asongroup

Transport Assessment Report

Proposed Multi-purpose Development
The Cultural and Civic Space Project, 23-31 Gordon Street, Coffs Harbour

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	5/06/2019	Draft	A. Tan & T. Lehmann	J. Mulhaire
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1 Executive Summary

This report has been prepared on behalf of Coffs Harbour City Council to support a State Significant Development Application for a new Cultural and Civic Space (All Welcome Centre). The All Welcome Centre provides significant cultural and long-term economic benefits to the Coffs Harbour City Centre and the greater Coffs Harbour area. By providing a central location for key civic services, the All Welcome Centre fosters a community environment that also encourages interaction between the community and the Council.

The objectives of this traffic study are to:

- To provide an appropriate response to the SEARs;
- To demonstrate that there is an appropriate and sustainable provision of car and bicycle parking;
- To establish that the forecast trip generation of the Proposal can be appropriately accommodated by the local and arterial road network; and
- To demonstrate that the proposed access driveways, internal roads, car parks and service facilities comply with the relevant Australian Standards.

1.1 Development Yield

The development includes mixed land uses which include a regional library, regional gallery, regional museum, shop, café, function space, co-working space, multi-purpose rooms, Council chambers, customers service area, Council administration and offices. With respect to parking, the new building accommodates a basement car park for 74 spaces, 60 bicycle rails for visitors, 40 bicycle spaces for staff/employees, end-of-trips facilities and a pick-up / drop-off area for light vehicles and buses/coaches along the Gordon Street frontage. It should be noted that 37 spaces would be retained for Council use within the existing car park located in Council's existing chambers, resulting in a total of 111 spaces for Council employee usage. The Proposal is summarised as follows:

- Construction of a temporary site compound and site office;
- Earthworks and associated excavation for footings and basement area;
- Construction of a new building to accommodate the proposed Cultural and Civic Space including a regional gallery, central library, regional museum, multi-purpose meeting rooms, co-working space, shop, café, function space (including use as Council Chambers), customer service area, Council staff office accommodation and underground car parking;
- New Basement carpark (74 Carparks) resulting in a total off-street parking provision of 111 car parking spaces.

- 60 bicycle rails for visitors and 40 bicycle racks for staff/employees, and
- Access to and from the site in Gordon Street.

1.2 Parking Assessment

Council's DCP provides guidelines for various land uses and outlines parking rates that are applicable to individual developments. The All Welcome Centre proposes a mix of community and workplace facilities which can be defined as short-term and long-term parking demands respectively. As such, the parking assessment has considered these two elements whereby the long-term demands would generally be accommodated by the private off-street parking facilities and the short-term within the available public parking availabilities consistent with the existing library / gallery developments and the Gordon Street Precinct Master Plan study.

The provision of a centralised location for key cultural amenities for the public warrants an assessment of the overall on-street parking capacity and availability within the locality. It should be noted that the existing Library and Gallery do not provide on-site parking, instead relying on the availability within the surrounding road network, which is common practice for community facilities.

1.2.1 Existing Conditions

A review of the spare capacity in the local area determines there are 1,542 spaces within the Castle Street carpark and the on-street parking study area. During the weekday peak period between 12.00PM-1.00PM there is a total of 262 (17%) available parking spaces. During the weekend peak period between 2.00PM-3.00PM there is a total of 440 (29%) available parking spaces.

1.2.2 Commercial (Office)Parking Demand

In accordance with Council's DCP, the commercial / office land uses require 84 parking spaces. In response, the Proposal provides 111 spaces for employee use, thereby satisfying Council's DCP requirements. In addition, Ason Group has also undertaken a First Principle analysis for the office land uses which confirms that the 111 parking spaces would satisfy the future parking demand. As discussed below, a draft Green Travel Plan has been prepared to drive behavioural change with respect to private vehicle usage and these targets have been incorporated into the parking assessment.

1.2.3 First Principles Assessment

To determine the parking demand of the Proposal, Council has provided projected visitation data for the Library, Museum, and Gallery based on assessments undertaken of similar improvement projects to similar land uses. Council has also provided projected visitation numbers for the multi-purpose, co-working, function space, and community rooms.

To supplement data provided by Council, discussions have been undertaken regarding length of stay for the aforementioned land uses data and timings have been agreed upon with Council. Daily in and out movements for the staff within the proposed development have been adopted from the RMS Guide Update. The RMS Guide Update provides data on hourly traffic movements which has been used to inform the arrival times and departures of Council employees throughout the day. Finally, existing travel mode data has been used to inform private vehicle mode share for visitors and staff members alike to the proposed development.

A holistic parking assessment is considered appropriate due to the provision of community facilities as well as the long-term economic and cultural benefits to the Coffs Harbour Urban Area. The analysis reviewed the net impact of the Proposal noting that the proposed development relocates existing land uses and consolidates these in a single location.

The assessment has therefore considered the on-street and off-street public parking capacities within a 5-minute walk from the development noting that the study area was set as the criteria for the Gordon Street Precinct analysis prepared by Council. The methodology has been discussed and agreed with Council which seeks to generally accommodate the long-term parking demands associated with employees off-street and satisfy the transient short-term parking demands of the community facilities within the local street network and available parking capacities.

Three scenarios (future year horizons) using operational data provided by Council and agreed parameters following discussion with Council officers. The 3 scenarios assessed were: Year of Opening, 5 Year Horizon, and 10 Year Horizon. The parking demand analysis determined that a maximum parking demand of 193 spaces would occur during the weekday 11.00AM-12.00PM peak period 5 years after the development is constructed. During this peak period, the surrounding road network is able to accommodate the demand with a spare capacity of 81 spaces.

The weekend analysis determined a maximum parking demand of 171 spaces between 11.00AM-12.00PM for the 10 Year Horizon Scenario. The surrounding road network is able to accommodate this demand with 393 space spare capacity.

In summary, the parking assessment concludes that the proposed development is supportable. The objective to satisfy the long-term parking demands within the private off-street carpark and short-term community demands within the available on-street and off-street public carpark is achieved. Compliance with the office use and parking supply accords with Council's DCP and the holistic temporal parking demand profile confirms that the peak parking demands can be met by the All Welcome Centre.

1.3 Traffic Assessment

1.3.1 Existing Conditions

Traffic surveys were undertaken in April 2019 to determine the existing intersection flows. The surveys were conducted as at the following intersections:

- Gordon Street / Vernon Street,
- Coff Street / Riding Lane, and
- Vernon Street / Riding Lane.

The surveys indicated that the peak hours occurred from 8:00-9:00AM and 3:30-4:30PM in the morning and afternoon peak periods, respectively. SIDRA intersection modelling determines that all intersections currently operate at LOS A (good operation) with spare capacity during the AM and PM peak hours.

1.3.2 Traffic Generation

To determine the traffic generation of the All Welcome Centre, the RMS Guide Update has been used to inform the hourly entering and exiting traffic movements throughout the day for the commercial / office components. However, for the other land uses of the land, in particular the library, museum and gallery, no direction is provided by the RMS Guide or RMS Guide Update on the traffic generating potential of these land uses. As such, similar to the parking assessment, a first principles analysis is necessary to determine the traffic generation of the Proposal.

