding: street garden bed & median strip - herbicide	15		
Weeding: Street garden bed & median strip - manual	9		
Weeding: Street garden bed & median strip - steam	15	In-house	

# INDUSTRY STANDARDS

## Introduction

This section provides the data from the benchmarking exercise undertaken with six comparable Local Government Authorities (LGAs).

Information was collected and analysed relating to level of service for key maintenance operational tasks undertaken within high visitor precincts, service providers, modes of delivery, funding sources, and customer request responses.

Financial information was not obtained due to the inherent problems associated with collecting data that is not 'apples for apples' and the challenge of devising an applicable format to suit the various financial systems.

## Benchmarking Levels of Service

To assist in the analysis of Byron Township Open Space Levels of Service, a group of benchmarking partners was established. Participants were selected based on their:

- Coastal proximity.
- Centres with high level tourism.
- Population.
- Size.
- Maintenance service levels that would be impacted by high levels of tourism.

The benchmarking partners are:

- Ballina Shire Council (NSW).
- Clarence Valley Council (NSW).
- Douglas Shire Council (QLD).
- City of Gold Coast (QLD).
- Noosa Council (QLD).
- Whitsunday Regional Council (QLD).

Each organisation was asked to provide:

- Open space maintenance service levels for specified tasks.
- Mode of service delivery (in house or contractual).
- Funding sources.
- Customer request response times.
- Comments.
- Any initiatives they felt worth sharing with the group.



Table 4. Benchmarking Partners

LGA	Council Area km <sup>2</sup>	Resident Population <sup>7</sup>	Annual Visitors <sup>8</sup>	(General) LGA Rate Revenue <sup>9</sup>	# Rate Assessments <sup>10</sup>
Ballina Sire Council (NSW)	485	41,790	728,000	\$19,522,000	18,172
Byron Shire Council (NSW)	566	31,556	1,885,000	\$19,085,000	15,327
Clarence Valley Council (NSW)	10,429	50,671	976,000	\$27,743,000	26,176
Douglas Shire Council (QLD)	2,437	11,714	697,000	\$13,977,000	
City of Gold Coast (QLD)	1,358	569,997	11,043,000	\$417,618,000	
Noosa Council (QLD)	869	52,149	2,107,000	\$44,369,000	
Whitsunday Regional Council (QLD)	23,860	34,538	1,022,000	\$44,545,00	

<sup>7</sup> ABS 2016 Census.

<sup>8</sup> 2017 National Visitors Survey.

<sup>9</sup> 2017-17.

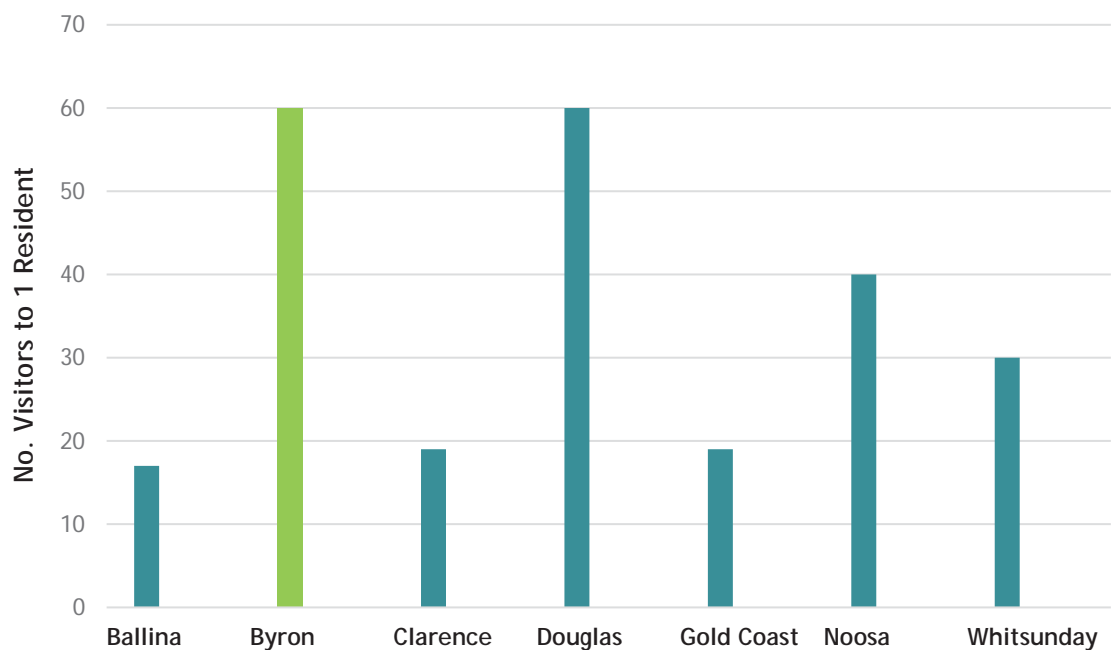
<sup>10</sup> 2016-17.

## Annual Visitor to Resident Population Ratio

Each benchmarking partner was assigned a ratio of annual visitors to resident population, which were based on the 2017 National Visitor Survey and 2016 Census data. This gave an indication of proportion of visitors to resident population, the implication being that the higher the proportion the more rateable cost burden that is placed on the Local Government Authority to manage the impacts of high visitation.

Byron Shire Council and Douglas Shire Council (QLD) have the highest annual visitor to resident population ratio (60:1), followed by Noosa Council (40:1) and Whitsunday Regional Council (30:1).

Clarence Valley Council (19:1), City of Gold Coast (19:1) and Ballina Shire Council (17:1) have the lowest annual visitor to population ratio.













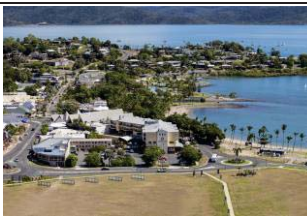



**Figure 7. Annual Visitor to Resident Population Ration – Benchmarking Partners**

For the Byron Shire Council, most of the visitors spend a period within the small area of the Byron Bay Township precinct (an area of less than 1 km<sup>2</sup>). The case would be similar for the Douglas Shire and the Port Douglas area, Whitsunday Shire and the Airlie Beach area, as well as Noosa Council and the Hasting Street Precinct. These Councils need to provide funds for a higher level of maintenance for high visitor impact areas that are likely to be a highly disproportional cost burden to their rate base.

In the case of the City of Gold Coast, the higher rate base and the larger number of high tourist area (eg Southport, Surfers Paradise, Broadbeach, Burleigh Heads and Coolangatta) somewhat lessens the cost burden on the rate base.

Table 5. Benchmarking Partners Annual Visitor to Resident Population Ratio

Member	Annual Visitor to Population Ratio	Photo 1	Photo 2
Ballina Shire Council	17:1		
Byron Shire Council	60:1		
Clarence Valley Council	19:1		
Douglas Shire Council	60:1		
City of Gold Coast	19:1		
Noosa Council	40:1		
Whitsunday Regional Council	30:1		

## Open Space Maintenance Service Levels – High Tourist Visitation Precincts

Levels of service vary due to climatic conditions (eg rainfall, temperatures), soil profiles, planting density, species selection, quantity of specific species (eg palm trees which continually shed fronds, trees that require regular pruning for safety), materials selection, available funding, population density, usage levels, urban design, streetscape design, park design, number and type of tourist accommodation within precinct, and profile of tourist precincts.

Byron Shire Council has a **higher level of service** than other LGAs for self-cleaning toilet maintenance, park path cleaning and lawn raking.

Byron Shire Council has **comparable high level of service** for beach cleaning, street bin emptying, non-self-cleaning toilet maintenance, street garden bed and median strip weeding by steam, BBQ cleaning, manual street litter pick-up, machine operated street litter pick-up, proactive pruning of street and carpark palm trees, proactive pruning of park shrubs, playground cleaning, and maintenance of beach access points.

Byron Shire Council has a **mid-range level of service** for street garden bed and median strip weeding by herbicide, lawn weeding by manual labour, proactive pruning of park trees, drinking fountain cleaning, and outdoor shower cleaning.

Byron Shire Council has a **lower level of service** for street garden bed and median strip weeding by manual labour, street verge mowing / brush cutting, proactive pruning of street and carpark shrubs, proactive pruning of street and carpark trees, and proactive pruning of park palm trees.

Byron Shire Council has a **low level of service** for seats and tables cleaning.

### Cleansing Tasks

Overall, **cleansing tasks** recorded high levels of service, with all but one task (beach access points maintenance <sup>11</sup>) scoring high to very high.

### Infrastructure Tasks

Overall, **infrastructure tasks** recorded mixed levels of service, with three tasks recording high to very high (park path cleaning, BBQ cleaning and playground cleaning); drinking fountain and outdoor shower cleaning recording mid-range level of service; and seats/tables cleaning a very low level of service.

### Green Space Tasks

Generally, the majority of **green space tasks** recorded mid to lower levels of service (proactive pruning of park trees and palms, street/carpark shrubs and trees; weeding of street/median strip beds by manual labour and herbicide; manual lawn weeding; and street verge mowing/brush cutting).

Lawn raking, weeding of street/median bed by steam, and proactive pruning of street/carpark palms and shrubs scored high to very high levels of service.

<sup>11</sup> Four LGAs undertake this task on As Required basis, Byron's level of service is 156 times/year, Douglas' 52 times/year, and Gold Coast 365 times/year.

### Higher Level of Service

Byron Shire Council has a **higher level of service** than other LGAs for:

- Self-cleaning toilet maintenance (820 times/year, Gold Coast 365 times/year).
- Park path cleaning (104 times/year, 2<sup>nd</sup> being Gold Coast at 52 times/year).
- Lawn raking (40 times/year; Ballina 39 times/year, Gold Coast 12 times/year, Clarence Valley 2 times/year).

### Comparable High Level of Service

Byron Shire Council has the **highest level of service in conjunction** with at least one other LGA for:

- Beach cleaning (365 times/year alongside Gold Coast and Noosa).
- Street bin emptying (450 times/year alongside Gold Coast and Noosa).
- Non self-cleaning toilet maintenance (820 times/year alongside Noosa).
- Street garden bed and median strip weeding by steam (9 times/year alongside Douglas).
- BBQ cleaning (365 times/year alongside Ballina, Douglas, Gold Coast, Noosa and Whitsunday).

Byron Shire Council has a **comparable high level of service** for:

- Manual street litter pick-up (365 times/year alongside Douglas, Noosa and Whitsunday, 2<sup>nd</sup> highest after Gold Coast's 450 times/year).
- Machine operated street litter pick-up (365 times/year alongside Douglas and Whitsunday, 2<sup>nd</sup> highest after Gold Coast's 450 times/year).
- Proactive pruning of street and carpark palm trees (18 times/year, 2<sup>nd</sup> highest after Whitsunday's 26 times/year).
- Proactive pruning of park shrubs (6 times/year alongside Clarence Valley and Douglas, 2<sup>nd</sup> highest after Whitsunday's 12 times/year).
- Playground cleaning (104 times/year, less than Gold Coast's 365 times/year, but double next closest of Douglas and Noosa at 52 times/year).
- Maintenance of beach access points (156 times/year, less than Gold Coast's 365 times/year, but more than double next closest of Douglas at 52 times/year).

### Mid-range Level of Service

Byron Shire Council has a **mid-range level of service** for:

- Street garden bed and median strip weeding by herbicide

- (15 times/year, 3<sup>rd</sup> highest rate – Gold Coast’s 26 times/year, Noosa’s 36 times/year).
- Lawn weeding by manual labour  
(Only Byron and Ballina undertake manual lawn weeding).  
(18 times/year, Ballina 39 times/year).
- Proactive pruning of park trees  
(3 times/year, highest being Clarence Valley at 6 times/year).
- Drinking fountain cleaning  
(12 times/year, lowest being Clarence Valley, Noosa and Whitsunday at 2 times/year;  
mid being Douglas at 52 times/year, highest being Gold Coast at 365 times/year).
- Outdoor shower cleaning  
(52 times/year, equal 3<sup>rd</sup> with Douglas, highest being Gold Coast at 365 times/year).

### *Lower Level of Service*

Byron Shire Council has a **lower level of service** for:

- Street garden bed and median strip weeding by manual labour  
(15 times/year, 4<sup>th</sup> highest rate – Ballina’s 39 times/year, Noosa’s 48 times/year, Gold Coast’s 52 times/year).
- Street verge mowing / brush cutting  
(18 times/year, highest being 52 times/year in Whitsunday).
- Proactive pruning of street and carpark shrubs  
(3 times/year, 2<sup>nd</sup> lowest, Whitsunday is highest at 12 times/year).
- Proactive pruning of street and carpark trees  
(3 times/year, 3<sup>rd</sup> lowest, Whitsunday is highest at 12 times/year).
- Proactive pruning of park palm trees  
(3 times/year, 3<sup>rd</sup> lowest, Whitsunday is highest at 12 times/year).

### *Low Level of Service*

Byron Shire Council has a **low level of service** for:

- Seats and tables cleaning  
(12 times/year, compared to 365 times per year for Ballina, Douglas, Gold Coast, Noosa and Whitsunday).



## INDUSTRY STANDARDS

**Table 6. Service Levels – Benchmarking Partners: High Tourist Visitation Precincts**

Item	Annual Frequency						
	Ballina	Byron	Clarence	Douglas	Gold Coast	Noosa	Whitsunday
2017 National Visitors Survey – Visitors to LGA	728,000	<b>1,885,000</b>	976,000	697,000	11,043,000	2,107,000	1,022,000
Population (2016 Census)	41,790	<b>31,556</b>	50,671	11,714	569,997	52,149	34,538
Annual Visitor to Population ratio <sup>12</sup>	<b>17:1</b>	<b>60:1</b>	<b>19:1</b>	<b>60:1</b>	<b>19:1</b>	<b>40:1</b>	<b>30:1</b>
<b>Cleaning</b>							
Beach access points	A/R	<b>156</b>	A/R	52	365	A/R	A/R
Beach cleaning	A/R <sup>13</sup>	<b>365</b>	A/R	54	365	365	4
Street bin emptying	313	<b>450</b>	119	365	450	450	365
Street litter pick-up (including blower) - manual	119	<b>365</b>	52	365	450	365	365
Street litter pick-up - machine operated	119	<b>365</b>	26	365	450	48	365
Toilet maintenance - self-cleaning	n/a	<b>820</b>	n/a	365	n/a	n/a	n/a
Toilet maintenance - non self-cleaning	365	<b>820</b>	156	365	450	820	365
<b>Infrastructure</b>							
BBQ cleaning	365	<b>365</b>	79	365	365	365	365
Drinking fountain cleaning	n/a	<b>12</b>	2	52	365	2	2
Outdoor shower cleaning	n/a	<b>52</b>	2	52	365	121	4
Park path cleaning	30	<b>104</b>	A/R	12	52	A/R	A/R
Playground cleaning	26	<b>104</b>	4	52	365	52	2
Seats & tables cleaning	365	<b>12</b>	2	365	365	365	365
<b>Green Space</b>							
Lawn raking	39	<b>40</b>	2	n/a	12	n/a	n/a
Mowing / brush cutting: street verge	39	<b>18</b>	22	32	26	28	52
Planting: street garden bed & median strip	A/R	<b>A/R</b>	A/R	9	A/R	A/R	A/R
Proactive pruning: park palms	5	<b>3</b>	6	2	A/R	11	12
Proactive pruning: park shrubs	5	<b>6</b>	6	6	A/R	2	12
Proactive pruning: park trees	5	<b>3</b>	6	2	A/R	2	4
Proactive pruning: street / carpark palms	5	<b>18</b>	6	2	A/R	11	26
Proactive pruning: street / carpark shrubs	5	<b>3</b>	6	6	A/R	6	12
Proactive pruning: street / carpark trees	5	<b>3</b>	6	2	A/R	5	12
Watering - automated	A/R	<b>n/a</b>	A/R	A/R	A/R	A/R	n/a
Watering - manual hand	A/R	<b>A/R</b>	A/R	A/R	A/R	A/R	A/R
Weeding: lawn - herbicide	A/R	<b>n/a</b>	1	2	12	2	1
Weeding: lawn - manual	39	<b>18</b>	n/a	n/a	n/a	n/a	n/a
Weeding: street garden bed & median strip - herbicide	A/R	<b>15</b>	6	9	26	36	A/R
Weeding: street garden bed & median strip - manual	39	<b>15</b>	6	9	52	48	A/R
Weeding: street garden bed & median strip - steam	n/a	<b>9</b>	n/a	9	n/a	n/a	n/a

<sup>12</sup> Indicator of potential impact on rate base to fund higher levels of service.

<sup>13</sup> As required.

### Cleaning Levels of Service

#### Beach Access Points

Maintenance of beach access points level of service ranges from As Requested (Ballina, Clarence Valley, Noosa and Whitsunday), to 52 (Douglas), to 156 (Byron), to 365 times per year (Gold Coast).

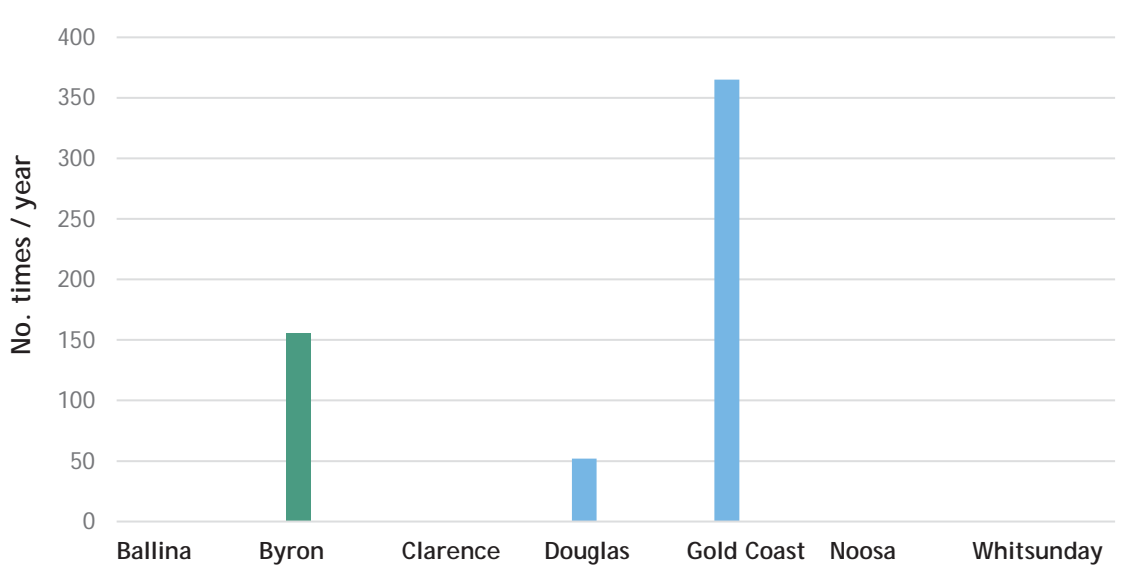


Figure 8. Beach Access Points Maintenance Service Levels

#### Beach Cleaning

Beach cleaning level of service ranges from As Required (Ballina and Clarence Valley), to 4 (Whitsunday), to 54 (Douglas), to 365 times per year (Byron, Gold Coast and Noosa).