The analysis assesses the net impact of the proposed development noting that the Proposal relocates a number of land uses within the immediate vicinity to the Site, and as such, there would be no material change to the surrounding road network.

The following information has been used to assess the traffic generation:

- The staffing and visitation numbers,
- Travel mode data,
- Length of stay per land use,

Using the above information, the AM, PM and site peak periods have been calculated for the weekday and weekend for the Year of Opening and 10 Year Horizon scenarios. The traffic generation is as follows:

Year of Opening

- AM Peak: 82 trips (77 in, 5 out)
- PM Peak: 94 trips (41 in, 52 out)

10 Year Horizon

- AM Peak: 128 trips (120 in, 8 out)
- PM Peak: 175 trips (79 in, 96 out)

Assessing the 10 Year Horizon is standard practice in accordance with RMS guidance and given the level of certainty regarding the projections for the use of the centre, the 10 Year Horizon scenario and traffic assessment is particularly relevant. In order to respond to the SEAR condition which requested analysis of the 20 Year Horizon scenario, a growth rate of 1.5% has been adopted within the local road network in the CBD. Whilst this analysis has been provided, it should be noted that travel behaviours within the CBD will change due to emerging smart technology, growth in public transport usage, and the Coffs Harbour City Centre Master Plan which aims at altering travel modes within the CBD. Therefore, it is that the 10 Year Horizon should be the baseline for this assessment.

1.3.3 Coffs Harbour CBD – Local Traffic Impacts

To assess the future impacts of the above SIDRA intersection analysis has been undertaken of three scenarios: Year of Opening; 10 Year Horizon; and 20 Year Horizon. A growth rate of 1.5% of growth per annum has been applied to the background traffic for both the 10 Year and 20 Year scenarios. SIDRA intersection modelling determined that the intersections within the local road network would continue to operate at LOS A within minimal delay increases, and therefore minimal impact on the operation of the surrounding road network.

1.3.4 Pacific Highway / Coff Street – Arterial Traffic Impacts

The highest forecast increase of traffic generated by the Proposal at the intersection of Pacific Highway / Coff Street would be in the order of 93 veh/hr in the 10 Year scenario, which is an overall increase of 2.2% in traffic travelling through the intersection. This increase would have little material impact on the Pacific Highway / Coffs Street intersection. Furthermore, the Coffs Harbour Bypass project is a committed project which would significantly reduce the traffic volumes on Pacific Highway and therefore improve the future operation of the intersection. The operation of the Pacific Highway (Grafton Street) / Coff Street intersection will therefore generally be consistent with the existing conditions and will accommodate the traffic generated by the Proposal.

In conclusion, the All Welcome Centre is supportable on traffic planning grounds.

1.4 Other Traffic Considerations

A preliminary Construction Traffic Management Plan has been prepared and submitted with this Transport Assessment. The Construction Traffic Management Plan intends to minimise potential impacts to the road network during the construction period.

A Green Travel Plan would be prepared for the Site to reduce the traffic impacts of the Proposal and maximise travel by public and active transport. A target modal split has been developed based on relevant data, reports and Council input. It is expected that the

The access, internal design, pick-up / drop-off area and loading bay has been designed having regard for relevant Australian Standards (AS2890 series). It is expected that a future Condition of Consent would be imposed requiring compliance with these Standards, and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

1.5 Overall Summary

The Transport Assessment supports the proposed All Welcome Centre and concludes that the traffic and parking implications can be accommodate and appropriately managed to align with the economic benefits of the regional centre.

2 Introduction

2.1 Overview

Ason Group has been engaged by Coffs Harbour City Council (Council) to prepare a Transport Assessment (TA) to support a State Significant Development Application (SSDA). The SSDA is for a new Cultural and Civic Space (All Welcome Centre) which will be assessed under Part 4 Division 4.7 of the EP&A Act. The project involves construction of a new building and associated infrastructure to accommodate the new facility.

The Site is located within the City of Coffs Harbour Local Government Area (LGA) and is therefore subject that Council's controls. Notwithstanding, as an SSDA the Proposal will be assessed by the Department of Planning & Environment (DPE).

2.2 Secretary's Environmental Assessment Requirements

Further to the above, Secretary's Environmental Assessment Requirements (SEARs) were issued by the DPE on 10 May 2019 regarding the Proposal. The SEARs outline the key areas for consideration in the assessment of the Proposal and includes specific assessment requirements determined by the Roads and Maritime Services (RMS) and Transport for New South Wales (TfNSW).

The general SEARs relating to transport issues are outlined in **Table 1** below, which also provides a summary response to each SEARs requirement, and reference to the section of this TA providing a more detailed analysis of each requirement.

Table 1: Secretary's Environmental Assessment Requirements

SEARs	Summary Response	TA Section
Accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development.	The existing peak hour vehicle, public transport, pedestrian and cycle movements and existing traffic and transport facilities on the adjacent road network are assessed in Sections 5 and 6.	5, 6
An assessment of the operation of existing and future transport networks, including the bus network and their ability to accommodate the forecast number of trips to and from the development.	The existing and future operation of the transport network and the ability to accommodate the forecast demand is discussed in Sections 4, 5 and 9.	4, 5, 9
The adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development.	The details of the adequacy of the public transport, pedestrian and bicycle networks to accommodate the future demand is described in Section 9.	9
Details of any upgrading or road improvement works required to accommodate the proposed development.	No upgrade or road improvement works would be required to accommodate the traffic generated by the Proposal. The traffic assessment is provided in Section 8.	8
Details of travel demand management measures to encourage sustainable travel choices and details of programs for implementation.	The details of programs, measures and implementations to encourage sustainable travel modes are provided in the Green Travel Plan discussed in Section 9.	9
The impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works, if required.	The cumulative impact of the traffic generated by the Proposal and other developments in the area is assessed in Section 8.	8
The proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones.	A technical review of the proposed car and bus pick-up/drop-off facilities and traffic mitigation measure are described in Sections 7 and 9. The existing pedestrian crossing on Gordon Street would be retained.	7, 9
The proposed car and bicycle parking provision, including end-of-trip facilities, which must take into consideration the availability of public transport and the requirements of Council's relevant parking codes and Australian Standards.	The proposed car and bicycle parking and end-of-trip facility provision has been assessed with regard to the relevant codes and Standards, as detailed in Section 7.	7
Proposed bicycle parking facilities in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance.	The proposed bicycle parking facilities are located in the basement car park, which satisfies the highest safety level. This is discussed in Section 9.	9
Details of emergency vehicle access arrangements.	Details of the emergency vehicle access arrangements is described in Section 7.	7
An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures.	A SIDRA intersection analysis has been undertaken of the existing road network which determined that they currently operate with acceptable delay times and operate well within capacity. In addition, the existing pedestrian facilities include a crossing across Gordon Street which directly connects to the Site. This is considered sufficient for the future pedestrian volumes of the site. However, investigations into the provision of raised thresholds or speed humps are being considered.	5

	A review of crash history data within the local road network indicates that there is no systemic issue that requires addressing.	
Service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times).	The service vehicle arrangements and estimated service vehicle movements is described in 7.	7
Details of typical events that would occur at the site, including details of potential patronage and/or capacity.	Details of typical events were provided by Council and summarised in Section 7.	7
A transport management plan with a particular focus on the safe movement of pedestrians from public car parking areas surrounding the site before and after scheduled events.	A suitable Traffic Management Plan (TMP) would be implemented subject to Council's approval. The TMP would aim to mitigate the traffic and parking aspects of the event, such as the use of Traffic Controllers to direct traffic flow, allocating areas to accommodate overflow parking and general procedures to ensure pedestrian safety. A TMP would be submitted prior to each event to ensure that traffic and parking are appropriately managed.	7
The total impact of existing and proposed development on the road network with consideration for a 20-year horizon, including consideration of future growth.	The impact of the Proposal with consideration to growth over a 20-year horizon is assessed in Section 8.	8
The volume and distribution of traffic generated by the proposed development	The traffic volumes generated by the Proposal and the distribution are analysed in Section 8.	8
Identification of impacted intersections from this development, including the intersections with the classified (State) road network.	The impacted intersections within the State road network is assessed in Section 8.	8
Consideration of turning lane warrants and identification of appropriate intersection treatments for the identified intersections for service vehicles, based on *Austroads Guide to Traffic Management Part 6 and Austroads Guide to Road Design Part 4A*.	Consideration for turning warrants at the identified intersections for service vehicles has been discussed in Section 8.	8
Capacity analysis using Sidra or similar, to identify Level of Service at identified intersections of Grafton Street.	The future operation of the Pacific Highway (Grafton Street) / Coff Street intersection has been assessed by calculating the net increase of traffic relative to the base flows for the year of opening, 10-year and 20-year horizons. The traffic distribution of the existing volumes was adopted to inform the distribution of the additional traffic. This analysis established that the volumes travelling through intersection would have no material impact on the operation of the intersection due to the low traffic volumes (refer to Section 8). As such, SIDRA analysis has not been undertaken of the Grafton Street intersection. Furthermore, the completion of the Coffs Harbour Bypass would reduce the traffic along Pacific Highway within the vicinity of the site.	8
Swept path analysis for the largest design vehicle at identified intersections.	Swept path analysis for heavy vehicles have been assessed as part of the draft Construction Traffic Management Plan. It is noted that the heavy vehicles used for construction would be greater in size than the largest anticipated heavy vehicle for the Proposal (Heavy Rigid Vehicles for deliveries). The Construction Traffic Management Plan has been attached to this report for reference.	Appendix C
Impacts of road traffic noise.	Refer to Acoustic Engineers Report	N/A
Where road safety concerns are identified at a specific location, the TIA shall be supported by a targeted Road Safety Audit undertaken by a suitably qualified person.	No road safety concerns were identified as part of this assessment.	
In relation to construction traffic:	A draft Construction Traffic Management Plan (CTMP) has been prepared to address the relevant issues and	Appendix C

○ assessment of cumulative impacts associated with other construction activities in the local area ○ an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity ○ details of the construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process ○ details of anticipated peak hour and daily construction vehicle movements to and from the site ○ details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle ○ details of temporary cycling and pedestrian access during construction ○ details of proposed construction vehicle access arrangements at all stages of construction ○ traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport. This shall include the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact (which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities).	procedures. The CTMP has been attached to this report for reference.	

2.3 Study Objectives

The key objectives of this TA are as follows:

- To provide an appropriate response to the SEARs;
- To demonstrate that there is an appropriate and sustainable provision of car and bicycle parking;
- To establish that the forecast trip generation of the Proposal can be appropriately accommodated by the local and arterial road network; and
- To demonstrate that the proposed access driveways, internal roads, car parks and service facilities comply with the relevant Australian Standards.

2.4 Reference Documents

Key documents referenced in the preparation of the TA Report include:

- Coffs Harbour Local Environmental Plan 2013 (CHLEP)
- Coffs Harbour Development Control Plan 2015 (CHDCP)
- Coffs Harbour City Centre Master Plan 2031 (Coffs Harbour Master Plan)
- Precinct Analysis Gordon Street Library and Gallery (Precinct Analysis Gordon Street)
- Roads and Maritime Service (RMS) *Guide to Traffic Generating Developments* (RMS Guide)
- RMS Technical Direction TDT 2013/04a, *Guide to Traffic Generating Developments – Updated Traffic Surveys* (RMS Guide Update)
- Australian Standard 2890.1: *Parking Facilities – Off Street Car Parking* (AS 2890.1)
- Australian Standard 2890.2: *Parking Facilities – Off Street Commercial Vehicle Facilities* (AS 2890.2)
- Australian Standard 2890.3: *Parking Facilities – Bicycle Parking*
- Australian Standard 2890.6: *Parking Facilities – Off Street Parking for People with Disabilities* (AS 2890.6)
- Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area Transport for New South Wales (TfNSW, December 2013)
- Austroads Guide to Traffic Management Part 6
- Austroads Guide to Road Design Part 4A.
- Austroads Research Report AP-R528-16 Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management.
- Intersection Analysis Report for Harbour Drive-Gordon Street Intersection (Bitzios Consulting, June 2012)
- Coffs Harbour City Centre Car Parking Study (Bitzios Consulting, March 2018)
- Coffs Council Staff Commuting Report 2010 (Coffs Commuting Report)
- Coffs Harbour City Council 2018 Community Wellbeing Survey (Coffs Community Wellbeing Survey)

2.5 Report Structure

This TA Report is structured as follows:

- Section 3 provides an overview of the Proposal;
- Section 4 summarises the strategic context documents relevant to the Proposal;
- Section 5 details the existing Site conditions, including the local traffic conditions;
- Section 6 outlines existing and proposed public transport, pedestrian and cycling links;
- Section 7 outlines the parking requirements applicable to the Proposal, and proposed parking provision;
- Section 8 assesses the traffic impacts of the development, including the Site's projected trip generation and forecasted network performance;
- Section 9 provides a preliminary review of Sustainable Travel Planning strategies.
- Section 10 discusses the Proposal with respect to the strategic objectives and outcomes of Council planning documents
- Section 11 reviews the design of internal access driveways, parking and service areas with reference to the appropriate Australian Standards; and
- Section 12 provides a summary of the key conclusions.

3 Overview of Proposal

This Transport Assessment has been prepared to inform the EIS and State Significant Development Application SSDA for the All Welcome Centre which will be assessed under Part 4 Division 4.7 of the EP&A Act. The project involves construction of a new building and associated infrastructure to accommodate the new facility.

The Proposal is summarised as follows:

- Construction of a temporary site compound and site office;
- Earthworks and associated excavation for footings and basement area;
- Construction of a new building to accommodate the proposed Cultural and Civic Space including a regional gallery, central library, regional museum, multi-purpose meeting rooms, co-working space, shop, café, function space (including use as Council Chambers), customer service area, Council staff office accommodation and underground car parking;
- New Basement carpark (74 Carparks)
- 60 bicycle rails for visitors and 40 bicycle racks for staff/employees, and
- Access to and from the site in Gordon Street.

In summary, the Proposal provides for the construction of a multi-purpose development as summarised in **Table 2**.