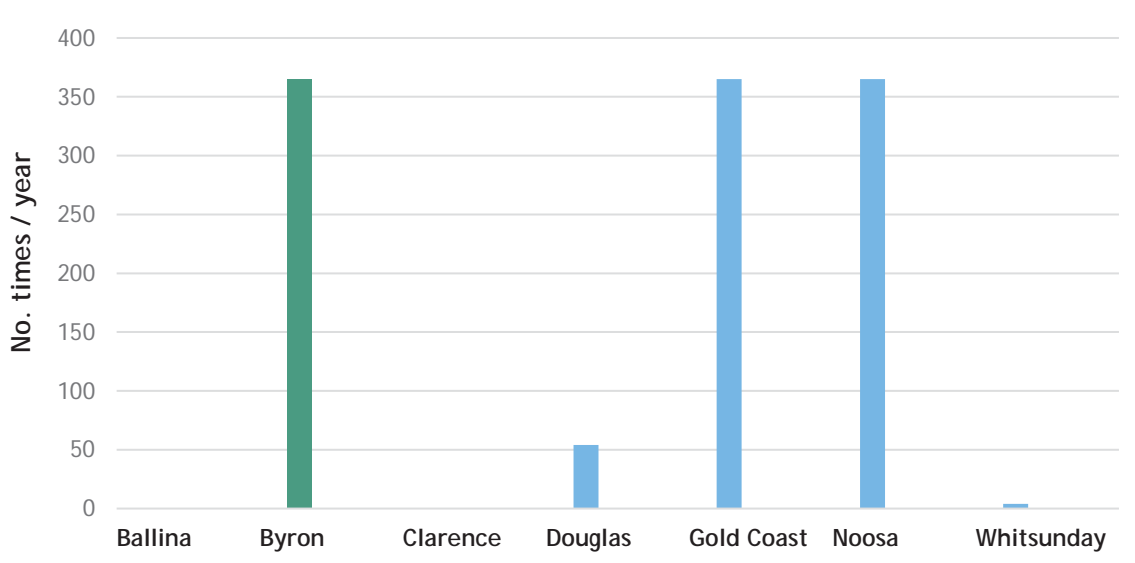


Figure 9. Beach Cleaning Service Levels



### Street Bin Emptying

Street bin emptying level of service ranges from 119 (Clarence Valley), to 313 (Ballina), to 365 (Douglas and Whitsunday), to 450 times per year (Byron, Gold Coast and Noosa).

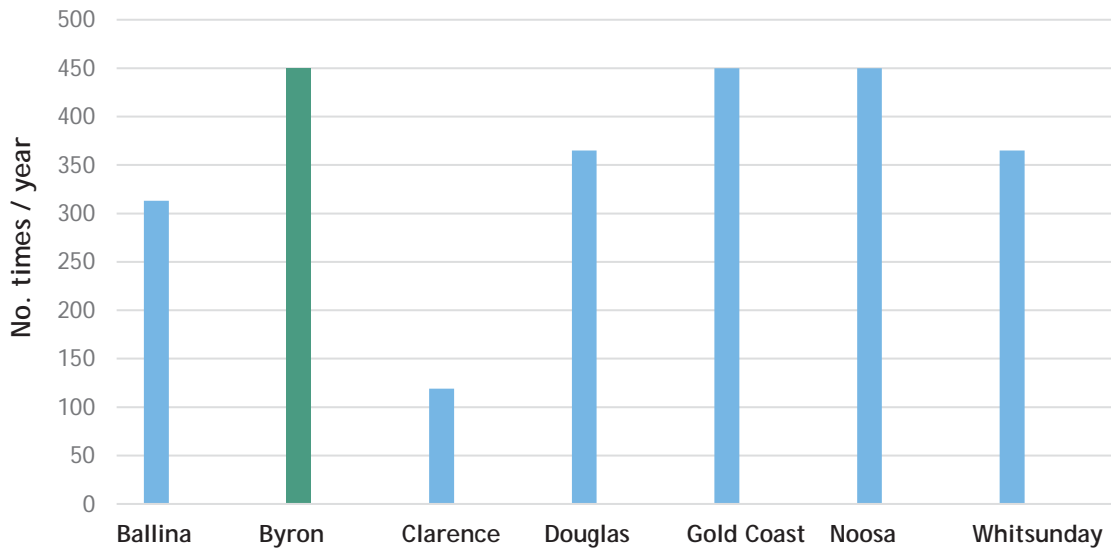


Figure 10. Street Bin Emptying Service Levels

### Street Litter Pick-Up - Manual

Manual street litter pick-up level of service ranges from 52 (Clarence Valley), to 119 (Ballina), to 365 (Byron, Douglas, Noosa and Whitsunday), to 450 times per year (Gold Coast).

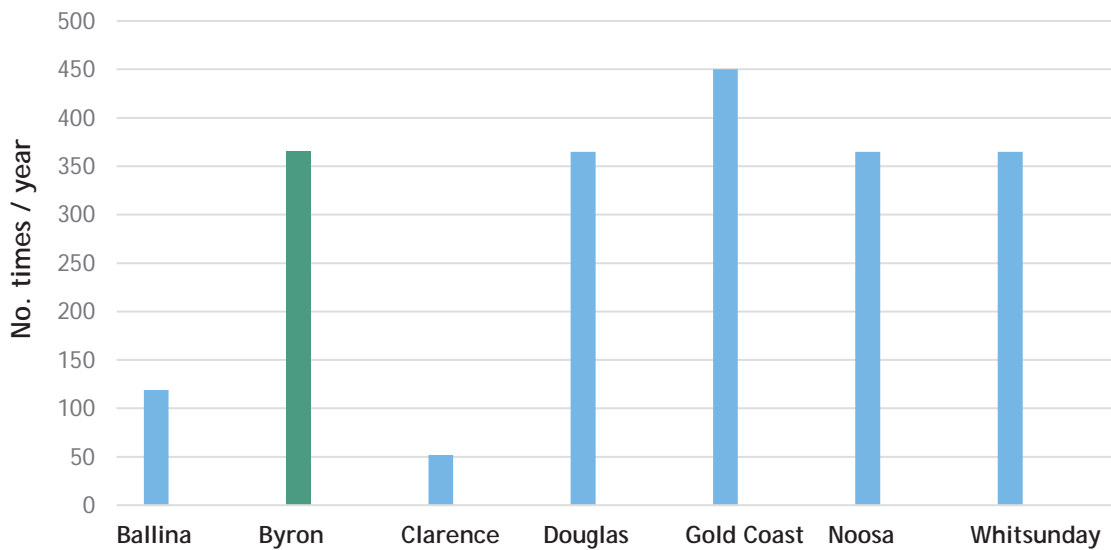


Figure 11. Street Litter Pick-Up - Manual Service Levels

### Street Litter Pick-Up - Machine Operated

Machine operated street litter pick-up level of service ranges from 26 (Clarence Valley), to 48 (Noosa), to 119 (Ballina), to 365 (Byron, Douglas and Whitsunday), to 450 times per year (Gold Coast).

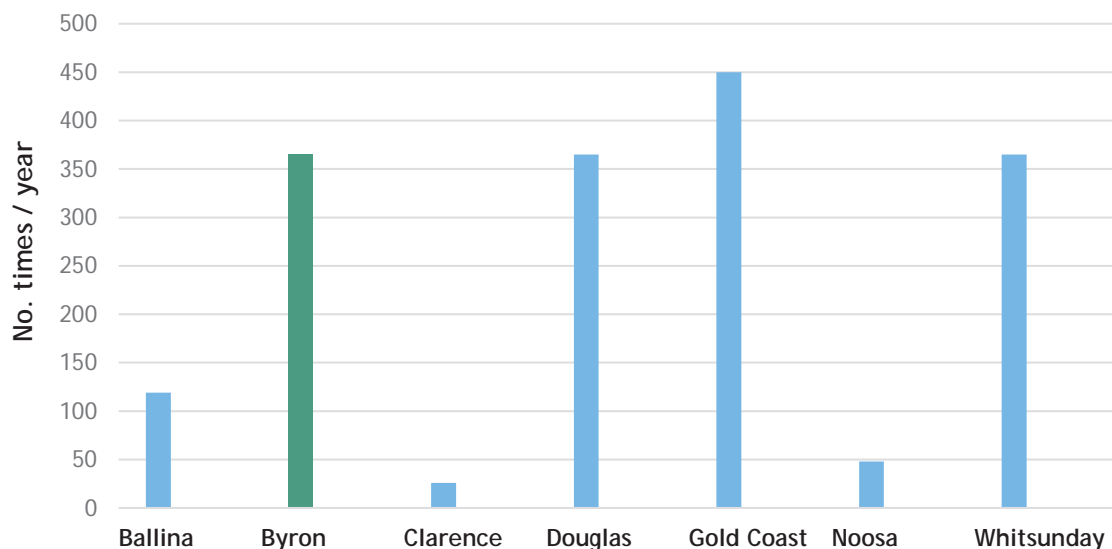


Figure 12. Street Litter Pick Up – Machine Operated Service Levels

### Toilet Maintenance - Self-Cleaning

Self-cleaning toilet maintenance level of service ranges from 365 (Douglas), to 450 times per year (Byron). The other LGAs do not undertake this service task.

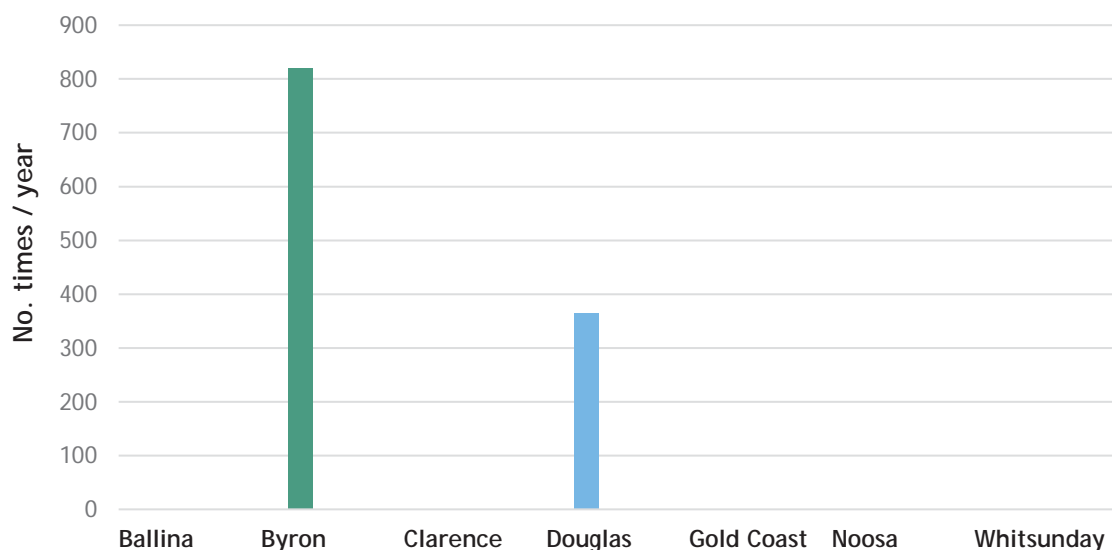
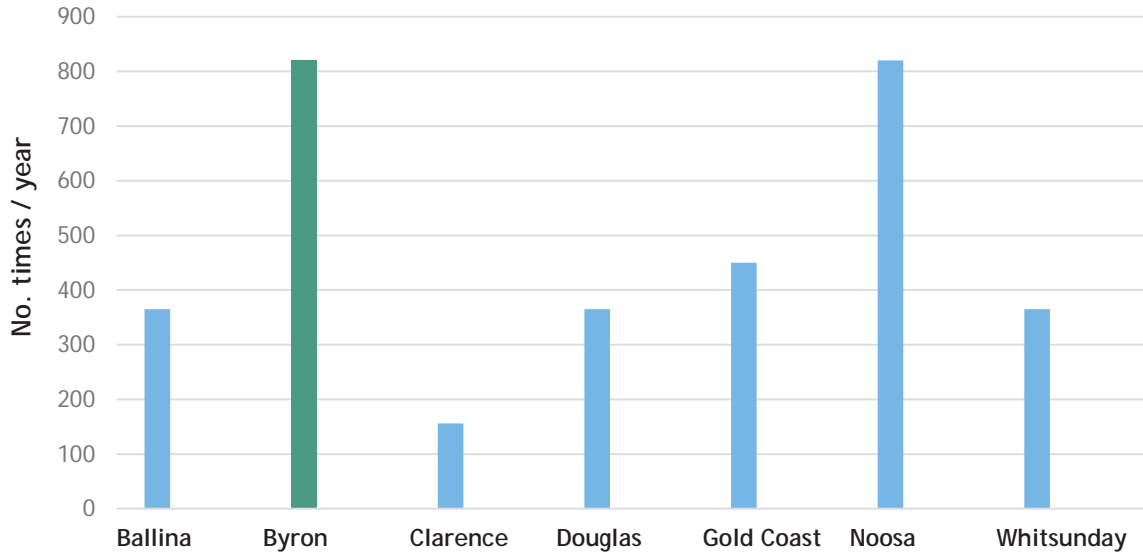


Figure 13. Toilet Maintenance - Self-Cleaning Service Levels

**Toilet Maintenance - Non Self-Cleaning**

Non self-cleaning toilet maintenance level of service ranges from 156 (Clarence Valley), to 365 (Ballina, Douglas and Whitsunday), to 450 (Gold Coast) to 820 times per year (Byron and Noosa).

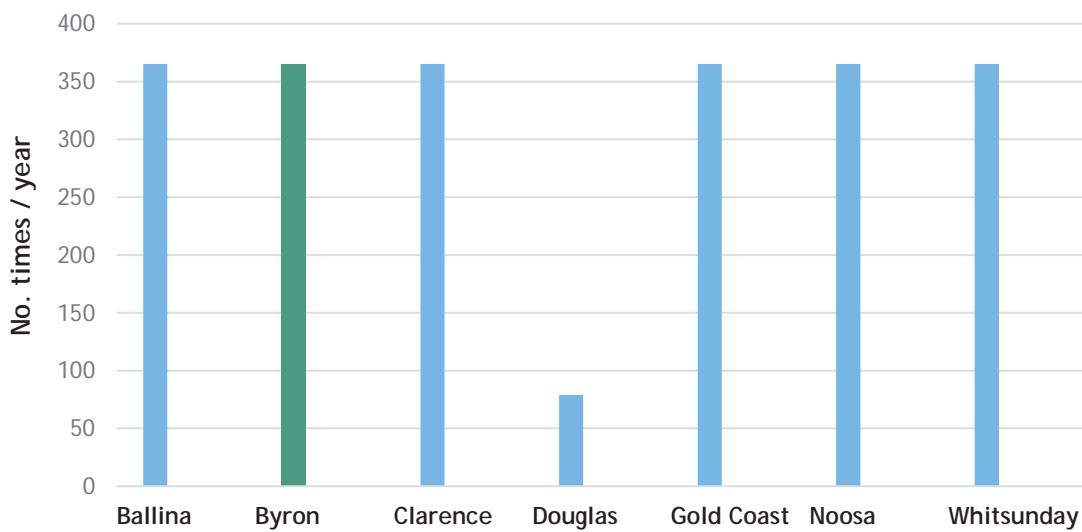


**Figure 14. Toilet Maintenance - Non Self-Cleaning Service Levels**

*Infrastructure Levels of Service*

**BBQ Cleaning**

BBQ cleaning level of service ranges from 79 (Clarence Valley), to 365 times per year (Ballina, Byron, Douglas, Gold Coast, Noosa, Whitsunday).



**Figure 15. BBQ Cleaning Service Levels**

### Drinking Fountain Cleaning

Drinking fountain cleaning level of service ranges from 2 (Clarence Valley, Noosa and Whitsunday), to 12 (Byron), to 52 (Douglas), to 365 times per year (Gold Coast).

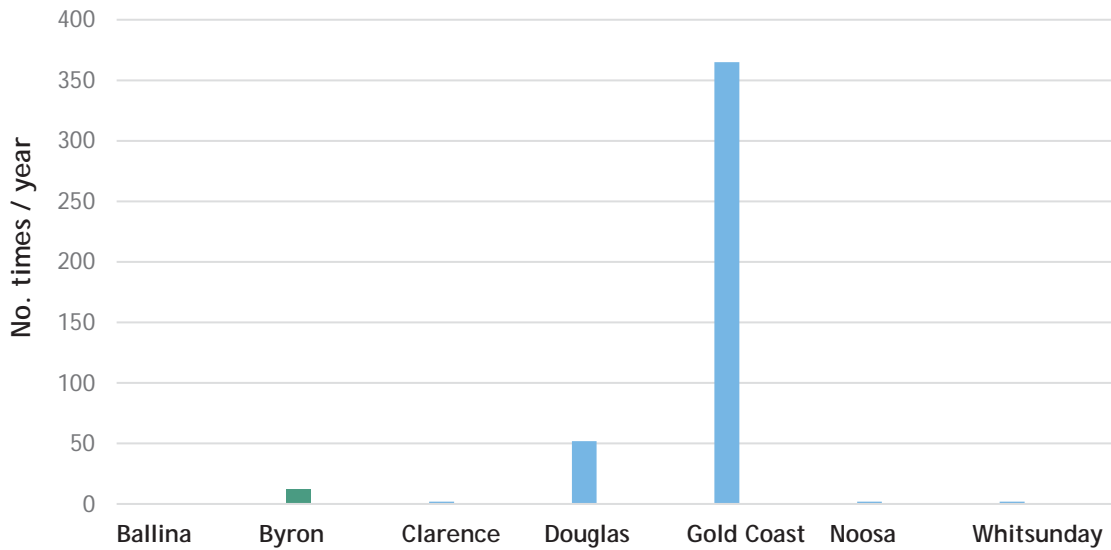


Figure 16. Drinking Fountain Cleaning Service Levels

### Outdoor Shower Cleaning

Outdoor shower cleaning level of service ranges from 2 (Clarence Valley), to 4 (Whitsunday), to 52 (Byron and Douglas), to 121 (Noosa), to 365 times per year (Gold Coast).