Table 2: Proposed Development Yield

Provision	Yields
Regional library	2,775 m^2
Regional gallery	948 m^2
Regional museum	577 m^2
Shop	40 m^2
Café	114 m^2
Function space / Co-working space / Multi-purpose rooms / Council Chambers	765 m^2
Customer service area	229 m^2
Council administration and offices	2,968 m^2

Reduced copies of the ground floor and basement plans are provided in **Figure 1** and **Figure 2** for context.

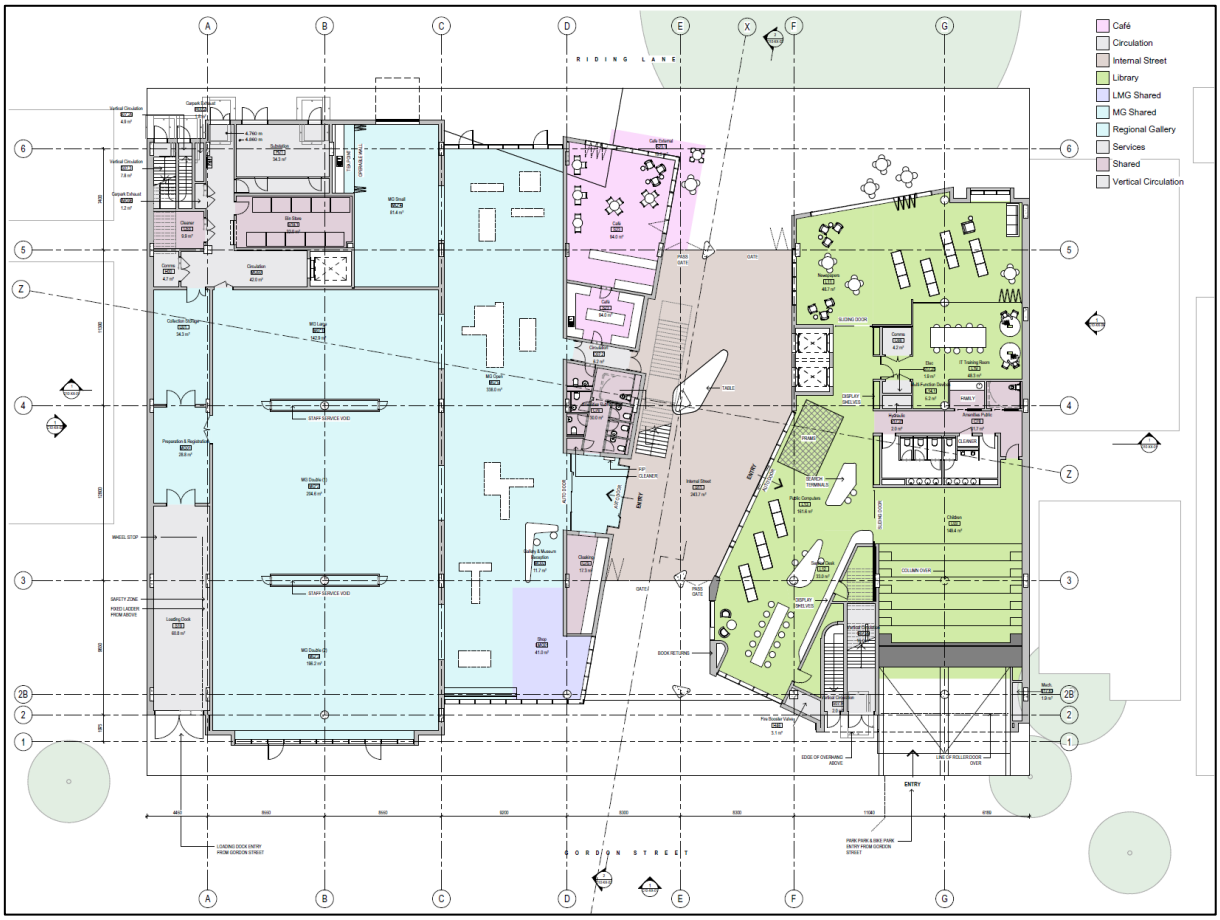


Figure 1: Ground Floor Plan

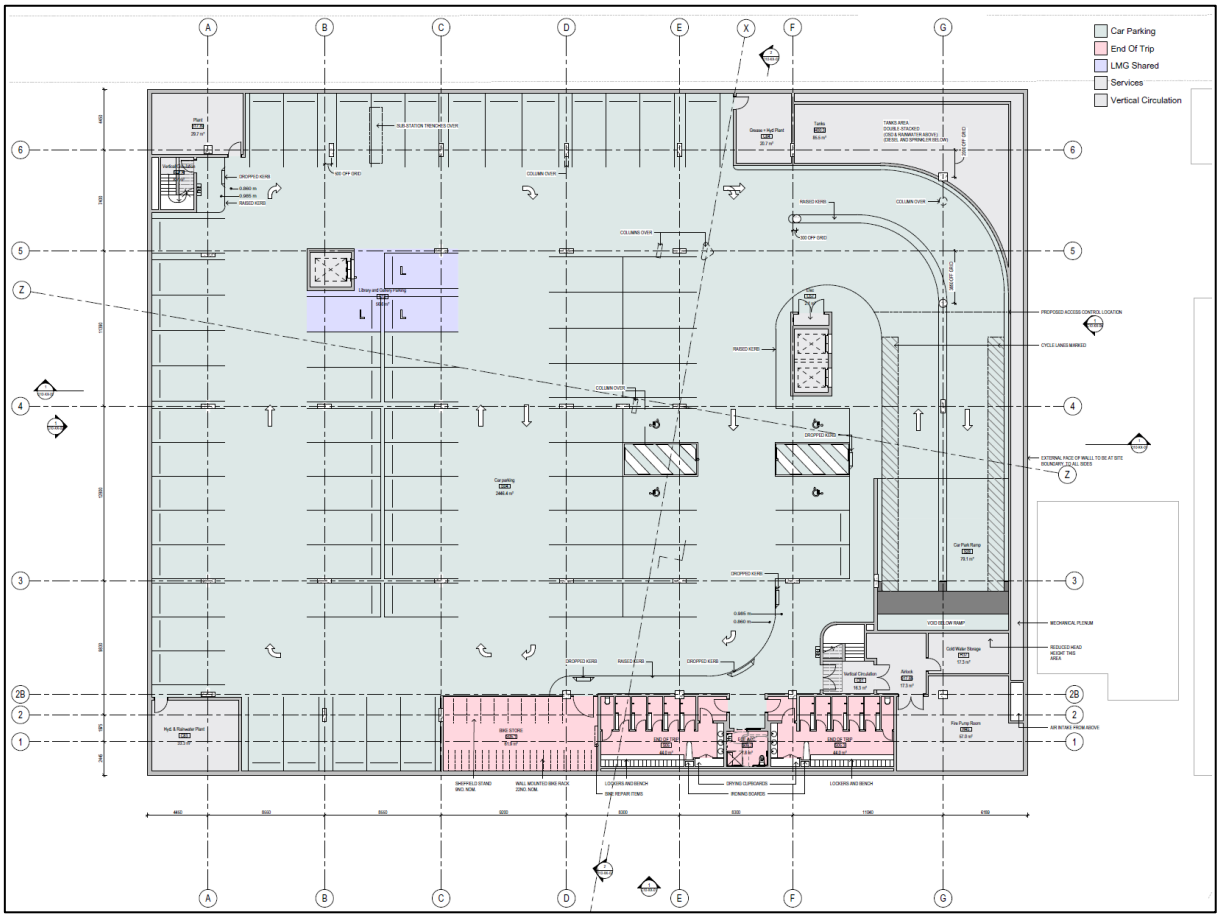


Figure 2: Basement Plan

4 Strategic Context

4.1 Council Planning Documents

4.1.1 Coffs Harbour City Centre Master Plan 2031

The Coffs Harbour City Centre Master Plan 2031 (Coffs Harbour Master Plan) identifies the strategies and policies to transform Coffs Harbour CBD into a vibrant and well-connected City Centre.