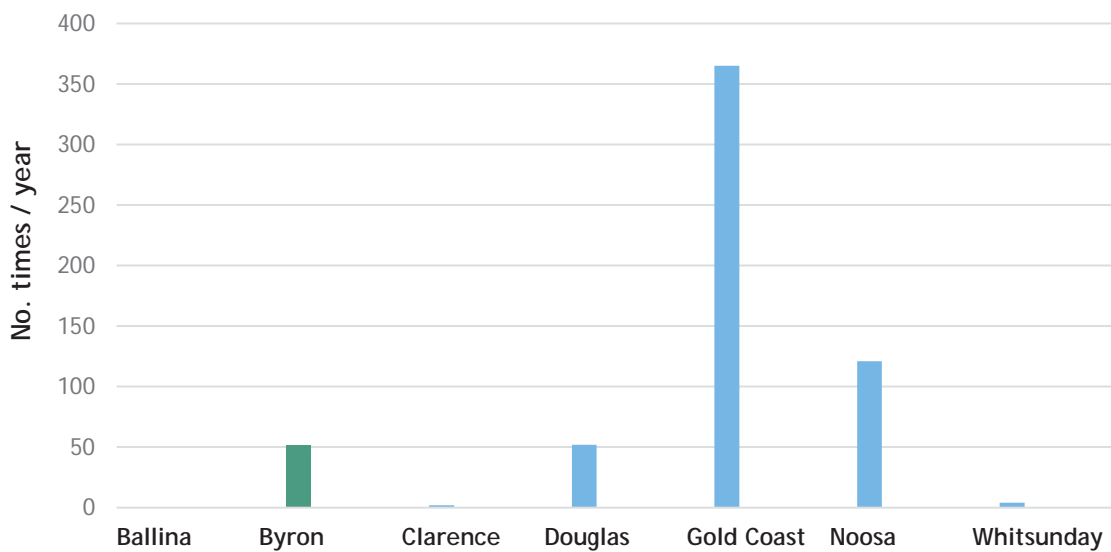


Figure 17. Outdoor Shower Cleaning Service Levels

**Park Path Cleaning**

Park path cleaning level of service ranges from As Requested (Noosa and Whitsunday), to 12 (Douglas), to 30 (Ballina), to 52 (Gold Coast), to 104 times per year (Byron).

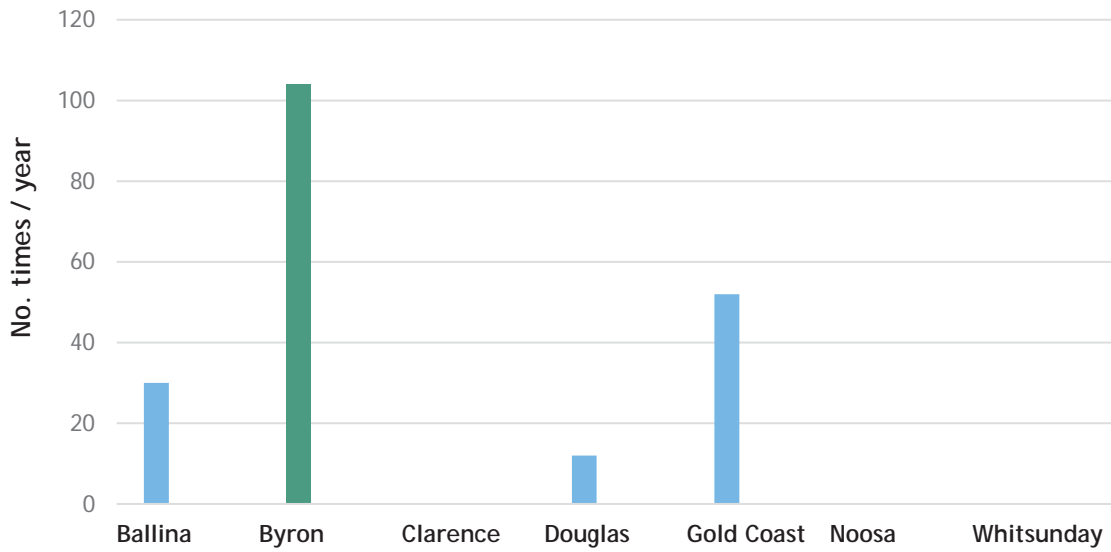


Figure 18. Park Path Cleaning Service Levels

**Playground Cleaning**

Playground cleaning level of service ranges from 2 (Whitsunday), to 4 (Clarence Valley), to 26 (Ballina), to 52 (Douglas and Noosa), to 104 (Byron), to 365 times per year (Gold Coast).

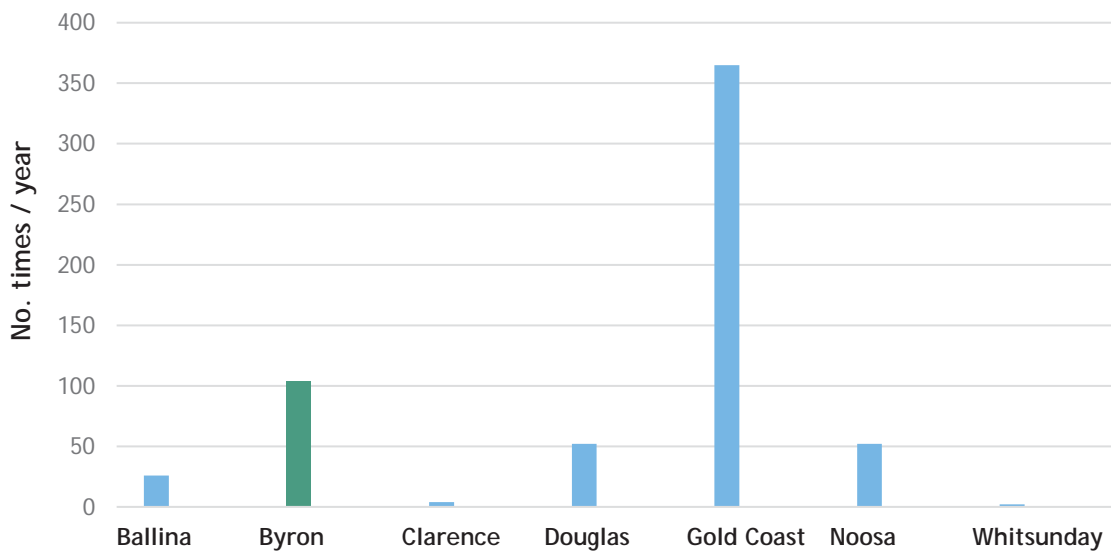


Figure 19. Playground Cleaning Service Levels

### Seats and Tables Cleaning

Seats and tables cleaning level of service ranges from 2 (Clarence Valley), to 12 (Byron), to 365 times per year (Ballina, Douglas, Gold Coast, Noosa and Whitsunday).

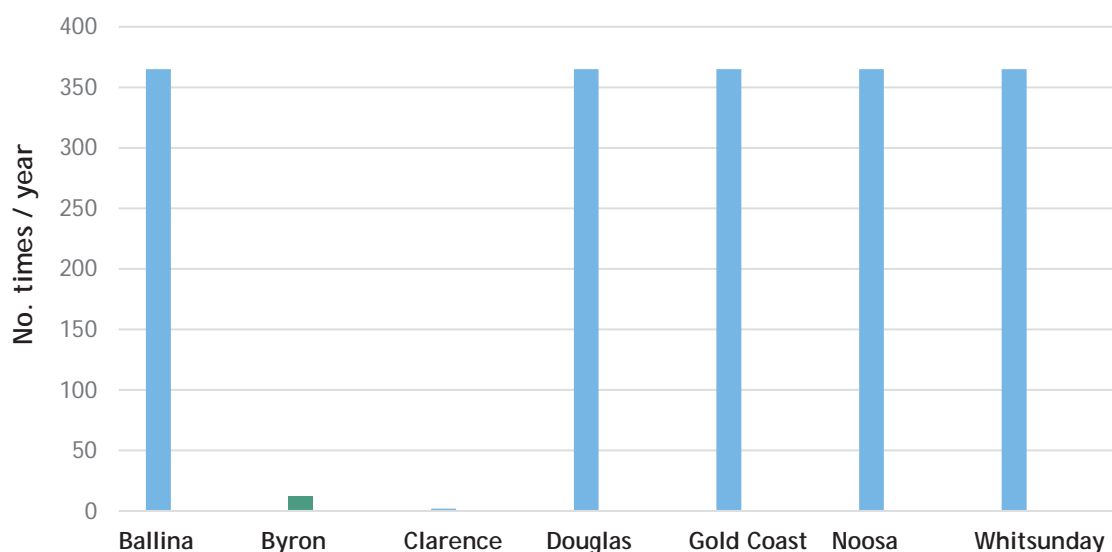


Figure 20. Seats and Tables Cleaning Service Levels

### Green Space

#### Lawn Raking

Lawn raking level of service ranges from 2 (Clarence Valley), to 12 (Gold Coast), to 39 (Ballina), to 40 times per year (Byron). Three LGAs (Douglas, Noosa and Whitsunday) do not undertake lawn raking maintenance tasks.

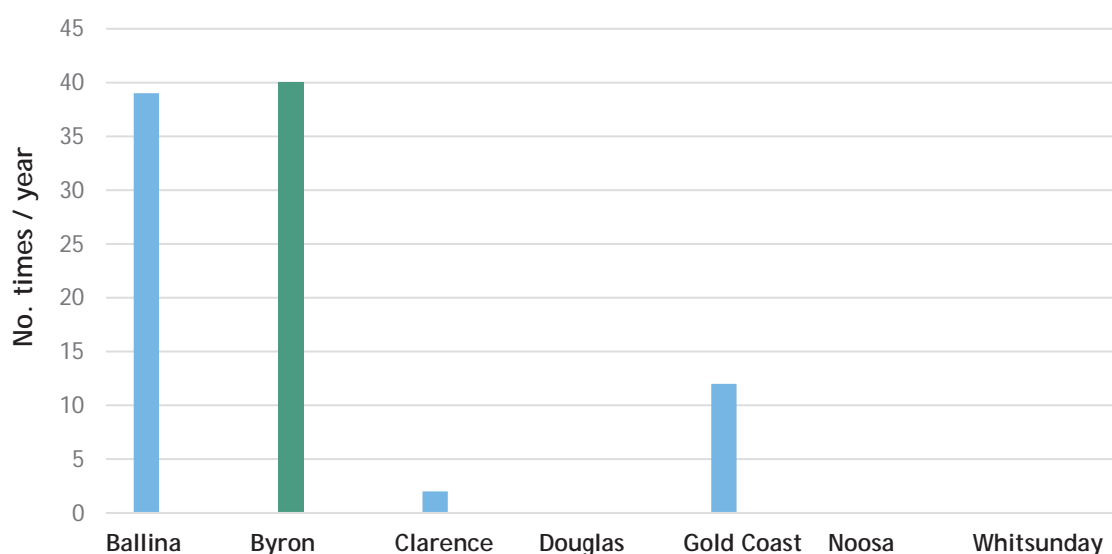


Figure 21. Lawn Raking Service Levels

### Mowing / Brush Cutting: Street Verge

Street verge mowing / brush cutting level of service ranges from 18 (Byron), to 22 (Clarence Valley), to 26 (Gold Coast), to 28 (Noosa), to 32 (Douglas), to 39 (Ballina), to 52 times per year (Whitsunday).

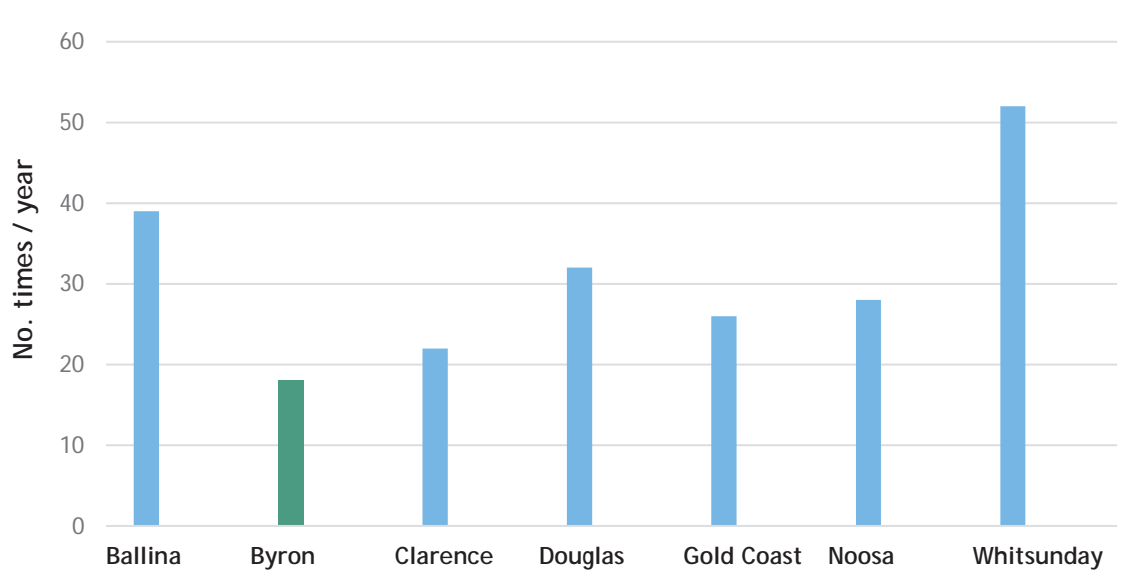


Figure 22. Mowing / Brush Cutting: Street Verge Service Levels

### Proactive Pruning: Park Palms

Proactive pruning of park palm trees level of service ranges from As Required (Gold Coast), to 2 (Douglas), to 3 (Byron), to 5 (Ballina), to 6 (Clarence Valley), to 11 (Noosa), to 12 times per year (Whitsunday).

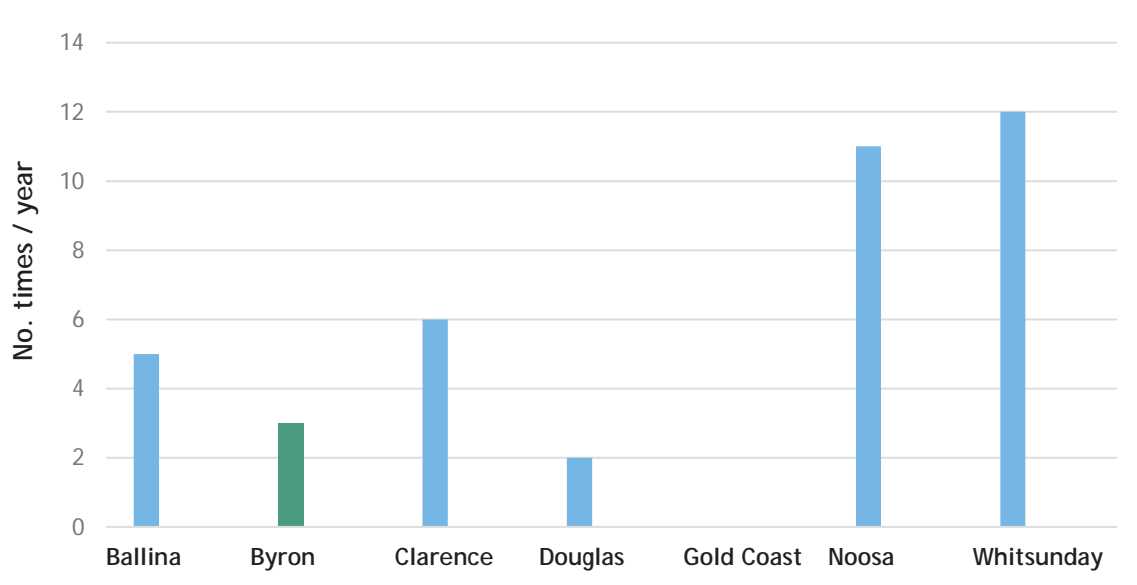
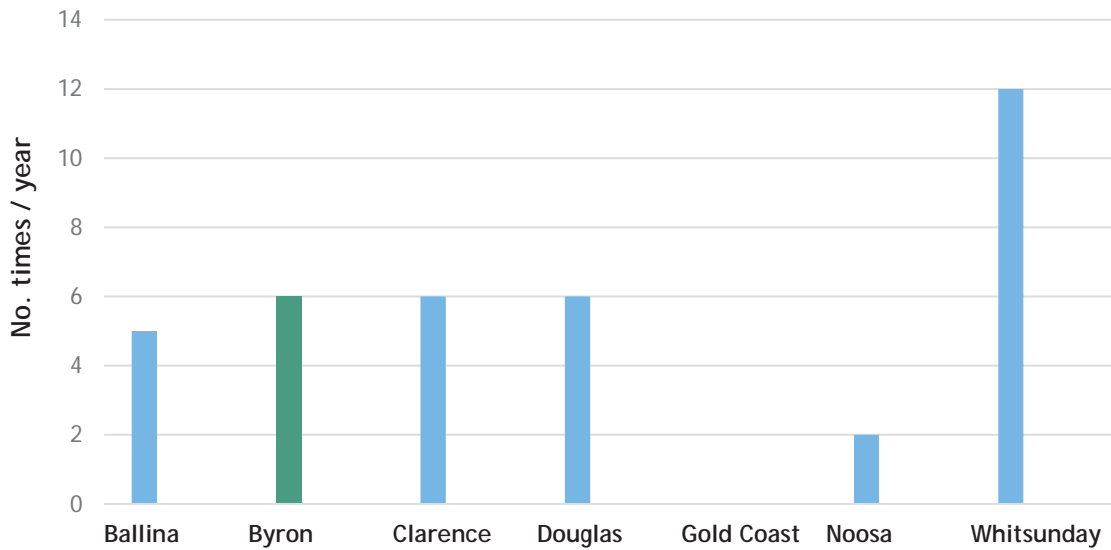


Figure 23. Proactive Pruning: Park Palms Service Levels

**Proactive Pruning – Park Shrubs**

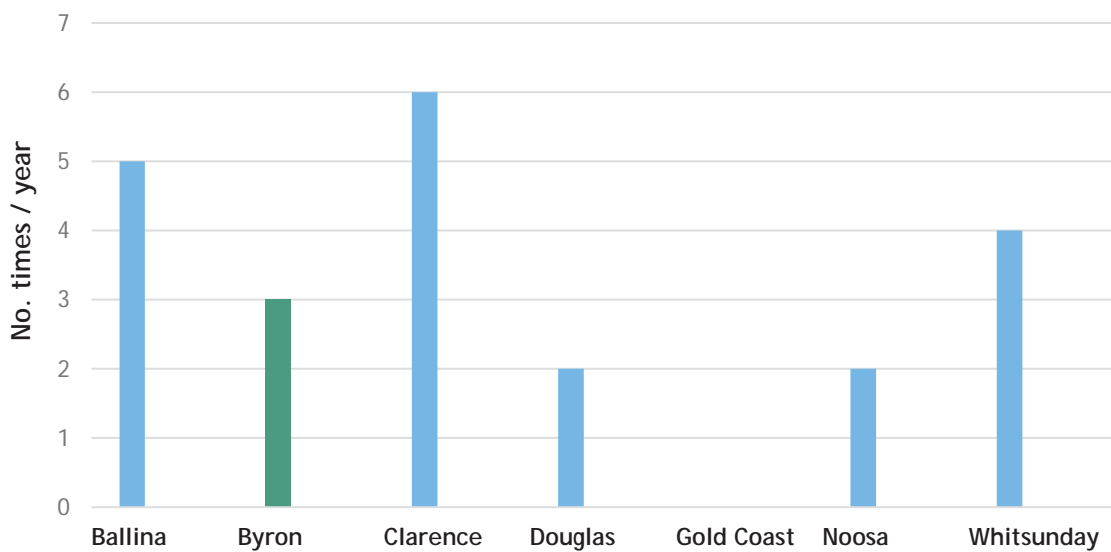
Proactive pruning of park shrubs level of service ranges from As Required (Gold Coast), to 2 (Noosa), to 5 (Ballina), to 6 (Byron, Clarence Valley and Douglas), to 12 times per year (Whitsunday).



**Figure 24. Proactive Pruning: Park Shrubs Service Levels**

**Proactive Pruning: Park Trees**

Proactive pruning of park trees level of service ranges from As Required (Gold Coast), to 2 (Douglas and Noosa), to 3 (Byron), to 4 (Whitsunday), to 5 (Ballina), to 6 times per year (Clarence Valley).

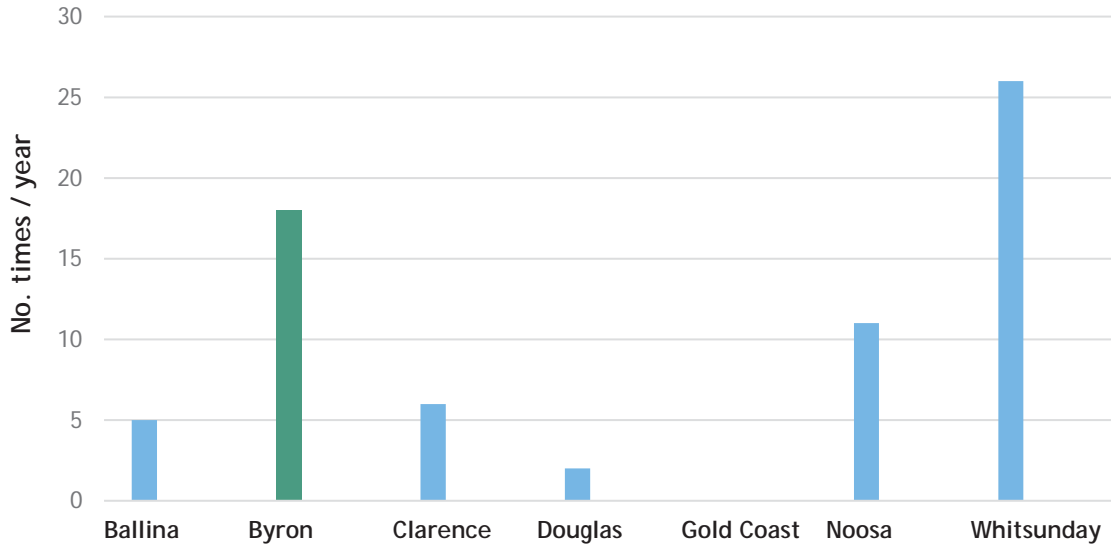


**Figure 25. Proactive Pruning: Park Trees Service Levels**



**Proactive Pruning: Street / Carpark Palms**

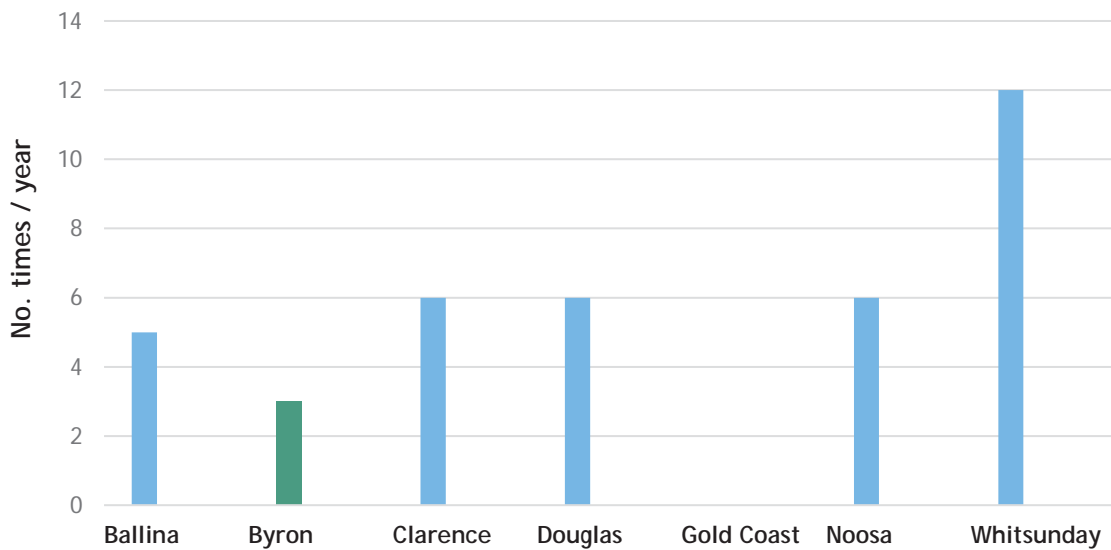
Proactive pruning of street and carpark palm trees level of service ranges from As Required (Gold Coast), to 2 (Douglas), to 5 (Ballina), to 6 (Clarence Valley), to 11 (Noosa), to 18 (Byron), to 26 times per year (Whitsunday).



**Figure 26. Proactive Pruning – Street / Carpark Palms Service Levels**

**Proactive Pruning: Street / Carpark Shrubs**

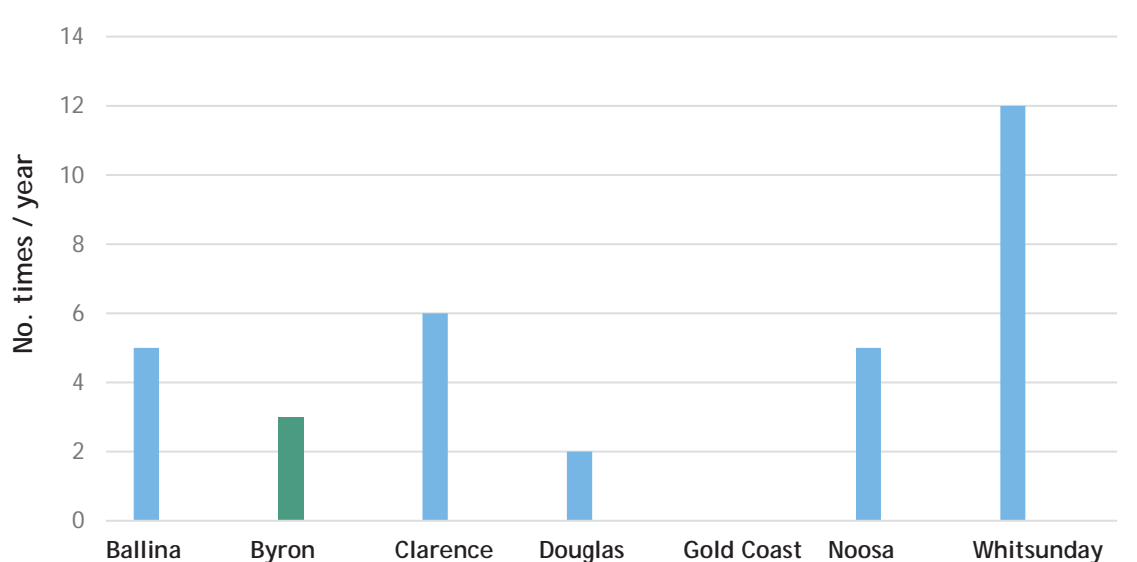
Proactive pruning of street and carpark shrubs level of service ranges from As Required (Gold Coast), to 3 (Byron), to 5 (Ballina), to 6 (Clarence Valley, Douglas and Noosa), to 12 times per year (Whitsunday).



**Figure 27. Proactive Pruning: Street / Carpark Shrubs Service Levels**

**Proactive Pruning: Street / Carpark Trees**

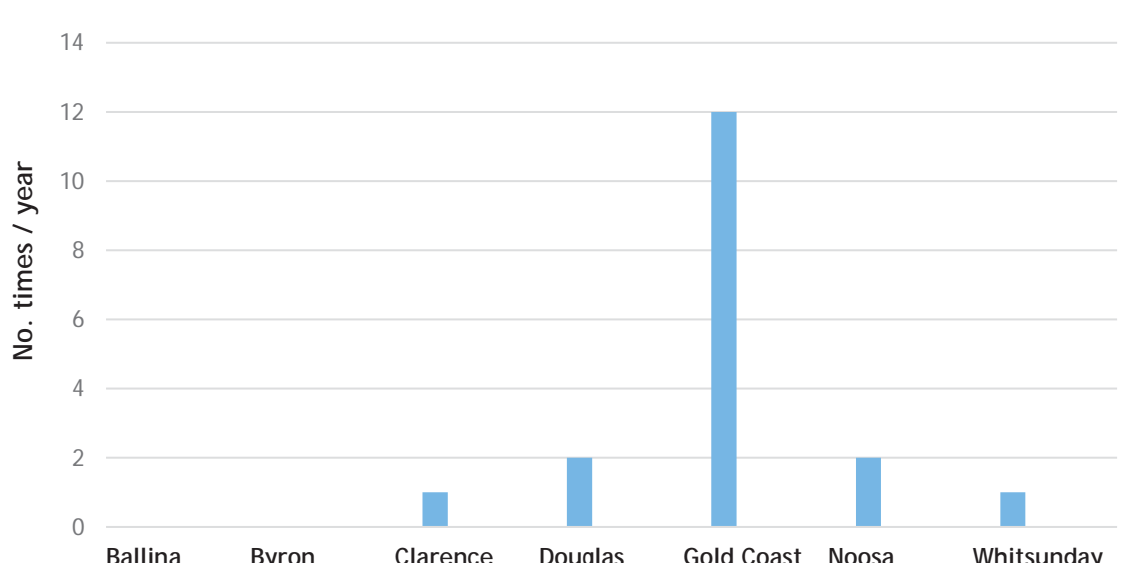
Proactive pruning of street and carpark trees level of service ranges from As Required (Gold Coast), to 2 (Douglas), to 3 (Byron), to 5 (Ballina and Noosa), to 6 (Clarence Valley), to 12 times per year (Whitsunday).



**Figure 28. Proactive Pruning: Street / Carpark Trees Service Levels**

**Weeding: Lawn - Herbicide**

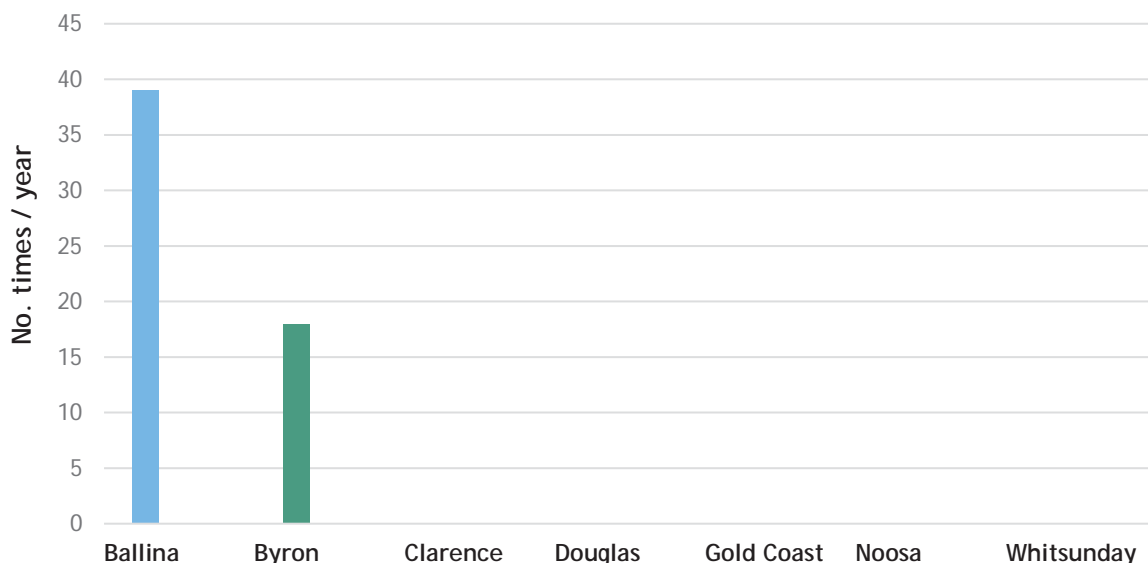
Byron Shire Council does not undertake lawn weeding by herbicide. Lawn weeding by herbicide level of service ranges from As Required (Ballina), to 1 (Clarence Valley and Whitsunday), to 2 (Douglas and Noosa), to 12 times per year (Gold Coast).



**Figure 29. Weeding: Lawn - Herbicide Service Levels**

**Weeding: Lawn - Manual**

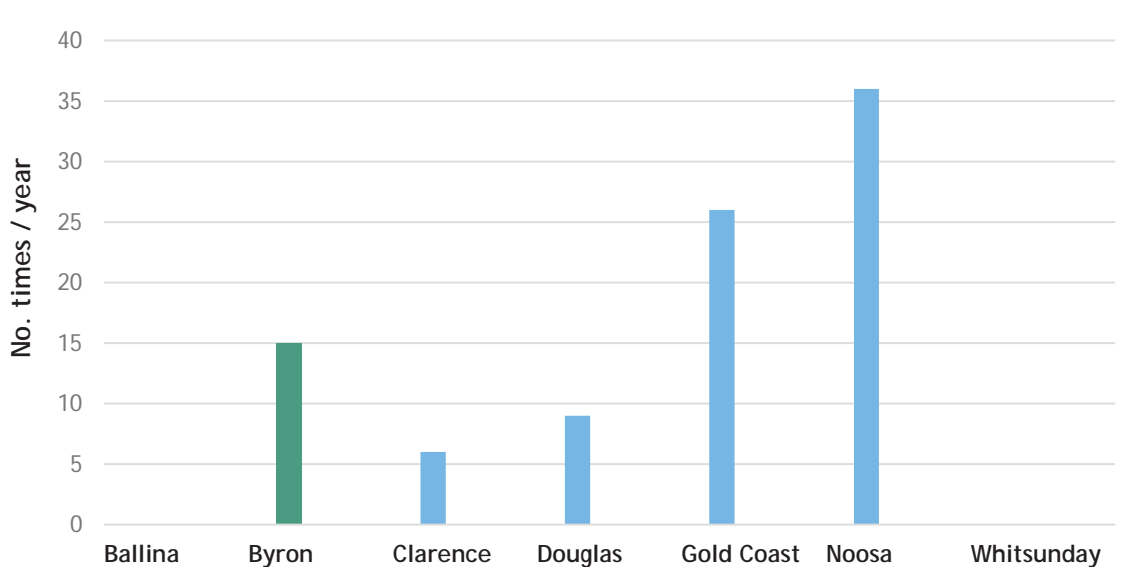
Only Byron and Ballina undertake manual lawn weeding. Byron’s lawn weeding by manual labour level of service is 18 times per year and Ballina is 39 times per year



**Figure 30. Weeding: Lawn - Manual Service Levels**

**Weeding: Street Garden Bed and Median Strip - Herbicide**

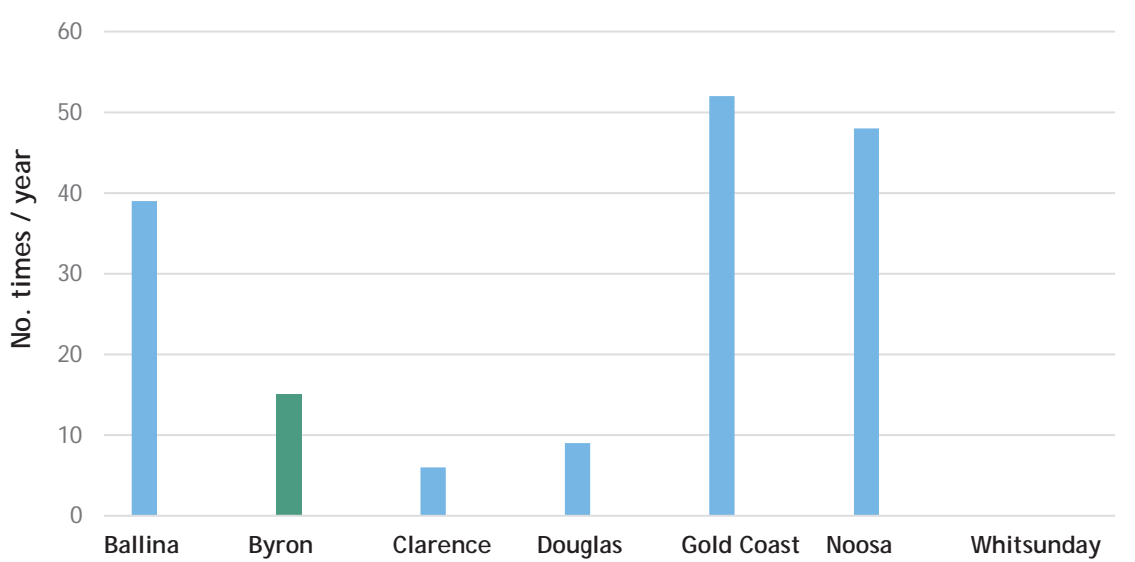
Street garden bed and median strip weeding by herbicide level of service ranges from As Required (Ballina and Whitsunday), to 5 (Clarence Valley), to 9 (Douglas), to 15 (Byron), to 26 (Gold Coast) to 36 times per year (Noosa).



**Figure 31. Street Garden Bed and Median Strip Weeding - Herbicide Service Levels**

**Weeding: Street Garden Bed and Median Strip - Manual**

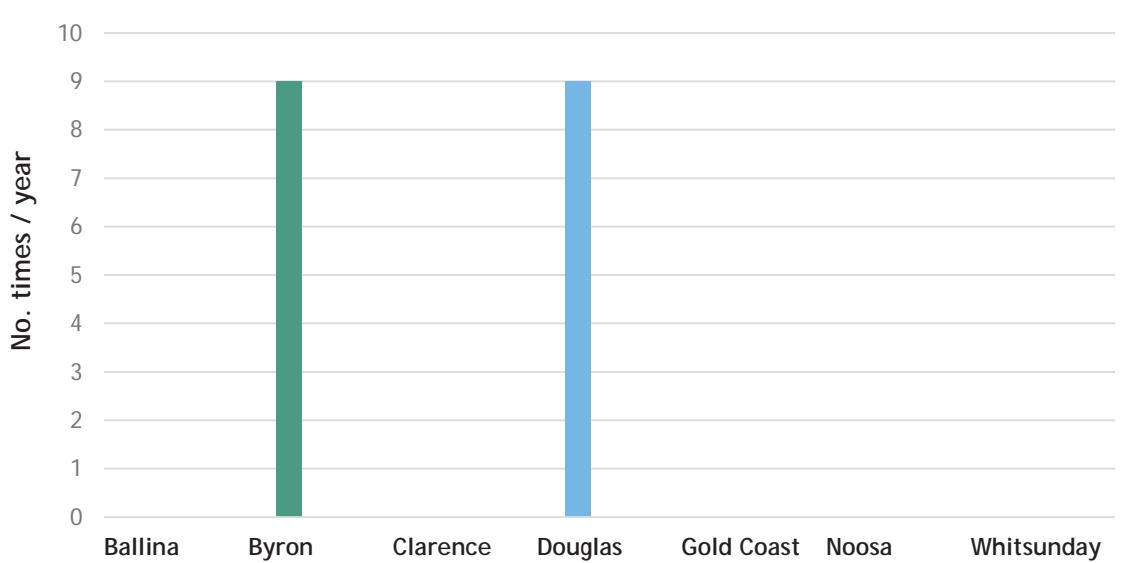
Street garden bed and median strip weeding by manual labour level of service ranges from As Required (Whitsunday), to 6 (Clarence Valley), to 9 (Douglas), to 15 (Byron), to 39 (Ballina), to 48 (Noosa) to 52 times per year (Gold Coast).