The Coffs Harbour Master Plan aims to increase public and active transport in the City Centre through the provision of new cycleways, bicycle parking facilities, footpaths, mid-block pedestrian connections and a new bus hub.

With respect to the Proposal, The Coffs Harbour Master Plan intends to provide for new cycling routes including cycling connections on Gordon Street (along the Site's eastern frontage), Harbour Street and an extension of the existing Coff Street cycle path, as illustrated in **Figure 3**.

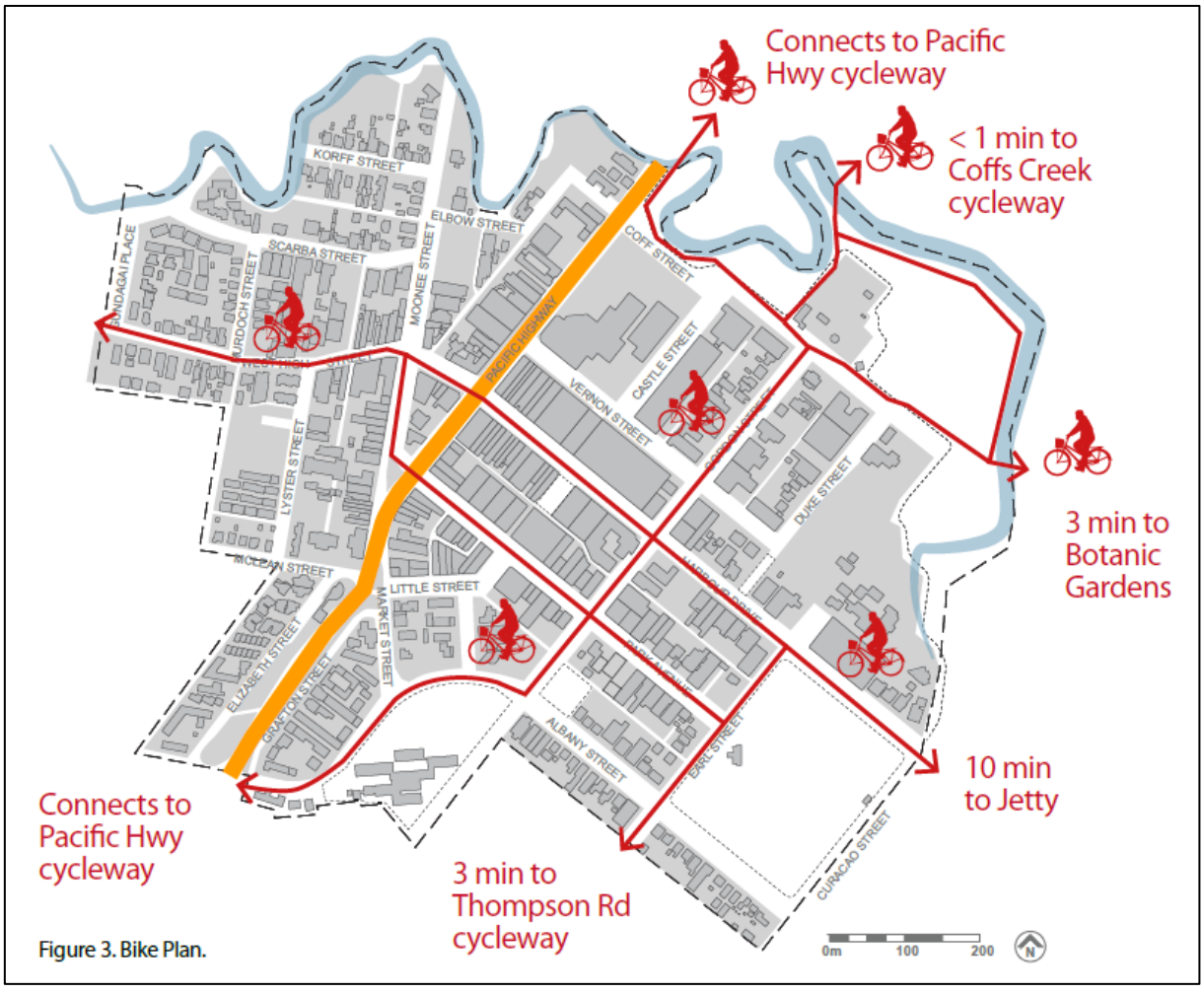


Figure 3: Proposed Cycling Network Connections

The future car parking in the City Centre was also assessed with respect to existing and forecast demand. Items which were investigated included new car parking areas (up to 8 locations under investigation) to manage increasing parking demand, replacement of parking facilities removed due to street reconfiguration and changing parking restrictions for efficiency purposes. The potential parking location plan is provided in **Figure 4**. In a local context, the study concluded that the Castle Street / Riding Lane Carpark extension could potentially provide an additional 120 spaces. The Coffs Harbour Master Plan provides a high-level overview of the likely sources of funding which include:

Joint ventures with private developer using existing Council land;

Government grants;

Special infrastructure contributions;

Select charging for parking;

One off rates payment;

Leasing options;

Crowd funding;