**Figure 32. Weeding: Street Garden Bed and Median Strip - Manual Service Levels**

**Weeding: Street Garden Bed and Median Strip - Steam**

Only two LGAs undertake street garden bed and median strip weeding by steam. The level of service is 9 times per year for Byron and Douglas.



**Figure 33. Weeding: Street Garden Bed and Median Strip - Steam Service Levels**

## Mode of Service Provision

Like many other LGAs around Australia, the benchmarking partner group has tended to keep the higher profile horticultural maintenance in-house (such as proactive shrub pruning, weeding, planting) rather than contracting out this service.

Many LGAs are of the opinion that the flexibility and skill level with trained in-house staff enables a higher quality of service for these open space maintenance tasks.

Contractors can improve efficiency for regular, programmed maintenance activities, such as mowing and cleaning activities. However, contracted services require documented, clear specifications regarding the works to be undertaken, regular supervision and monitoring.

Anecdotal evidence also suggests that local contractors (if available) are preferred over nationally based contracting services.

The number of services contracted out ranged from 0 (Ballina), to 1 (Whitsunday), to 2 (Clarence Valley), to 6 (Byron), to 8 (Douglas), to 9 (Gold Coast), to 12 (Noosa).

Services most likely to be contracted out are street bin emptying (6 LGAs), beach cleaning (3 LGAs), and lawn weeding by herbicide (3 LGAs).

### *Ballina Shire Council*

**Ballina Shire Council** sources all service provision in-house.

### *Byron Shire Council*

**Byron Shire Council** utilises contractors for beach cleaning, manual street litter pick-up, street bin emptying, toilet maintenance, BBQ cleaning and drinking fountain cleaning.

### *Clarence Valley Council*

**Clarence Valley Council** utilises contractors for beach cleaning and street bin emptying.

### *Douglas Shire Council*

**Douglas Shire Council** utilises contractors for street bin emptying, park path cleaning, playground cleaning, proactive pruning of park palms, proactive pruning of park trees, proactive pruning of street/carpark palms, proactive pruning of street/carpark trees, lawn weeding by herbicide.

### *City of Gold Coast*

The **City of Gold Coast** utilises contractors for machine operated street litter pick-up, street bin emptying, planting of street garden be/median strip, proactive pruning of park palms, proactive pruning of park trees, proactive pruning of street/carpark palms, proactive pruning of street/carpark trees, lawn weeding by herbicide, and street garden bed/median strip weeding by herbicide.

### *Noosa Council*

**Noosa Council** utilises contractors for beach access points maintenance, beach cleaning, manual street litter pick-up, machine operated litter pick-up, street bin emptying, toilet maintenance, BBQ cleaning, outdoor shower cleaning, mowing / brush cutting of street verges, proactive park palm pruning, proactive street/carpark palm pruning, and lawn weeding by herbicide.

### *Whitsunday Regional Council*

**Whitsunday Regional Council** utilises contractors only for street bin emptying.

Table 8. Ballina: Open Space Maintenance Service Levels, Mode of Delivery

Item	Yearly Frequency	In-house/ Contractor	Comments
Beach access points	A/R	In-house	Maintenance as determined by inspection.
Beach cleaning	A/R <sup>14</sup>	In-house	As needed, ranger or public notification.
Street litter pick-up (including blower) - manual	119	In-house	
Street litter pick-up - machine operated	119	In-house	
Street bin emptying	313	In-house	
Toilet maintenance - self-cleaning	n/a	n/a	
Toilet maintenance - non self-cleaning	365	In-house	Additional provided at peak times as needed.
BBQ cleaning	365	In-house	
Drinking fountain cleaning	n/a	n/a	
Outdoor shower cleaning	n/a	n/a	
Park path cleaning	30	In-house	Reactive to weather events and requests.
Playground cleaning	26	In-house	Min. weekly visual inspection. Daily inspections at some key locations.
Seats & tables cleaning	365	In-house	
Lawn raking	39	In-house	Seasonal and Venue dependent.
Mowing / brush cutting: street verge	39	In-house	Seasonal and Venue dependent.
Planting: street garden bed & median strip	A/R	In-house	A/R or project driven.
Proactive pruning: park palms	5	In-house	
Proactive pruning: park shrubs	5	In-house	
Proactive pruning: park trees	5	In-house	
Proactive pruning; street / carpark palms	5	In-house	
Proactive pruning: street / carpark shrubs	5	In-house	
Proactive pruning: street / carpark trees	5	In-house	
Watering - manual hand	A/R	In-house	As determined by staff.
Watering: automated	A/R	In-house	Site and weather dependent. Inspected fortnightly.
Weeding: lawn - herbicide	A/R	In-house	Herbicide usage as little as possible. Determined based on need, weed species and suitable weather conditions.
Weeding: lawn - manual	39	In-house	Seasonal and Venue dependent.
Weeding: street garden bed & median strip - herbicide	A/R	In-house	Herbicide usage as little as possible. Determined based on need, weed species and suitable weather conditions.
Weeding: Street garden bed & median strip - manual	39	In-house	Seasonal and Venue dependent.
Weeding: Street garden bed & median strip - steam	n/a	n/a	

<sup>14</sup> As required.



**Table 9. Clarence Valley: Open Space Maintenance Service Levels, Mode of Delivery**

Item	Yearly Frequency	In-house/ Contractor	Comments
Beach access points	A/R	In-house	Reactive Maintenance
Beach cleaning	A/R <sup>15</sup>	Contractor	Reactive maintenance – Flood / Storm events
Street litter pick-up (including blower) - manual	52	In-house	High visibility areas
Street litter pick-up - machine operated	26	In-house	Street sweeping – Town Centres
Street bin emptying	119	Both	In line with contract services
Toilet maintenance - self-cleaning	n/a	n/a	Service not provided
Toilet maintenance - non self-cleaning	156	In-house	General cleaning of toilets. General checking of toilets and replacement of consumables at higher frequency
BBQ cleaning	79	In-house	Cleaning of BBQs are undertaken by the users prior to use. Council cleaning ensures, longevity of the equipment as it removes stains, soiling, and fat/grime accumulations
Drinking fountain cleaning	2	In-house	6 inspection frequency per annum. Reactive maintenance A/R. Clean all water emitters (no algae, dirt, rust or calcium); clean body and drainage trays (no graffiti, algae, dirt, rust or calcium), replace of filters
Outdoor shower cleaning	2	In-house	6 inspection frequency per annum. Reactive maintenance A/R. Clean all water emitters (no algae, dirt, rust or calcium); clean body and drainage trays (no graffiti, algae, dirt, rust or calcium)
Park path cleaning	A/R	In-house	Reactive maintenance
Playground cleaning	4	In-house	52 routine inspections / year which include litter removal. Playground equipment cleaning A/R and prior to December school holiday. Playground equipment to be washed down, all mould, bird dropping, split food & drinks removed
Seats & tables cleaning	2	In-house	2 inspection frequency per annum. Reactive maintenance A/R. Inspect for secure fixture of timber battens on seats / table; inspect for secure fixing to slab / footing; inspect legs for corrosion – no structural rust allowable; check battens for rot / splitting; clean with suitable products no dirt, graffiti, rust
Lawn raking	2		Thatch removal
Mowing / brush cutting: street verge	22	In-house	Low growth season: 4 interventions; High growth season: 9 interventions
Planting: street garden bed & median strip	A/R	In-house	General replanting of perennials limited to minimum of 6yrs. General replanting of annuals to 2 street garden bed locations during 3 community events
Proactive pruning: park palms	6	In-house	General maintenance, includes hedging, pruning, and weed removal
Proactive pruning: park shrubs	6	In-house	General maintenance, includes hedging, pruning, and weed removal
Proactive pruning: park trees	6	In-house	General maintenance, includes hedging, pruning, and weed removal
Proactive pruning; street / carpark palms	6	In-house	General maintenance, includes hedging, pruning, and weed removal

<sup>15</sup> As required.

## INDUSTRY STANDARDS

Item	Yearly Frequency	In-house/ Contractor	Comments
<b>Proactive pruning: street / carpark shrubs</b>	6	In-house	General maintenance, includes hedging, pruning, and weed removal
<b>Proactive pruning: street / carpark trees</b>	6	In-house	General maintenance, includes hedging, pruning, and weed removal
<b>Watering: automated</b>	A/R	In-house	Selected regional level locations, general irrigation to garden beds to maintain season flower growth / perennials growth
<b>Watering - manual hand</b>	A/R	In-house	Reactive watering to 'water in' street trees; maintain perennial plantings during 'extreme' dry periods to prevent water stress and loss of plant material
<b>Weeding: lawn - herbicide</b>	6	In-house	General maintenance, includes hedging, pruning, and weed removal
<b>Weeding: lawn - manual</b>	n/a	n/a	Service not provided
<b>Weeding: street garden bed &amp; median strip - herbicide</b>	6	In-house	General maintenance, includes hedging, pruning, and weed removal
<b>Weeding: Street garden bed &amp; median strip - steam</b>	1	In-house	Annual Bindi / broadleaf control program
<b>Weeding: Street garden bed &amp; median strip - manual</b>	n/a	n/a	Service not provided

Table 10. Douglas: Open Space Maintenance Service Levels, Mode of Delivery

Item	Yearly Frequency	In-house/ Contractor	Comments
Douglas over the years has been separated into 2 seasons. Dry season (High Season, May – Oct) Wet Season (Low Season, Nov – April). More recently the tourism numbers have been higher during the summer holidays which is our wet season and the months of February/March are the only months considered Low Season. With this in mind Douglas Shire Council endeavours to program the disruptive type works in the Macrossan St During February/March including Pressure Washing Footpaths and proactive Tree Maintenance.			
Beach access points	52	In-house	
Beach cleaning	54	In-house	Litter only, do not rake beach or remove natural debris.
Street litter pick-up (including blower) - manual	365	In-house	Blowers and manual pick-up.
Street litter pick-up - machine operated	365	In-house	Street sweeper truck.
Street bin emptying	365	Contractor	
Toilet maintenance - self-cleaning	365	In-house	
Toilet maintenance - non self-cleaning	365	In-house	
BBQ cleaning	365	In-house	Daily A/R.
Drinking fountain cleaning	52	In-house	
Outdoor shower cleaning	52	In-house	
Park path cleaning	12	Both	Pressure washed by contractor's A/R.
Playground cleaning	52	Both	
Seats & tables cleaning	365	In-house	Visual inspection daily and A/R.
Lawn raking	n/a	n/a	
Mowing / brush cutting: street verge	32	In-house	Weekly wet season, Monthly dry season.
Planting: street garden bed & median strip	9	In-house	As above.
Proactive pruning: park palms	2	Contractor	As per streets.
Proactive pruning: park shrubs	6	In-house	As per streets.
Proactive pruning: park trees	2	Both	As per streets.
Proactive pruning; street / carpark palms	2	Contractor	Coconuts denuded every 6 months 1700 in total in areas frequented by public, Oil Palms dead frond removal annually. Others A/R.
Proactive pruning: street / carpark shrubs	6	In-house	In high profile areas and A/R in other areas.
Proactive pruning: street / carpark trees	2	Both	In high profile areas plus any ad hoc inspections that identify dangerous branches/trees in between regular trims. Other areas as identified or required.
Watering: automated	A/R	In-house	A/R during the dry season.
Watering - manual hand	A/R <sup>16</sup>	In-house	A/R during times of water restrictions.
Weeding: lawn - herbicide	2	Contractor	Sportsfields only.
Weeding: lawn - manual	n/a	n/a	
Weeding: street garden bed & median strip - herbicide	9	In-house	Dependant on growth conditions eg less frequency in dry season.
Weeding: Street garden bed & median strip - manual	9	In-house	As above.
Weeding: Street garden bed & median strip - steam	9	In-house	As above.

<sup>16</sup> As required.

Table 11. Gold Coast: Open Space Maintenance Service Levels, Mode of Delivery

Item	Yearly Frequency	In-house/ Contractor	Comments
Beach access points	365	In-house	
Beach cleaning	365	In-house	All foreshore beaches cleaned on daily basis.
Street litter pick-up (including blower) - manual	450	In-house	
Street litter pick-up - machine operated	450	Both	
Street bin emptying	450	Both	
Toilet maintenance - self-cleaning	n/a	n/a	
Toilet maintenance - non self-cleaning	450	In-house	
BBQ cleaning	365	In-house	
Drinking fountain cleaning	365	In-house	
Outdoor shower cleaning	365	In-house	
Park path cleaning	52	In-house	
Playground cleaning	365	In-house	
Seats & tables cleaning	365	In-house	
Lawn raking	12	In-house	
Mowing / brush cutting: street verge	26	In-house	Currently changing from contract back to in-house on all high profile foreshore areas.
Planting: street garden bed & median strip	A/R <sup>17</sup>	Both	
Proactive pruning: park palms	A/R	Both	
Proactive pruning: park shrubs	A/R	In-house	
Proactive pruning: park trees	A/R	Both	
Proactive pruning; street / carpark palms	A/R	Both	
Proactive pruning: street / carpark shrubs	A/R	In-house	
Proactive pruning: street / carpark trees	A/R	Both	
Watering: automated	A/R	In-house	
Watering - manual hand	A/R	In-house	
Weeding: lawn - herbicide	12	Contract	
Weeding: lawn - manual	n/a	n/a	
Weeding: street garden bed & median strip - herbicide	26	Contract	
Weeding: Street garden bed & median strip - manual	52	In-house	Onsite crews identify and pull out A/R.
Weeding: Street garden bed & median strip - steam	n/a	n/a	

<sup>17</sup> As required.

Table 12. Noosa: Open Space Maintenance Service Levels, Mode of Delivery

Item	Yearly Frequency	In-house/ Contractor	Comments
Beach access points	A/R <sup>18</sup>	Contractor	Reactive Maintenance
Beach cleaning	365	Contractor	Incorporated into cleaning contract
Street litter pick-up (including blower) - manual	365	Contractor	Incorporated into cleaning contract
Street litter pick-up - machine operated	48	Contractor	Street sweeping – Town Centres - once per week
Street bin emptying	450	Contractor	In line with contract services - not managed by Parks & Gardens
Toilet maintenance - self-cleaning			NA – Service not provided
Toilet maintenance - non self-cleaning	820	Contractor	Incorporated into cleaning contract
BBQ cleaning	365	Contractor	Incorporated into cleaning contract
Drinking fountain cleaning	2	In-house	Filters changed on bottle filling stations twice a year, all other servicing is reactive only.
Outdoor shower cleaning	121	Contractor	Two beach showers with high usage are cleaned and sand removed three times a week on average
Park path cleaning	A/R	In-house	Reactive maintenance - done infrequently
Playground cleaning	52	In-house	52 routine inspections / year which include litter removal as well as safety checks on equipment and softfall
Seats & tables cleaning	12	In-house	2 inspection frequency per annum, included within comprehensive park inspections twice yearly. Reactive maintenance A/R including cleaning of grime, bird droppings and graffiti probably averaging once per month
Lawn raking			NA – Service not provided
Mowing / brush cutting: street verge	28	Contractor	Low growth season: 4 cuts; Medium growth season: 8 cuts; High growth season: 16 cuts
Planting: street garden bed & median strip	A/R	In-house	General replanting of perennials on A/R basis - renovations or infill replacement of dead specimens
Proactive pruning: park palms	11	Contractor	Pruning of Coconut Palms in vicinity of pathways along foreshore park for risk management (nuts and fronds)
Proactive pruning: park shrubs	2	In-house	General maintenance includes hedging, pruning, and weed removal. Not done as frequently as roadside gardens as parks vegetation is deliberately very low maintenance.
Proactive pruning: park trees	2	In-house	General maintenance, includes dead wooding and lift pruning where required.
Proactive pruning; street / carpark palms	11	Contractor	Pruning of Coconut Palms in vicinity of beach boardwalk for risk management (nuts and fronds)
Proactive pruning: street / carpark shrubs	6	In-house	General maintenance, includes hedging, pruning, and weed removal
Proactive pruning: street / carpark trees	5	In-house	General maintenance, includes lift pruning for visibility
Watering: automated	A/R	In-house	Irrigation to garden beds to maintain seasonal plant growth and turf in some areas - some sections of irrigation are in need of repair/replacement
Watering - manual hand	A/R	In-house	Reactive watering to 'water in' street trees; maintain perennial plantings during 'extreme' dry

<sup>18</sup> As required.

## INDUSTRY STANDARDS

Item	Yearly Frequency	In-house/ Contractor	Comments
			periods to prevent water stress and loss of plant material
<b>Weeding: lawn - herbicide</b>	2	Contractor	Annual Bindi / broadleaf control program - twice yearly
<b>Weeding: lawn - manual</b>	n/a	n/a	Service not provided
<b>Weeding: street garden bed &amp; median strip - herbicide</b>	36	In-house	General maintenance, includes hedging, pruning, and weed removal - we have recently reduced our herbicide spraying due to customer complaints which is still being resolved
<b>Weeding: Street garden bed &amp; median strip - manual</b>	48	In-house	General maintenance, includes hedging, pruning, and weed removal, weed removal would be undertaken on average once per week in these areas
<b>Weeding: Street garden bed &amp; median strip - steam</b>	n/a	n/a	Service not provided

Table 13. Whitsundays: Open Space Maintenance Service Levels, Mode of Delivery

Item	Yearly Frequency	In-house/ Contractor	Comments
Beach access points	A/R <sup>19</sup>		
Beach cleaning	4		Reactive maintenance – flood / storm events.
Street litter pick-up (including blower) - manual	365	In-house	Main Street of each town daily.
Street litter pick-up - machine operated	365	In-house	Street sweeping done daily in main streets of each town. Pavement sweeper cleans Main Street pavements weekly.
Street bin emptying	365	Contractor	
Toilet maintenance - self-cleaning	n/a	n/a	Service not provided.
Toilet maintenance - non self-cleaning	365	In-house	General cleaning of amenities & replenishment of consumables (Under Property & Facilities Dept).
BBQ cleaning	365	In-house	Done daily from 6.30am to 12pm, Asset ID stickers on BBQ & customer service number for any defects.
Drinking fountain cleaning	2	In-house	Reactive maintenance A/R.
Outdoor shower cleaning	4	In-house	Inspected daily, 4 x full cleans of emitters, tiles and concrete floors.
Park path cleaning	A/R	In-house	Reactive maintenance A/R.
Playground cleaning	2	In-house	Weekly visual inspections, 12 full monthly audits, Wash down twice a year all playground equipment.
Seats & tables cleaning	365	In-house	Daily inspection, table & chair cleaning, 4 major cleans a year with gernys, Gerny concrete slab also & shelter. Inspect for defects.
Lawn raking	n/a	n/a	
Mowing / brush cutting: street verge	52	In-house	Brush Cutting gets done once mower has mowed park. LOS determine frequency.
Planting: street garden bed & median strip	A/R	In-house	A/R renewal of garden beds are determined by age & plant health.
Proactive pruning: park palms	12	In-house	Removal of palm fronds or seed pods, A/R, Coconut schedule to de-nutt twice a year.
Proactive pruning: park shrubs	12	In-house	Monthly hedging of shrubs.
Proactive pruning: park trees	4	In-house	Visual inspections weekly, 4 times a year lift trees that have any low protruding branches.
Proactive pruning; street / carpark palms	26	In-house	Removal of palm fronds or seed pods, A/R, Coconut schedule to de-nut twice a year.
Proactive pruning: street / carpark shrubs	12	In-house	Monthly hedging of shrubs.
Proactive pruning: street / carpark trees	12	In-house	Visual inspections weekly, 4 times a year lift trees that have any low protruding branches.
Watering: automated	A/R	In-house	Audits of Irrigation systems done monthly, Irrigation systems run depending on weather.
Watering - manual hand	A/R	In-house	Reactive watering for street trees.
Weeding: lawn - herbicide	1	In-house	Annual Bindi / broadleaf control program.
Weeding: lawn - manual	n/a	n/a	
Weeding: street garden bed & median strip - herbicide	A/R	In-house	A/R, Minimal herbicide spraying, usually for garden beds only, drains are slope mowed.
Weeding: Street garden bed & median strip - manual	A/R	In-house	Manual weeding if weeds get to certain height.
Weeding: Street garden bed & median strip - steam	n/a	n/a	Service not provided.

<sup>19</sup> As required.



## Funding Sources

The majority of funding for open space maintenance of high profile tourist precincts is sourced from general rates.

Four LGAs source funds for open space maintenance in high profile tourist precincts from general rates only: Ballina Shire Council, Clarence Valley Council, Douglas Shire Council and Whitsunday Regional Council.

Byron Shire Council and City of Gold Coast utilise parking fees to fund open space maintenance in high profile tourist precincts.

Noosa Council obtains funds from a business levy to fund open space maintenance in high profile tourist precincts. Whilst Byron Shire Council obtains funds from a business levy, this is not utilised for streetscape beautification or maintenance within the Township.

**Table 14. Funding Sources for High Profile Tourist Area Open Space Maintenance**

Item	Yes/No	Item	Yes/No
<b>Ballina Shire Council (NSW)</b>		<b>Byron Shire Council (NSW)</b>	
General Rates	Yes	General Rates	Yes
Business Levy	No	Business Levy	No
Parking Fees	No	<b>Parking Fees</b>	<b>Yes</b>
Voluntary Chamber of Commerce Contribution	No	Voluntary Chamber of Commerce Contribution	No
Grants	No	Grants	No
<b>Clarence Valley Council (NSW)</b>		<b>Douglas Shire Council (QLD)</b>	
General Rates	Yes	General Rates	Yes
Business Levy	No	Business Levy	No
Parking Fees	No	Parking Fees	No
Voluntary Chamber of Commerce Contribution	No	Voluntary Chamber of Commerce Contribution	No
Grants	No	Grants	No
<b>City of Gold Coast (QLD)</b>		<b>Noosa Council (QLD)</b>	
General Rates	Yes	General Rates	Yes
Business Levy	No	<b>Business Levy</b>	<b>Yes</b>
<b>Parking Fees</b>	<b>Yes</b>	Parking Fees	No
Voluntary Chamber of commerce Contribution	No	Voluntary Chamber of Commerce Contribution	No
Grants	No	Grants	No
<b>Whitsunday Regional Council (QLD)</b>			
General Rates	Yes		
Business Levy	No		
Parking Fees	No		
Voluntary Chamber of Commerce Contribution	No		
Grants	No		

## Customer Requests

All benchmarking partners indicated at least a two tier timeframe for customer requests, with urgent requests being addressed ‘immediately to within 24 hours’ and non-urgent requests over a longer time period.

The City of Gold Coast divides urgent customer requests into two priority levels, and non-urgent requests into three priority levels.

**Table 15. Customer Request Response Times and Comments**

Item	Time Period	Comments
<b>Ballina Shire Council</b>		
Urgent	Same day	Same business day or immediate call back.
Non urgent	1 week	n/a
<b>Byron Shire Council</b>		
Urgent	Immediate	
Non urgent	2 weeks	2 week schedule.
<b>Clarence Valley Council</b>		
Urgent	4 hrs	4hr – phone call + action.
Non urgent	1-2 weeks	Medium (within 1 week) / Low (within 2 weeks).
<b>Douglas Shire Council</b>		
Urgent	NS <sup>20</sup>	
Non urgent	NS	
<b>City of Gold Coast</b>		
Urgent	1-24 hours	Priority 1: 2 hour response, 5 day completion; Priority 2: 24 hour response, 5 day completion.
Non urgent	3-20 days	Priority 3: 3 day response, 10 day completion; Priority 4: 5 day response, 20 day completion; Priority 5: 20 day response, as agreed completion.
<b>Noosa Council</b>		
Urgent	4 hrs	4hr – phone call + action.
Non urgent	10 days	
<b>Whitsundays Regional Council</b>		
Urgent	ASAP	Action ASAP.
Non urgent	10 days	Provide acknowledgement within 2-3 days, action request within 10 days of initial request. Parks and Gardens tend to action on request no CRM will go over a week to action.

<sup>20</sup> Not Supplied.

# EXPECTED LEVELS OF SERVICE

## Introduction

For this study, the following people were interviewed:

- Councillors
- Council management, including:
  - Director Infrastructure Services
  - Manager Open Space
  - Manager of Finance (TO BE INCLUDED).
  - Executive Management Team
- Council field staff
- Contractors that perform services (TO BE INCLUDED).

## Satisfaction with Levels of Service

For most of the stakeholders that were interviewed as part of this study, the expected open space maintenance service levels for the Byron Bay Township align with the current levels of services.

Concern was raised with the level of investment in providing extra service levels, given the on-the-ground outcomes, and shortfalls in expected response rates to reactive tasks.

As mentioned earlier, the levels of maintenance services for the Township are significantly higher the rest of the Shire, but have been justified due to the increased impact of tourism. There is a mixed history of design and construction outcomes within the Township that takes away from an underlying theme or character capable of unifying the Townscape experience. This has tended to exasperate landscape maintenance activities, with personnel having to develop maintenance solutions for a diverse array of themed plantings and, in many cases, poor growing conditions.

A number of recommendations have been made to assist in alleviating these issues and create a more productive environment for landscape maintenance.

Additionally, a Service Level Agreement has not been developed, which can greatly alleviate any mismatch between desired levels of standard and outcomes. A service Level Agreement between the service providers and management creates a shared understanding and expectation for landscape maintenance outcomes by including:

- Aims and objectives
- Outcomes and levels of service to meet those outcomes
- Task allocations
- Event planning
- Contingency planning
- Funding sources.

**RECOMMENDATION 2: Develop agreed service levels for cleansing, infrastructure maintenance and green space maintenance within the Byron Township.**

Council has formed a strategic planning asset management group who will be integrating the park assets into Council’s asset management and financial management system next financial year. This process will be including the identification of assets that are of an unacceptable standard and require replacement or removal. Road assets, including roundabouts and road islands in the Byron Town Centre have been assessed in terms of their structural functionality but not in relation to their capability to sustain greenery. This will need to be addressed when upgrading the design and construction details for road islands and roundabouts within the Township.

## Community Expectations

Byron Shire Council currently does not have direct community feedback on the level of service of key maintenance tasks undertaken within the Township.

Community engagement during the development of the draft Community Strategic Plan highlighted community’s priorities, including:

- Improving infrastructure
- Balancing the benefits and impacts of tourism

In 2018, the Byron Shire Community Panel was convened as a deliberative democracy process as a randomly selected group of people representative of the broader community to consider Byron’s infrastructure challenges and devise recommendations.

Panellists assigned a level of priority of importance for each of the various infrastructure categories, including:

- Footpaths and cycleways (11.2%).
- Public toilets (7.7%).
- Playgrounds and parks (6.6%).
- Open spaces and sportfields (5.7%).

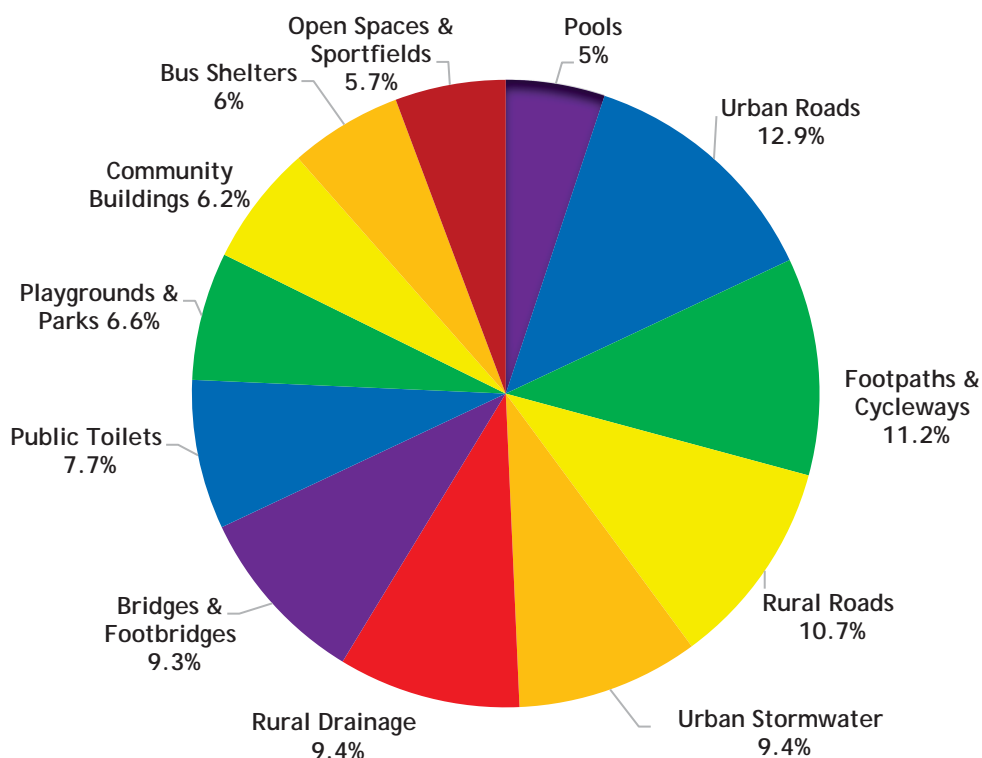


Figure 34. Community Infrastructure Priorities

# GAP ANALYSIS

## Introduction

Some gaps exist between current levels of service, industry standards and expected levels of service were identified during the study.

## Comparison with Industry Standards

The figure below portrays the level of service of operational tasks in the Byron Bay Township in comparison to industry benchmarking partners. Over half of the tasks reviewed scored high or comparably high levels of service.

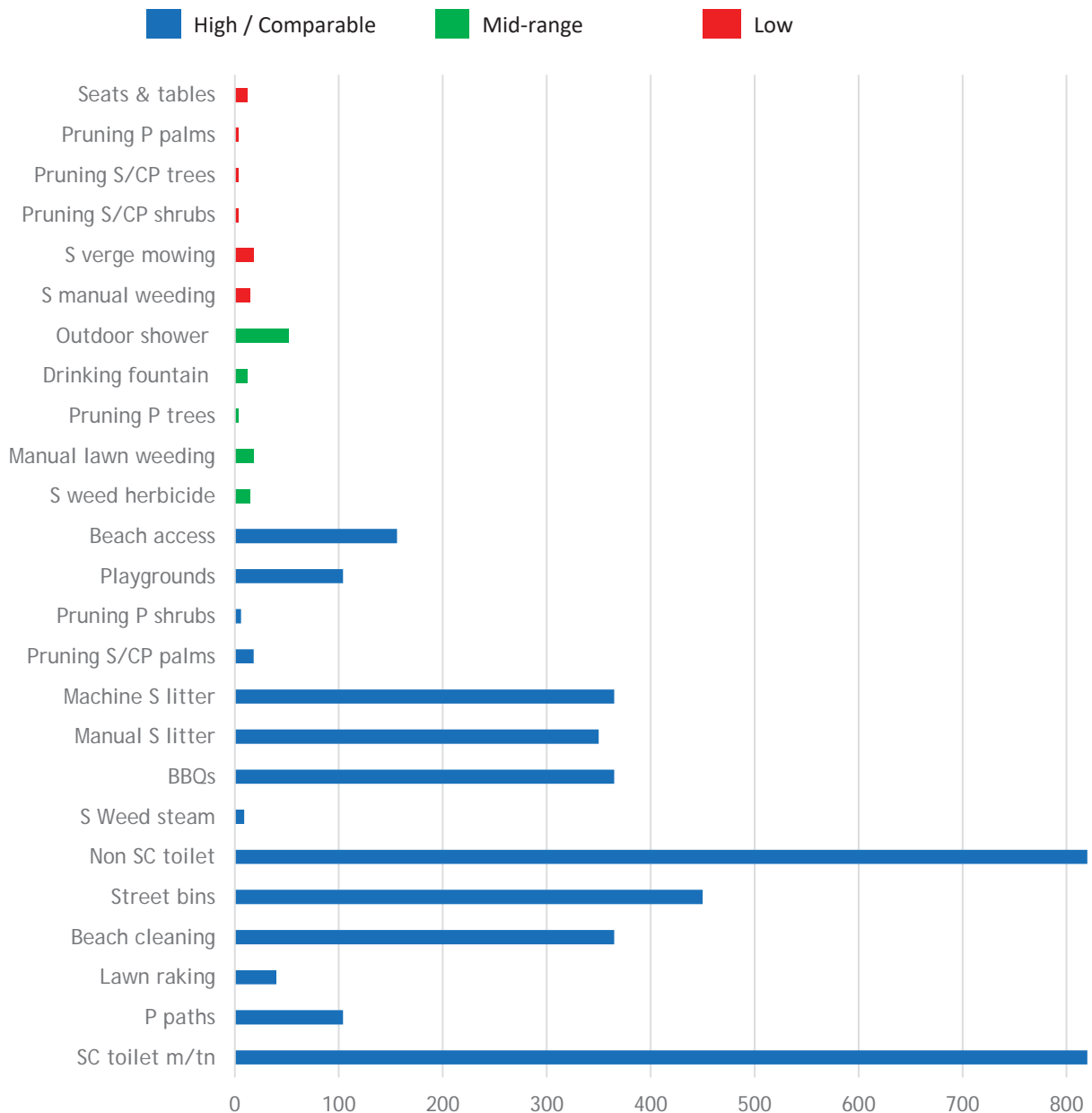


Figure 35. Level of Service Industry Comparison

## Higher Levels of Service

Three tasks were identified in the benchmarking component as having a higher level of service than the benchmarking LGA partners:

- Self-cleaning toilet maintenance (820 times/year, Gold Coast 365 times/year).
- Park path cleaning (104 times/year, 2<sup>nd</sup> being Gold Coast at 52 times/year).
- Lawn raking (40 times/year; Ballina 39 times/year, Gold Coast 12 times/year, Clarence Valley 2 times/year).

Given the volume of people utilising the small number of amenity blocks in the Town Centre (eg Apex Park toilets usage exceed 60,000 uses per month over the festive seasons), this level of service could not reasonably be considered over servicing.

Norfolk Island Pines (*Araucaria heterophylly*) create considerable leaf litter (large pine needles) in Apex Park, onto the park lawns and paths, which requires regular removal.



**Figure 36. Norfolk Island Pine Debris in Apex Park**

## Lower Level of Service

The level of service for four tasks could be reviewed in light of the benchmarking findings.

Byron Shire Council has a **lower level of service** for:

- Proactive pruning of street and carpark shrubs  
(3 times/year, 2<sup>nd</sup> lowest, Whitsunday is highest at 12 times/year).
- Proactive pruning of street and carpark trees  
(3 times/year, 3<sup>rd</sup> lowest, Whitsunday is highest at 12 times/year).
- Proactive pruning of park palm trees  
(3 times/year, 3<sup>rd</sup> lowest, Whitsunday is highest at 12 times/year).

Byron Shire Council has a **low level of service** for:

- Seats and tables cleaning  
(12 times/year, compared to 365 times per year for Ballina, Douglas, Gold Coast, Noosa and Whitsunday).

## Mode of Service Provision

The number of services contracted out ranged from 0 (Ballina), to 1 (Whitsunday), to 2 (Clarence Valley), to 6 (Byron), to 8 (Douglas), to 9 (Gold Coast), to 12 (Noosa).

Services most likely to be contracted out are street bin emptying (6 LGAs), beach cleaning (3 LGAs), and lawn weeding by herbicide (3 LGAs).



# POTENTIAL IMPROVEMENTS AND EFFICIENCY GAINS

## Introduction

This section discusses several areas in which potential improvements and efficiency gains can be made within existing budgetary constraints, including:

- Interdependency of provision, development, triple bottom line with maintenance
- Picturesque vs gardenesque landscape design
- Landscape design and construction for productive maintenance
- Innovations
- Volunteers and partnerships for management of public land
- Grants
- Customer Request Management
- Recommendations

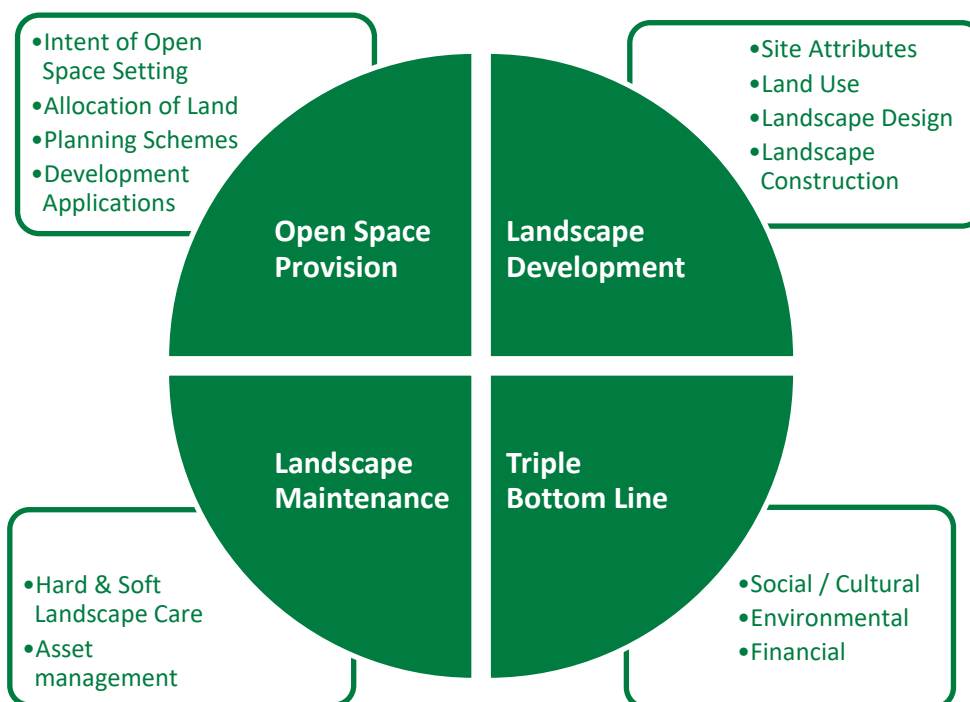
## Open Space Maintenance

The aim of this section is to contextualise the Byron Township open space maintenance activities within the broader spectrum of open space planning and management.