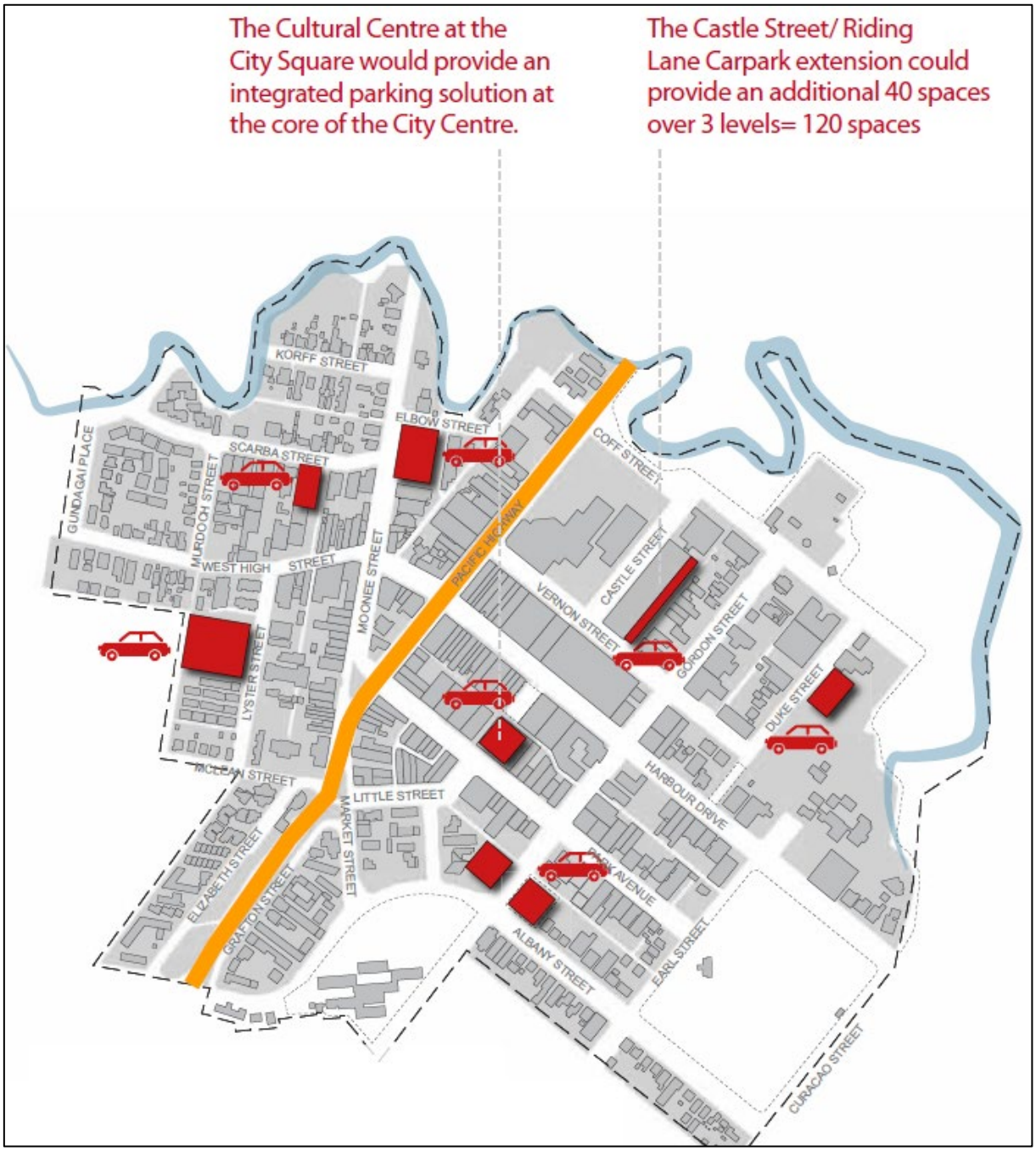


Figure 4: Potential Parking Location Plan

The Coffs Harbour Master Plan also discusses the intention for future investigation into on-street reconfiguration works for Gordon Street, see **Figure 5** for reference.

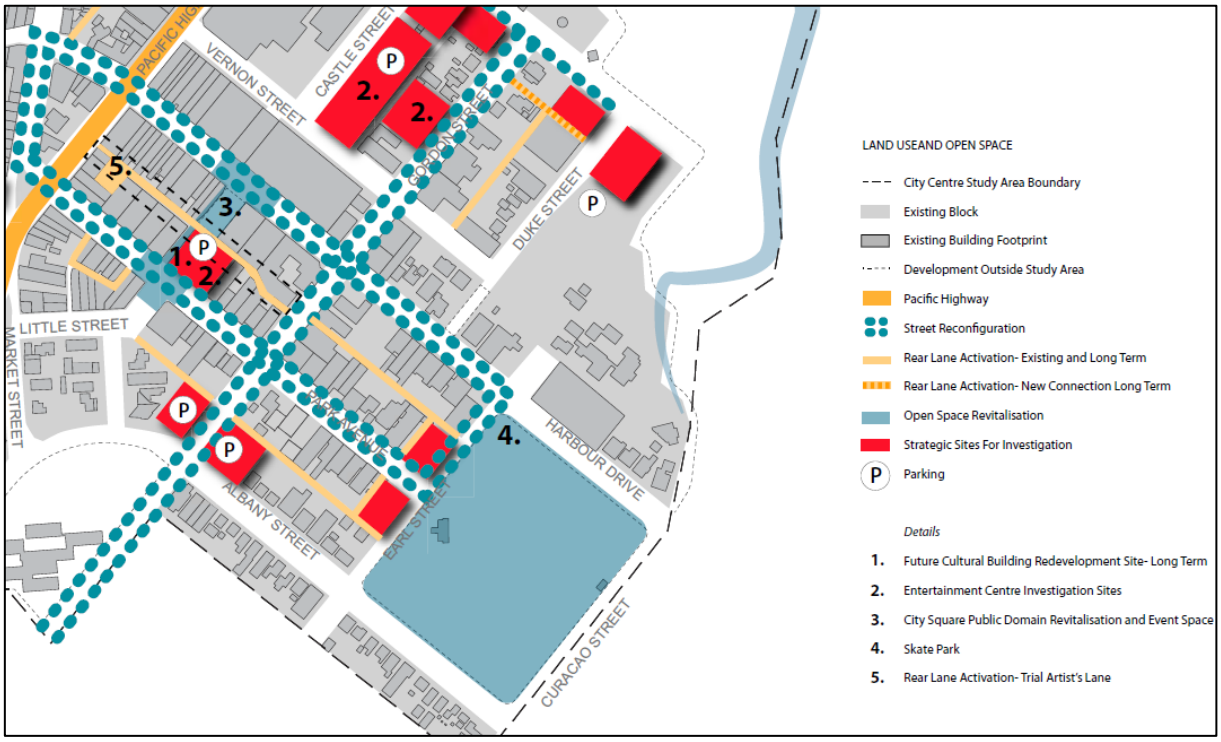


Figure 5: Potential On-street Reconfiguration Works

4.1.2 Precinct Analysis Gordon Street Library and Gallery

The Coffs Harbour Master Plan is supplemented by the Precinct Analysis Gordon Street Library and Gallery (Precinct Analysis Gordon Street) which was released in April 2017. The Precinct Analysis Gordon Street report investigated the All Welcome Centre specifically with regard to the parking, traffic and pedestrian implications further to the Coffs Harbour Master Plan. The parking facilities within walking distance of the Site are presented in **Figure 6**, which accounts for a 5-minute walk (approximately 400m). This parking study area is pertinent to the subject SSDA and sets the baseline for assessment of future parking demands.