## Interdependency of Provision, Development, Triple Bottom Line with Maintenance

Discussions with Council stakeholders indicated that a number of decisions associated with open space provision, landscape development and triple bottom line criteria directly affect the way the landscape is maintained. Productivity gains will be achieved if the decisions associated with the Township landscape also consider the impacts on landscape maintenance.

An existing landscape setting is the measure of the effectiveness of a multi-disciplinary approach, characterised in the below figure. Decisions within each quadrat creates what currently exists in the Byron Bay Township green spaces.



**Figure 37. Interdependency of Provision, Development, Maintenance and Triple Bottom Line**

The *open space provision* processes determine where open space is to be located, the functions it fulfils, and the amount of land allocated. For example, the allocation of Butler Street Reserve for use as a car park and market venue is a good planning decision, given it is an old relatively uncapped tip site, would be very costly to redevelop the area as parkland or sportsfields, as is near the Township.

*Landscape development* involves the design and construction of the landscape. There is a mixed history of design and construction outcomes within the Township that takes away from an underlying theme or character capable of unifying the Townscape experience. A number of documents have been produced that hint towards the design theme for the Township including:

- Plan of Management Byron Bay Railway Park - October 2018.
- Better Byron Bay Crew Bed Upgrade Program - January 2018.
- The Byron Bay Town Centre Masterplan.
- Fletcher St Byron Bay Landscape Analysis and Community Planting Day Plan - DRAFT July 2013.
- Landscape Analysis & Renovation Plan: Byron Bay Town Centre - September 2009.

Evidence of a unifying design and construction intent is being set in place but will take some years to fully implement as funds become available. In the interim the documentation and agreeance of a suite of design and construction details that characterises a theme for the streetscape and parks would assist in a more productive maintenance regime. Such documentation should consider:

- A street tree planting program:
  - Trees are a strongly unifying landscape feature due to their size, form and environmental amelioration factors like shade, wind buffering, particulate pollution reduction, temperature control. Street trees require a significant rootzone,

preferably located in well structures soils within growing cells in order to maintain their health and longevity.

- Street trees should be of a significant height and form to have an impact on the streetscape. This may mean that overhead infrastructure is undergrounded or consolidated in cable bundles in order to enable street trees to function to their maximum potential.
- In some cases, carpark spaces will need to be converted into street tree spaces.
- Species selection should replicate the successful existing native street trees (eg *Melaleuca leucadendra* – Weeping paper bark, *Cupaniopsis anacardioides* – Tuckeroo, *Ficus hillii* – Hills Weeping Fig).<sup>21</sup>
- A shrub and groundcover planting program similar to that specified in Better Byron Bay Crew Bed Upgrade Program - January 2018.
- Development of a suite of construction details for road islands and median strips that allow for healthy plant growth and longevity.
- Develop a suite of construction details for street furniture and paving solutions.

**RECOMMENDATION 3: Agree on and implement a planting theme that characterises and unifies the Byron Township.**

**RECOMMENDATION 4: Develop a suite of construction details for road islands and median strips that allows for healthy plant growth and longevity.**

**RECOMMENDATION 5: Develop a suite of construction details for street furniture and paving solutions that allow for efficient maintenance.**

The *landscape maintenance* functions provide for the care and longevity of the landscape. It is usually the costliest investment over the life of the landscape, often overtaking capital costs within five to ten years. The principles of maintaining the hard landscape (structures) in a sustainable manner have been embedded into local government asset management and financial systems. The soft landscape (plants) have been somewhat estranged from this process, primarily due to an inability to identify their monetary, social and environmental value.

Council recognises that the Byron Town Centre has evolved into a significant NSW tourist hub and has invested in higher landscape development and maintenance levels of service to showcase the area. Approximately \$1.25 million is spent on maintaining the Town Centre, with the majority of the works being classified under cleansing, infrastructure maintenance and green space maintenance.

An example of how landscape design can affect landscape maintenance productivity can be seen with the regular leaf shed of the Norfolk Island Pines at Apex Park. Given the high profile of the area and the desire to remove the Norfolk Island Pine leaves, approximately 120 hours per annum is spend on lawn raking. From a direct productivity viewpoint this allocation could have been reduced should a different tree species was selected.

Underpinning these direct intervention functions is the indirect intervention function of the *triple bottom line*, which considers social, environmental, and financial issues associated with the sustainability of the landscape.

<sup>21</sup> Note: A list of existing native street trees is contained in the Landscape Analysis and Renovation Plan: Byron Bay Town Centre - September 2009.

Each component in Figure 37 is affected by the other components and should be considered as an interdependent part of the whole.

## Picturesque vs. Gardenesque Landscape Design

Picturesque and gardenesque describe two ways of observing plants in a landscape. In general terms, picturesque refers to the overall impression of a landscape, whereas gardenesque tends to focus more on the growth of individual plants.

Most commercial streetscapes and parks are developed and maintained with the picturesque, rather than a gardenesque, intent for several reasons including:

- Most people that move through a streetscape or park tend to be influenced by the overall impression of the landscape rather than a focus on individual plants.
- The level of horticultural maintenance of plants in a picturesque landscape is less and more cost effective compared to a gardenesque.
- In a picturesque landscape, a higher level of leeway is allowed towards plant failure or maintenance shortfalls as the overall impression is of more importance than the health of individual plants.

**RECOMMENDATION 6: As part of the overall theme for the Town Centre Streetscape and Parks, a Picturesque landscape outcome is adopted.**

## Landscape Design and Construction for Productive Maintenance

Landscape maintenance is generally the most investment intensive activity over a landscape's lifecycle. It is an essential requirement to the achievement of a landscape's purpose, design, useability and user satisfaction. Yet, consideration of landscape maintenance is frequently overlooked and undervalued in many landscape design and construction processes. If referred to in the design phase, maintenance generally only arises in relation to the importance that maintenance plays in ensuing the success of a particular design. Developing a management or maintenance plan at the design/construction phase is not sufficient, as this does not consider the whole of life investment requirements of asset management – the frequency and level of maintenance required for particular types of open space, the lifespan of the assets and their future replacement requirements.

Often, only cursory attention is paid to the issue of maintenance in landscape design texts. The strong inter-dependencies between planning, design and management functions in determining the presentation and productivity of open space settings are not often mentioned. More importantly, there appears to be little understanding of the impact that design has on maintenance productivity.

Designing landscapes for productive maintenance is an imperative that produces significant cost savings over a landscape's life. Basic guidelines can assist landscape designers and constructors in understanding how their decisions affect the way a landscape is maintained and the ramifications on whole of life investment and maintenance productivity. In particular it encourages the active consideration of the productive maintenance implications of landscape design and construction.

The application of the criteria does not undermine the design intent of a landscape. The level of maintenance is expected to vary in accordance with site conditions, design solutions and landscape profile. However, consultation with personnel in various disciplines may be required.

The productivity implications are substantial, and if fully applied, can lead to saving hundreds of thousands of dollars over a landscape's life.

Application can also contribute to the sustainability and longevity of landscapes, sustainable operational and maintenance practices, useability and user satisfaction.

The following criteria can be applied to a landscape design or construction program to assist in developing a more productive and sustainable landscape.

### 1. Accessibility

- eg Maintenance crews and machinery require adequate access points that allow for their turning angles, size, and weight; providing good access reduces hand-work.

### 2. Siting of hard landscape elements

- eg Seats and tables are located away from tree species that exude leaf drip, or which have fruits and berries attractive to birds.
- eg Site infrastructure to allow for efficient operation of maintenance equipment by minimising obstacles in open areas.

### 3. Siting of soft landscape elements

- eg Trees and shrubs in the vicinity of paths, kerbs, roads, bridges, overpasses, lights etc are planted with a growth space that minimises severe pruning or eventual removal.
- eg Cluster trees and shrubs in grassed areas.

### 4. Edges

- eg Reduce the amount of edges; generally, the greater the edge in proportion to the area, the greater the maintenance requirements.
- eg Ensure paved surfaces are flush or fractionally below grass surfaces to reduce brush cutter hand work.

### 5. Topography and drainage

- eg Locate infrastructure in well drained areas.
- eg Ensure water quality is protected.
- eg Ensure slope grades suit the maintenance regime.

### 6. Soil

- eg Understand the site soil conditions and make appropriate amendments to suit soft and hard landscape requirements.
- eg Test imported soils, prior to use, for weed seed and pathogens.
- eg Clean up construction sites thoroughly.
- eg Protect soil during construction and restoration programs.
- eg Allow enough soil volume for growing trees in confined spaces (eg street trees along footpaths). Whilst the amount is relative to each species, a rule of thumb is the volume of root space ( $m^3$ ) is roughly 1.5 times the area under the mature canopy ( $m^2$ ).
- eg Ensure soil conditions for trees in grassed areas promote deep rather than shallow rooting.

### 7. Mulch and ground covers

- eg Use mulch or shade tolerant ground covers in soft landscapes that are too shady for effective turf growth.
- eg Use mulches and ground covers in garden beds or under trees to reduce mowing and weeding.

### 8. Greenery

- eg Group plants requiring similar maintenance regimes.
- eg Select plants based on their suitability to the maintenance regimes.
- eg Remove turf areas under trees that have very shallow roots and install garden beds, mulched or other ground covers in their place.
- eg Ensure roundabouts and median strips are free of mown grass, to eliminate the need for higher frequency maintenance activities in dangerous areas. Use shrubs, ground covers or hard surfaces that require less maintenance cycles.

### 9. Hard surfaces

- eg Hard surfaces used to reduce wear and tear in high impact areas.

### 10. Water

- eg Manage water infrastructure and usage in a sustainable manner.

### 11. Materials

- eg When selecting landscape furniture, ensure that ongoing maintenance investment (replacement, servicing, painting) are considered.
- eg Consider the durability and maintenance requirements of landscape materials.
- eg Avoid materials that require unreasonably high maintenance levels.
- eg Specify durable and robust materials rather than creating a false economy from use of cheaper and inferior materials.
- eg Assess the durability of materials for local conditions.
- eg Ensure that when selecting landscape furniture, that ongoing maintenance investment (replacement, servicing, painting etc) are considered.
- eg Construct landscape furniture of materials that are easily maintained and replaced.
- eg Ensure spare parts are available for the life of the landscape asset.
- eg Ensure surface treatment of landscape furniture minimises maintenance.

**RECOMMENDATION 7: When developing landscape design and construction plans, consider factors that will enhance landscape maintenance productivity and sustainability.**

## Innovations

Potential innovation concepts for consideration have been sourced from stakeholders, benchmarking partners and desktop reviews, and are listed in the following table.

**Table 16. Potential Innovations**

Innovation	Recurrent Budget Impact
<b>Additional workforce vehicles</b>	
<p>Current carrying capacity of vehicles is supervisors ute (2 people) truck (3 people). When supervisors ute is unavailable a staff member must walk between sites.</p> <p>2 proposals have been tabled:</p> <ol style="list-style-type: none"> <li>1. Acquisition of electric buggy with a 2 seat capacity. This would enable the full EFT staff contingent 6 (including vacant trainee position) to move around the town centre in vehicles</li> <li>2. Trial of tricycle that carry one staff member, a small range of equipment and has a capacity to carry up to 60 kg of garden waste. If successful there would be an opportunity to deploy staff in a more flexible manner.</li> </ol> <p>In both cases further storage space would be required for the vehicles.</p> 	<p>Labour productivity savings can be realised once rolled out.</p>
<b>Bin sensor technology</b>	
<p>The City of Gold Coast is trialling the use of bin sensors technology in high profile parks. The sensor measures bin capacity and then sends an alert to the Gold Coast City Cleaning Department/crew when the bin needs emptying.</p> <p>This could assist in determining bin emptying in a timely manner in high use areas but it is unclear whether this would reduce or increase the level of service and programmed works by the contractor.</p>	<p>Likely to be an increase in recurrent expenditure due to maintenance of laser technology and disruption to scheduled bin emptying programs.</p>
<b>Chemical weeding</b>	
<p>There is a strong viewpoint within the Byron Bay region that hand weeding is preferential to chemical weeding due to a lesser risk on environmental and health impacts.<sup>22</sup></p> <p>From a direct productivity viewpoint, hand weeding in turf is 30 times less efficient than chemical weeding; hand weeding in gardens beds is 5 times less efficient than chemical weeding.</p> <p>These inefficiencies are even greater when herbaceous perennial species (eg nut grass) are proliferated by hand weeding techniques.</p> <p>There is also an increased safety risk to staff and traffic congestion when road island and median strip traffic control measures are required for longer periods due to the hand weeding versus chemical weeding.</p>	

<sup>22</sup> Generally, chemical weeding is an accepted norm for roadside, median strip, garden bed, turf and bushland weeding. When diligently applied, taking into account social, health, safety and environmental requirements, it has proved to be extremely effective in cost, target impact, environmental sustainability and landscape presentation. However, underlying these positive attributes are concerns that the use of chemical weeding is having a detrimental and unforeseen effects on the environment, health and wellbeing. History has shown that some chemicals (eg DDT), although initially thought to be safe, have had a very deleterious effect on the environment, health and wellbeing. History may be repeating itself in the case of Glyphosate, probably the most widely used general herbicide in the world. In the last few months, a number of bellwether court cases in the United States and Europe are testing whether this chemical causes cancer. If found to be the case, the withdrawal of this product would have a strong impact on horticultural and bush care maintenance throughout Australia.



## POTENTIAL IMPROVEMENTS AND EFFICIENCY GAINS

Innovation	Recurrent Budget Impact
<b>Chemical weeding of grassed areas</b> Chemical weeding in turf areas is significantly more productive than hand weeding.	A 3,000% increase in productivity with associated labour costs.
<b>Chemical weeding of streetscape gardens</b> Reduction in the traffic disruption and employee risk due to the shorter amount of time spent in weeding traffic islands.	A 500% increase in productivity with associated labour cost savings.
<b>Elimination of small grassed areas around the Township</b> These areas are time consuming and difficult to manage to a satisfactory level of horticultural excellence.	Labour productivity savings can be realised.
<b>Employment of a horticultural trainee</b> Once vehicle issues have been resolved, fill the vacant position of the horticultural trainee	Budget allocation for horticultural trainee
<b>Improved design and construction details</b> Better design and construction details that aim to improve landscape maintenance productivity and realise a shared design theme.	Labour productivity savings can be realised.
<b>Improved township layout for vehicular and pedestrian circulation</b> Construction of the planned township by-pass road along Butler Street will lessen traffic congestion within the Township, enabling easier access for work crews.	Limited funds available. However Grant applications may assist
<b>Incorporation of wetting and soil moisture retention agents into streetscape garden beds</b> Due to the high incidence of recent droughting in streetscape garden beds, incorporate wetting and soil moisture retention agents when the opportunity avails. Roll out the program over several years to avoid larger drawdowns on the recurrent budget	Manageable on a smaller scale within recurrent spending
<b>Synthetic turf in high wear areas</b> Some authorities have replaced worn areas which cannot sustain grass with synthetic turf in order to reduce wear and tear and provide an aesthetic appeal.	Higher capital cost, but lower recurrent costs for smaller areas.
<b>Trial industrial vacuums for leaf and micro litter removal</b> There are an array of industrial vacuums on the market that have the capacity to remove leaf and micro litter. Some examples can be found on the following web links <a href="https://industrialvacuumsystems.com.au/table/litter-vacuum-cleaners/">https://industrialvacuumsystems.com.au/table/litter-vacuum-cleaners/</a>	Grant funding may be available from <a href="https://www.epa.nsw.gov.au/working-together/grants/litter-program/council-litter-grants">https://www.epa.nsw.gov.au/working-together/grants/litter-program/council-litter-grants</a>
<b>Use of larger plants in planting programs</b> Whilst the use of smaller plant stock is less costly and, if maintained carefully, will overtake the larger plant stock, larger plant stock has shown to be more resilient in their establishment phase to droughting, accidental damage and vandalism.	Labour productivity savings can be realised in the longer term.

**RECOMMENDATION 8: Improve the productivity of green space management through trialling the use of larger plants in planting programs for improving the resilience of plants in the establishment phase to droughting, accidental damage and vandalism.**



# Volunteers and Partnerships for Management of Public Land

## Volunteers

Despite the lack of being common practice in Australia, the concept of volunteers, directly or through partnerships, contributing to maintenance outcomes of urban developed parklands has significant potential - if the principles of volunteering are adhered to and adequate consideration given to best practice principles. In particular, the principles of 'volunteering is not a substitute of paid work', 'volunteers do not replace paid workers nor constitute a threat to the job security of paid workers', and 'volunteering benefits the community and the volunteer' are of significant relevance.

A fundamental question to be answered prior to the utilisation of volunteers for general maintenance activities in public land management is: 'By increasing reliance on volunteering are we simply replacing a paid workforce with an unpaid one, or are we leveraging resources for the best outcomes?'

A very likely reason that Australian Councils have not pursued this model, is that general maintenance tasks are routinely undertaken by paid staff.

The Great Lakes Volunteering Program of the Parks and Recreation Branch provides an example of the potential of volunteers undertaking maintenance duties in public open space for an LGA. GLC is a developing council, and one where the budget in recent years did not meet the expectations or desires of residents. Council was required to tightened financial controls and resourcing levels to reduce budgetary pressures, as Council faced a looming infrastructure maintenance issue.

Volunteering in the Great Lakes Parks and Recreation Branch commenced in 2000. The program operates as a 'mobile men's shed', undertaking mowing and maintenance in public lands, and dunecare, landcare and waterways activities. The program successfully engaged 55 active volunteer groups, with 37 undertaking mowing and maintenance.<sup>23</sup>

Other volunteering programs operate in varying degrees within State and LGA public lands, driven by a requirement to fulfil service level provisions not able to be met within existing resource regimes, assisting with either Council-wide programs (such as street trees, streetscapes) or involving particular activities (such as gardening) within individual parks.