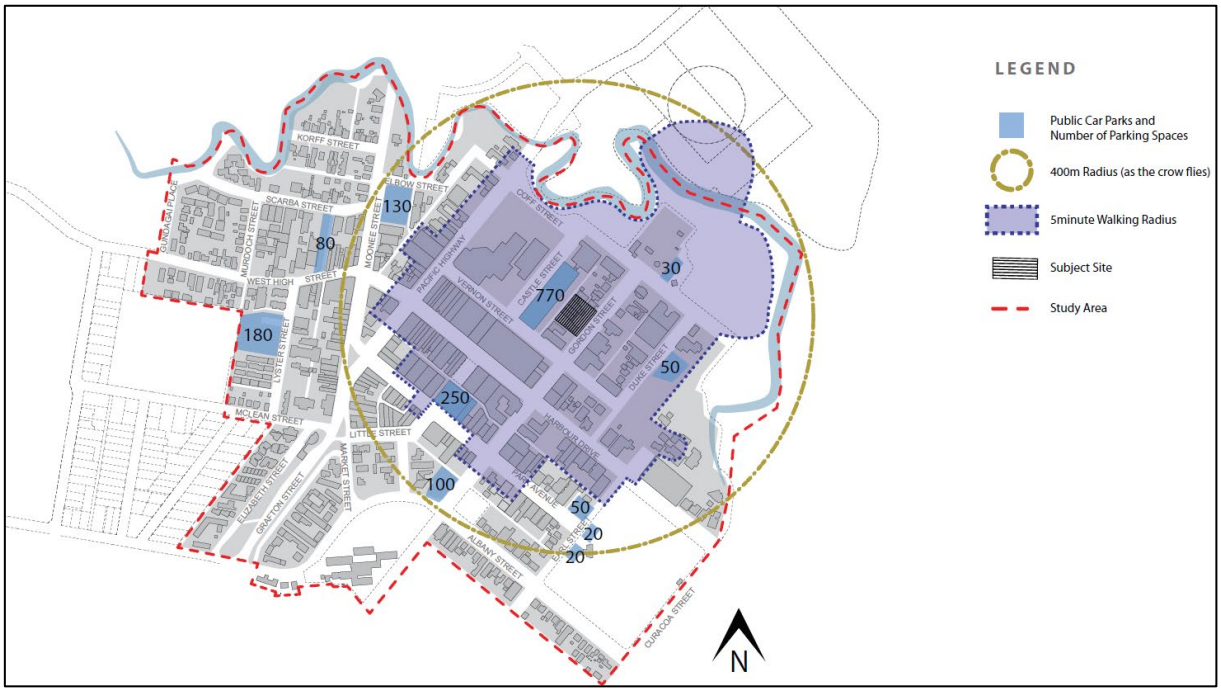


Figure 6: Surrounding Parking Facilities

The Precinct Analysis Gordon Street report also investigated the potential upgrades works to Gordon Street, which includes the realignment of Gordon Street parking, the provision of dedicated cycle path and mid-block pedestrian connections. The potential Gordon Street works at the Proposal location are illustrated in **Figure 7**. Again, this concept layout has been referred in the design development of the All Welcome Centre which seek to provide the infrastructure and future proofing ability to deliver the key components of this Plan.

The report also expresses Council's desire to investigate the conversion of the Gordon Street / Vernon Street roundabout into a signalised intersection, as shown in **Figure 8**.

Figure 7: Gordon Street Potential Reconfiguration Works

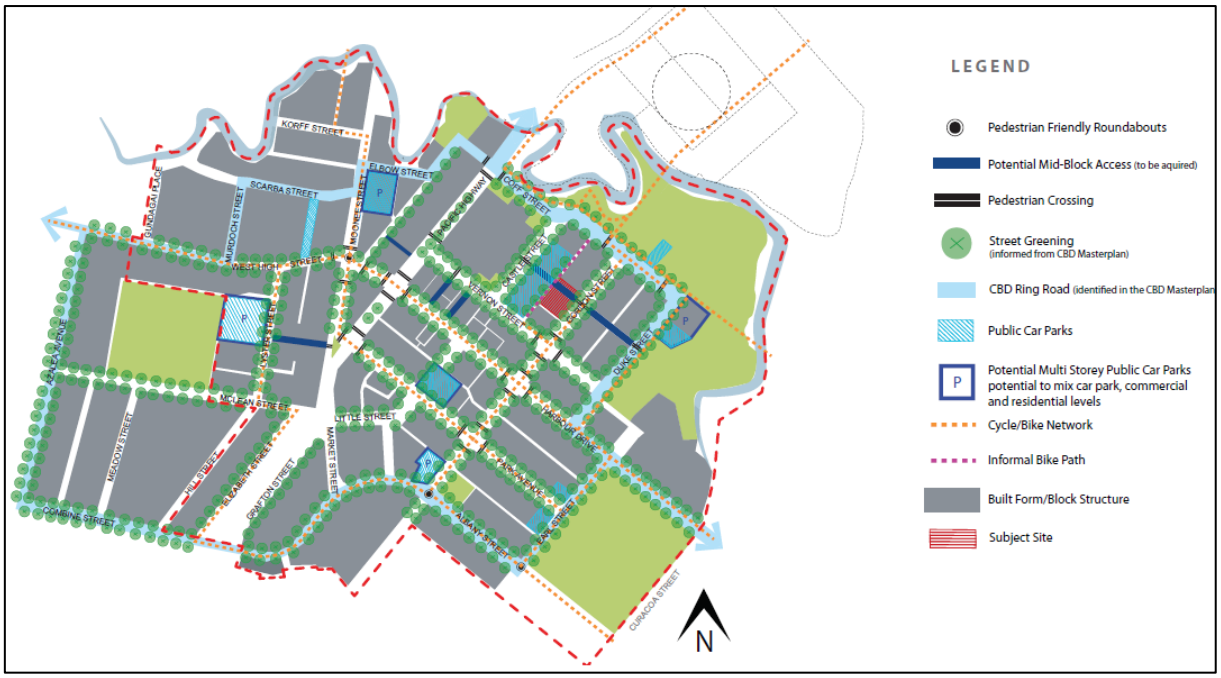


Figure 8: Design Precinct Plan

4.2 Relevant Studies and Reports

4.2.1 Coffs Harbour Bypass Project

The Coffs Harbour Bypass is a traffic project by the Australian and NSW governments to provide a 14km bypass with the purpose to "*improve connectivity, road transport efficiency and safety for local and interstate motorists*". The Coffs Harbour bypass concept design plan in relation to the Site is provided in overleaf, for reference. Investigations have been undertaken on impacts to traffic volumes along the Pacific Highway within Coffs Harbour and are detailed in **Figure 9**.

	Base Daily Volumes			Project Daily Volumes		
Location	**2024**	**2034**	**2044**	**2024**	**2034**	**2044**
Bypass						
North of Coramba Road	-	-	-	19,100	21,200	23,400
South of Coramba Road	-	-	-	24,600	27,100	29,300
Existing Pacific Hwy						
South of Bruxner Park Rd	38,600	43,300	46,500	33,400	36,600	40,000
North of Orlando St	45,800	49,700	52,000	35,000	37,700	39,600
South of Albany St	34,300	36,000	36,000	19,500	21,200	21,200
Local Network						
Hogbin Dr north of Park Beach Rd	8,900	11,000	10,000	6,500	8,000	8,400
Hogbin Dr north of Harbour Dr	18,000	19,100	18,800	13,800	14,800	15,100
Hogbin Dr north of Stadium Dr	28,900	31,300	31,700	20,700	21,800	22,600
Stadium Dr east of Pac Hwy	10,400	11,600	13,500	11,300	11,800	13,200
Bray St east of Joyce St	10,600	11,400	12,200	8,000	8,200	8,400
West High St west of Murdock St	9,000	10,500	11,800	9,500	10,200	10,600
Coramba Rd between Shephards Lane and Robin St	12,800	13,600	14,500	10,800	11,700	13,000
Coramba Rd between Bypass and Shephards Lane	9,200	9,500	9,900	9,900	10,900	12,600

Figure 9: Coffs Harbour Bypass Traffic Reduction

As is evident from the above, it is anticipated that the Coffs Harbour Bypass would results in a ~40% decrease in traffic south of Albany Street and ~25% decrease north of Orlando Street. Noting that the Proposal is between Albany Street and Orlando Street, the Coffs Harbour Bypass would significantly reduce daily traffic flows on Pacific Highway and would therefore improve intersection operation in the future within the vicinity of the Site.