The development of the various volunteering public sector programs and activities, appear to be based on a service level provision gap and/or an emerging issues coupled with community interest. In some instances, innovation has played a significant contribution. In the terms of Friends of Park groups, the incentive has come from the community, which is generally very passionate about the park they support.

A long-standing model for community-public partnerships can be found in environmental conservation. Faced with a rapidly increasing conservation estate, not matched by an equal increase in available resources, and strong community interest, an alternative public land management model has developed. Having been in existence for over thirty years, the movement has evolved with the times, formalising its structure, becoming incorporated into government strategic plans, and continuing to grow in experience and success.

<sup>23</sup> 2014 figures.

Volunteering has increased dramatically in both professionalism and status in recent years. Consequently, there are considerable resources available for organisations seeking to engage volunteers in the labour force. Guidance can be found in National Standards and the Model Code of Conduct for organisations engaging volunteers.

### *What is Volunteering*

Volunteering Australia describes formal volunteering as an activity which takes place through Not-For-Profit organisations or projects and is undertaken:

- To be of benefit to the community and the volunteer.
- Of the volunteer's own free will and without coercion.
- For nor financial payment.
- In designated volunteer positions only.<sup>24</sup>

In this instance the term 'Not-For-Profit' includes public sector organisations. The intention of the statement is to ensure that volunteer effort always contributes to a social benefit rather than privately held capital and resources.<sup>25</sup>

Volunteers and the organisations and communities they serve, have a shared responsibility to:

- Create environments in which volunteers have meaningful work that helps to achieve agree upon results.
- Define the criteria for volunteer participation, including the conditions under which the organization and the volunteer may end their commitment, and developed policies to guide volunteer activity.
- Provide appropriate protections against risks for volunteers and those they serve.
- Provide volunteers with appropriate training, regular evaluation and recognition.
- Ensure access for all by removing physical, economic, social and cultural barriers to their participation.

### *Benefits of Volunteering*

The benefits of volunteering include:

- Volunteering plays a significant role in the development of engaged, active and healthy communities.
- Many services and programs provided by land managers rely on the dedication and goodwill of volunteers.
- The harnessing of volunteers' time, enthusiasm, interests and skills can provide many benefits to the services and projects assisted, the organisation, the community and to the volunteers.
- Benefits to organisations and communities range from improving local amenity and environments, fostering civic pride and stewardship, creating a sense of community spirit, improving the quality of life for residents, assisting to accomplish goals or service provision levels that otherwise would not have been met, connecting public land managers and communities, to bringing new ideas and a community perspective to the provision of services and programs.
- Volunteering can offer an array of benefits to the volunteers, including personal development and enrichment, contribution to professional development and career

<sup>24</sup> Volunteering Australia. 'Information Sheet: Definitions and Principles of Volunteering'.

<sup>25</sup> Volunteering Australia (2006). 'The Principles of Volunteering: why have them?'

pathway, the opportunity to provide service to communities and society, contribution to health and wellbeing, and opportunities for socialisation.

### Challenges of Volunteering

The challenges of volunteering include:

- Volunteering can raise several challenges - for both the organisation and the volunteer. However, many of these issues can be overcome through good management and consideration of best practice principles. Some, such as lack of available resources on behalf of organisations, or lack of time on behalf of the volunteer are more difficult to deal with.
- Organisations engaging volunteers to assist with public land managers can face a number of challenges, including: lack of strategic direction, policy or standard procedures to accommodate volunteers in the organisation; lack of internal resources to dedicate to volunteering efforts; lack of staff training in volunteer management; challenge of creating meaningful work for volunteers; failure to attract volunteers due to competitive volunteer marketplace; shortage of skilled / appropriate volunteers; initial staff resistance due to preconceptions or existing workload pressures; and volunteer commitment or retention challenges.
- A range of personal circumstances and organisational factors can limit a person's ability to volunteer, or negatively impact on volunteer experience, including: lack of time; lack of interest; health issues; negative perceptions of volunteer activities; lack of volunteer opportunities that match interest/skills; fears of encountering ageism; concerns about increasing regulation; lack of meaningful volunteer opportunities; lack of adequate leadership in organisation; lack of adequate training; lack of clear direction or supervision; prejudices resulting from volunteers being treated as inferior to paid staff, or being regarded as a threat to security of paid staff; lack of recognition, or feeling valued by organisation.

**RECOMMENDATION 9: Investigate volunteering options for the undertaking of green space management tasks that sit outside existing levels of service, that Council has the resources to manage on an ongoing basis, and within their ability to manage the WHS aspects.**

### Partnerships

An opportunity exists to enhance the Town Centres streetscape beyond current levels of service by entering into partnering agreements with local businesses to care for their abutting streetscape. This practice has been implemented within a number of LGAs with some success. For example, the City of Brisbane has been actively promoting partnerships with local businesses to assist with the care of their streetscape for a number of years.<sup>26</sup>

For the success of such an initiative, a mutually agreeable program focussing on win-win outcomes for the Council and local business would need to be created and monitored. Council has had some experience in what not to do ...

*In 2013 Council conducted a Community Planting Day in Fletcher Street. A great deal of preparation went into the planting and the day was deemed to be a great success. Unfortunately, no provision was made for the care of newly*

<sup>26</sup> City of Brisbane Corporate Plan 2016/170 2020-21 pp 26.

*planted streetscape and many of the plants died. Success quickly turned to failure.*

Should Council wish to embark on a partnership arrangement with local business to care for the streetscape abutting their business, the parameters of the agreement could include:

1. Sponsorship of garden bed preparation (planting cells, structural soils, mulching etc).
2. Design intent and species selection are agreed – no variance.
3. Irrigation arrangements.
4. Pruning to an agreed standard.
5. Weeding requirements.
6. Adherence to WHS requirements.
7. Acknowledgement (most important and ongoing) – Certificates, shop window stickers, mention in newspapers and Council publications, publication of business profiles, awards etc.
8. Council monitoring and correctional advice (if required).
9. Allocation of long term Council resources to support the program.

**RECOMMENDATION 10: Consider developing partnership agreements with local businesses in the Byron Town Centre to develop and care for the streetscape abutting their business to an agreed design intent and standard.**

## Grants

The implementation of the Byron Bay Town Centre Masterplan will take some time as funding permits. Concurrently with its delivery it is expected that design solutions that improve the productivity for landscape maintenance are implemented. This will enable Council to consider a number of options including the rechannelling of resources away from the Town Centre maintenance whilst retaining the current levels of service or retaining the resources within the Town Centre and increasing the levels of service.

These are:

1. NSW Regional Growth – Environment and Tourism Fund  
<https://www.nsw.gov.au/improving-nsw/regional-nsw/regional-growth-environment-and-tourism-fund/>
2. NSW Regional Growth Fund  
<https://www.nsw.gov.au/improving-nsw/regional-nsw/regional-growth-fund/>
3. Australian Government - The Department of Infrastructure, Regional Development and Cities - Regional and community programs  
<https://regional.gov.au/regional/programs/stronger-communities.aspx> has several programs that may be applicable.

**RECOMMENDATION 11: Apply to source funds to accelerate the implementation of the Byron Town Centre Masterplan and ensure landscape design and construction solutions include consideration of productive landscape maintenance.**

## Customer Request Management (CRM)

Byron Shire Council operates a Customer Request Management System (CRM) that is functional but could be improved.

The system caters for external (public) and internal requests via:

- Face to face contact.
- Phone.
- Email.
- Web page.

The CRM process includes:

- Councillor requests are generally flagged for priority treatment.
- CRMs are entered by a number of staff throughout Council.
- Reports are run daily, through the Team Leader Open Space who runs request through dummy officer called PAO that acknowledges requests.
- CRMs are assigned to individual officers and forms for non-urgent matters put in pigeon holes of actioning officer. When the job is completed the form is returned and CRM is closed.
- There is no acknowledgement of job being completed to originator.
- CRM remains open until its completed. Monthly report identifies outstanding CRMs.
- No performance requirements are associated with the CRMs as escalation systems have never really worked.
- Non urgent matters can be delayed if officers are absent, public holiday etc, as report may not be generated.
- Urgent request do not rely on CRM pigeon hole system. They are entered into the CRM but rung through to the responsible officer for actioning immediately. Urgent matters are dealt with straight away by whoever is available. An afterhours service also exists to deal with urgent matters.

Improvements suggested for the CRM include:

- Better category codes.
- Improved usability: the system is clunky and repetitious.
- CRMs should be linked to works orders.
- The originator the CRM should be contacted by the person undertaking the rectification to clarify the nature of the work and when it will be completed. Then upon completion, the originator is informed that the work is completed, again by the person undertaking the rectification.

**RECOMMENDATION 12: As part of corporate CRM improvement process consider changes that:**

- Reduce manual processes.
- Allows for staff absences, public holidays, weekends etc that delay the timeframe of non-urgent customer request, CRM generation, and response.
- Minimise the risk of flagging urgent requests as non-urgent.
- Feeds back the remedial action to the originator of the request (where known).

## Recommendations

<b>Recommendation 1</b>	<b>Continue to encourage a culture of innovation and continuous improvement.</b>
<b>Supporting Evidence</b>	There is strong evidence of a culture of continuous improvement and innovation within the Better Byron Crew, championed by their Supervisor, the Team Leader Open Space, and Manager, Open Space and Resource Recovery. Numerous innovations, emanating from this group, have been documented and in many cases implemented.
<b>Financial Implications</b>	Savings generated through productivity improvements and improved standards of service.
<b>Recommendation 2</b>	<b>Develop agreed service levels for cleansing, infrastructure maintenance and green space maintenance within the Byron Township.</b>
<b>Supporting Evidence</b>	A poor shared understanding of the Town Centre’s cleansing, infrastructure maintenance and green space maintenance activities. An SLA will provide a definition of agreed activities and expected outcomes.
<b>Financial Implications</b>	Staff time to evolve the SLA.
<b>Recommendation 3</b>	<b>Agree and implement a planting theme that characterises and unifies the Byron Township.</b>
<b>Supporting Evidence</b>	<p>Evidence of a unifying design and construction intent is being set in place, but will take some years to fully implement, being funding dependent. In the interim, the documentation and agreeance of a suite of design and construction details that characterises a theme for the streetscape and parks would assist in a more productive maintenance regime. Such documentation should consider:</p> <p>A street tree planting program:</p> <ul style="list-style-type: none"> <li>• Trees are a strongly unifying landscape feature due to their size, form and environmental amelioration factors like shade, wind buffering, particulate pollution reduction, temperature control. Street trees require a significant rootzone, preferably located in well structures soils within growing cells in order to maintain their health and longevity.</li> <li>• Street trees should be of a significant height and form to have an impact on the streetscape. This may mean that overhead infrastructure is undergrounded or consolidated in cable bundles in order to enable street trees to function to their maximum potential.</li> <li>• In some cases, carpark spaces will need to be converted into street tree spaces.</li> <li>• Species selection should replicate the successful existing native street tees (eg <i>Melaleuca leucadendra</i> – Weeping paper bark,</li> </ul>

## POTENTIAL IMPROVEMENTS AND EFFICIENCY GAINS

*Cupaniopsis anacardioides* – Tuckeroo, *Ficus hillii* – Hills Weeping Fig).<sup>27</sup>

- A shrub and groundcover planting program similar to that specified in Better Byron Bay Crew Bed Upgrade Program - January 2018.

**Financial Implications** Normalisation of maintenance solutions for the landscape will lead to productivity savings.

**Recommendation 4** **Develop a suite of construction details for road islands and median strips that allows for healthy plant growth and longevity.**

**Supporting Evidence** Poor construction standards for plant growth on many road islands and median strips reduces plant longevity and increases landscape maintenance.

**Financial Implications** Implementation of the construction solutions will increase the health and longevity of plants and lead to reduced maintenance and replanting due to plant failure.

**Recommendation 5** **Develop a suite of construction details for street furniture and paving solutions that allow for efficient maintenance.**

**Supporting Evidence** A suite of construction details for street furniture and paved surfaces will allow for better sourcing of spare parts and quicker repair. Materials specifications to suite coastal requirements will increase the useful life threshold of these landscape components.

**Financial Implications** Cost savings generated by reliably sourcing parts and increased life threshold.

**Recommendation 6** **As part of the overall theme for the Town Centre Streetscape and Parks, a Picturesque landscape outcome is adopted.**

**Supporting Evidence** Most commercial streetscapes and parks are developed and maintained with the picturesque, rather than a gardenesque, design intent for several reasons including:

- Most people that move through a streetscape or park tend to be influenced by the overall impression (picturesque) of the landscape rather than a focus on individual plants (gardenesque).
- The level of horticultural maintenance of plants in a picturesque landscape is less and more cost effective compared to a gardenesque.

In a picturesque landscape, a higher level of leeway is allowed towards plant failure or maintenance shortfalls as the overall impression is of more importance than the health of individual plants.

**Financial Implications** Less of a cost burden to maintain streetscape and parks in a picturesque rather gardenesque style.

<sup>27</sup> A list of existing native street trees is contained in the Landscape Analysis and Renovation Plan: Byron Bay Town Centre - September 2009.



<b>Recommendation 7</b>	<b>When developing landscape design and construction plans, consider factors that will enhance landscape maintenance productivity and sustainability.</b>
<b>Supporting Evidence</b>	The major cost burden of most landscapes is associated with their maintenance phase. Incorporating design and construction standards that reduce the maintenance burden but also retain design intent is a logical choice and reduces the overall maintenance cost burden. Designing for more productive maintenance reduces maintenance costs whilst still maintaining the design intent of the landscape.
<b>Financial Implications</b>	Maintenance cost savings. Reduction in the maintenance cost burden.

<b>Recommendation 8</b>	<b>Improve the productivity of green space management through trialling the use of larger plants in planting programs for improving the resilience of plants in the establishment phase to droughting, accidental damage and vandalism</b>
<b>Supporting Evidence</b>	Whilst the use of smaller plant stock is less costly and, if maintained carefully, will overtake the larger plant stock, larger plant stock has shown to be more resilient in their establishment phase to droughting, accidental damage and vandalism.
<b>Financial Implications</b>	Labour productivity savings can be realised in the longer term.

<b>Recommendation 9</b>	<b>Investigate volunteering options for the undertaking of green space management tasks that sit outside existing levels of service, that Council has the resources to manage on an ongoing basis, and within their ability to manage the WHS aspects.</b>
<b>Supporting Evidence</b>	National guidelines for volunteering stipulates that volunteers should not replace paid workers or be seen as free labour. The investment (training, support, WHS, rewards) in volunteers is substantial in order for their work to be rewarding for their sponsor organisation and themselves. Volunteering is a key consideration of Our Byron Our Future Delivery Program and Operational Plan.
<b>Financial Implications</b>	Skill development for volunteer coordinators in people development and management. Ongoing support and monitoring of volunteer activities. Work care insurances.

<b>Recommendation 10</b>	<b>Consider developing partnership agreements with local businesses in the Byron Town Centre to develop and care for the streetscape abutting their business to an agreed design intent and standard.</b>
<b>Supporting Evidence</b>	When planned and executed correctly, this type of partnership program can enhance the business profile and improve the quality of the streetscape.

## POTENTIAL IMPROVEMENTS AND EFFICIENCY GAINS

**Financial Implications** Improved streetscape quality and partner profile creating a win-win through a well worded partnership agreement. This will generate an indirect cost benefit to Council and the partner.

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**Recommendation 11** **Apply for grant funding to accelerate the implementation of the Byron Town Centre Masterplan and ensure landscape design and construction solutions include consideration of productive landscape maintenance.**

**Supporting Evidence** The implementation of the Byron Bay Town Centre Masterplan will take some time and occur as funding permits. Concurrently with its delivery, design solutions that improve the productivity for landscape maintenance can be implemented. Several Federal and State Grants are available to source further funds to accelerate the implementation of the Town Centre Masterplan.

**Financial Implications** Should grant(s) be forthcoming, the implementation of the Town Centre Masterplan will be accelerated and with that the productivity gains in implementing design and construction standards that support more productive maintenance. This will enable Council to consider a number of options including the rechanneling of recurrent resources away from the Town Centre maintenance whilst retaining the current levels of service or retaining the resources within the Town Centre and increasing the levels of service.

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**Recommendation 12** **As part of corporate CRM improvement process, consider changes that:**

- **Reduce manual processes.**
- **Allows for staff absences, public holidays, weekends etc that delay the timeframe of non-urgent customer request, CRM generation and response.**
- **Minimise the risk of flagging urgent requests as non-urgent.**
- **Feeds back the remedial action to the originator of the request (where known).**

**Supporting Evidence** Better practices for CRM management derived from process review.

**Financial Implications** When corporate funds allow. This matter is a corporate not a branch or sub-branch matter

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## REFERENCES

Byron Shire Council (2018). *Our Byron Our Future: Budget Extract – From the Delivery Program 2017-2021 and operational Plan 2018-2019*.

Byron Shire Council (2018). *Plan of Management, Byron Bay Railway Park*.

Byron Shire Council (2018). 'Open Space and Resource Recovery September 2018 E2015/84321.'

Byron Shire Council (2018). *Integrated Pest Management Policy 2018*.

Byron Shire Council (2018). *Byron Shire Council Fees and Charges 2018/19*

Byron Shire Council (2018). *Byron Shire Community Solutions Panel Final Report*.

Byron Shire Council (2018). *Byron Shire Community Solutions Panel Briefing Book*.

Byron Shire Council Memo 'Better Byron Crew and Byron Town Centre', from Director Infrastructure Services (16.04.2018).

Byron Shire Council (2017). *Byron Shire Council Annual Report 2016-17*.

Byron Shire Council (2017). 'Parks Assets Breakdown October 2017'.

Byron Shire Council (2017). *Our Byron Our Future: Delivery Program 2017-2021 (revised) and Operational Plan 2018-2019*.

Byron Shire Council (2016). *Strategic Asset Management Plan: General Fund Assets 2016-2026. Version 3.02*.

Byron Shire Council (2010). *Byron Shire Council Policy No. 10,006. Events on Public and Private Land*.

Byron Shire Council (2001). *Byron Shire Council Policy No. 5.52. Commercial Activities on Coastal and Riparian Crown Reserves*. (amended 2017).

Byron Shire Council (1994). *Byron Shire Council Policy 12/007. Business and Commercial Activities*. (amended 2018).

Byron Shire Council (1994). *Byron Shire Council Policy 5.37. Commercial and Other Activities on Public Land and Roads*.

Byron Shire Council (undated). *Parks Level of Service*.

Department of Local Government, Racing and Multiculturalism (2017). *Queensland Local Government Comparative Information 2016-17*. Queensland Government.

Independent Pricing and Regulatory Tribunal of New South Wales (2017). *Byron Shire Council's application for a special variation for 2017-18*.

McGreggor Coxall et al (undated). *Byron Bay Town Centre Masterplan, Final Masterplan Report*.

Micromex Research (2016). *Byron Shire Council Community Satisfaction Research*.

Planning and Environment (2017). *North Coast Regional Plan 2036*. NSW Government.

Ross Planning (2017). *Draft Byron Shire Open Space and Recreation Needs Assessment and Action Plan 2017-2036*.