The financial obligations of the project have been committed and construction works are expected to commence in 2020 with a forecast completion date of 2024.

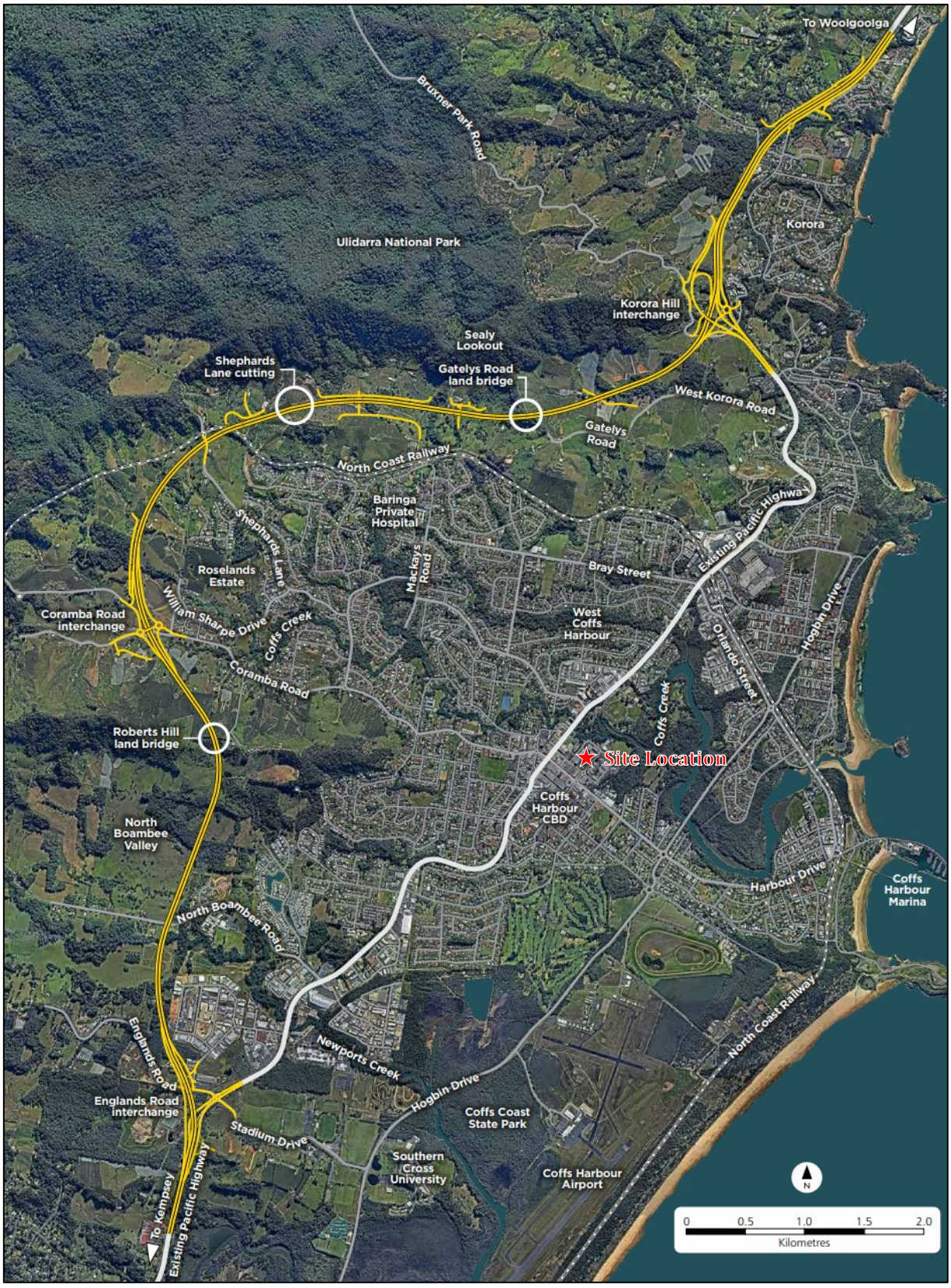


Figure 10: Coffs Harbour Bypass Concept Design Plan

4.2.2 Coffs Council Staff Commuting Report 2010

The Coffs Council Staff Commuting Report 2010 (Coffs Commuting Report) was undertaken by Council in 2010 through an online survey program, SurveyMonkey, to determine existing travel modes. Furthermore, the surveys provided insight into the recommended infrastructure changes that would encourage a shift towards sustainable travel modes such as walking, cycling and public transport. The information provided in this study has formed the basis of the target modal splits discussed later in this report.

4.2.3 Coffs Harbour City Centre Car Parking Study 2018

The Coffs Harbour City Centre Car Parking Study (Bitzios Parking Study) was undertaken by Bitzios Consulting in March 2018. This report was a Council commissioned study into the existing conditions of on-street and off-street parking. The Bitzios Parking Study analysed the weekday and weekend periods and also formed a comparative assessment of the Coffs Harbour City Plan 2031 traffic and parking study by GTA Consultants.

The results of the Bitzios Parking Study informed the car parking assessment in Section 6 of this report.

4.2.4 Coffs Harbour CBD Traffic Study - Intersection Analysis Report for Harbour Drive-Gordon Street Intersection 2012

The Coffs Harbour CBD Traffic Study - Intersection Analysis Report for Harbour Drive - Gordon Street Intersection (Bitzios Intersection Analysis Report) is a traffic study conducted by Bitzios Consulting. The report specifically the investigated the operation of Harbour Street / Gordon Street and Gordon Street / Vernon Street intersections with modelling software SIDRA.

The findings of the Bitzios Intersection Analysis Report formed the basis of a comparative assessment between the 2012 operation and the forecast operation. In this regard, the results of the SIDRA intersection software modelling undertaken for this TA demonstrate comparable results per the SIDRA analysis by Bitzios. The SIDRA results further to the traffic generated by the Proposal are presented in Section 7.3.

5 Existing Conditions

5.1 Site & Location

The subject Site has a street address of 23-31 Gordon Street, Coffs Harbour and is legally known as Lot 20, Section 6 of DP 758258, Lot B of DP 346105 and Lot 123 of DP 749233. The Site is currently occupied by three (3) commercial developments and is located within the Coffs Harbour CBD. It is bound by Gordon Street to the east and Riding Lane to the west. The Site shares a frontage with a single storey church to the south and a low-rise office development to the north.

Within the broader locale, surrounding developments comprise predominantly commercial, business and retail uses.

The key roads around the Site, are shown in their local context in **Figure 11.**

5.1.1 Existing On-street Parking Controls

On-street parking is generally restricted; it is subject to 2-hour parking (2P) from 8:30 AM to 6:00 PM Monday to Friday and 8:30 AM to 12:30 PM Saturday. These parking restrictions generally apply to the roads surrounding the subject Site, including Gordon Street, Vernon Street and Coff Street.

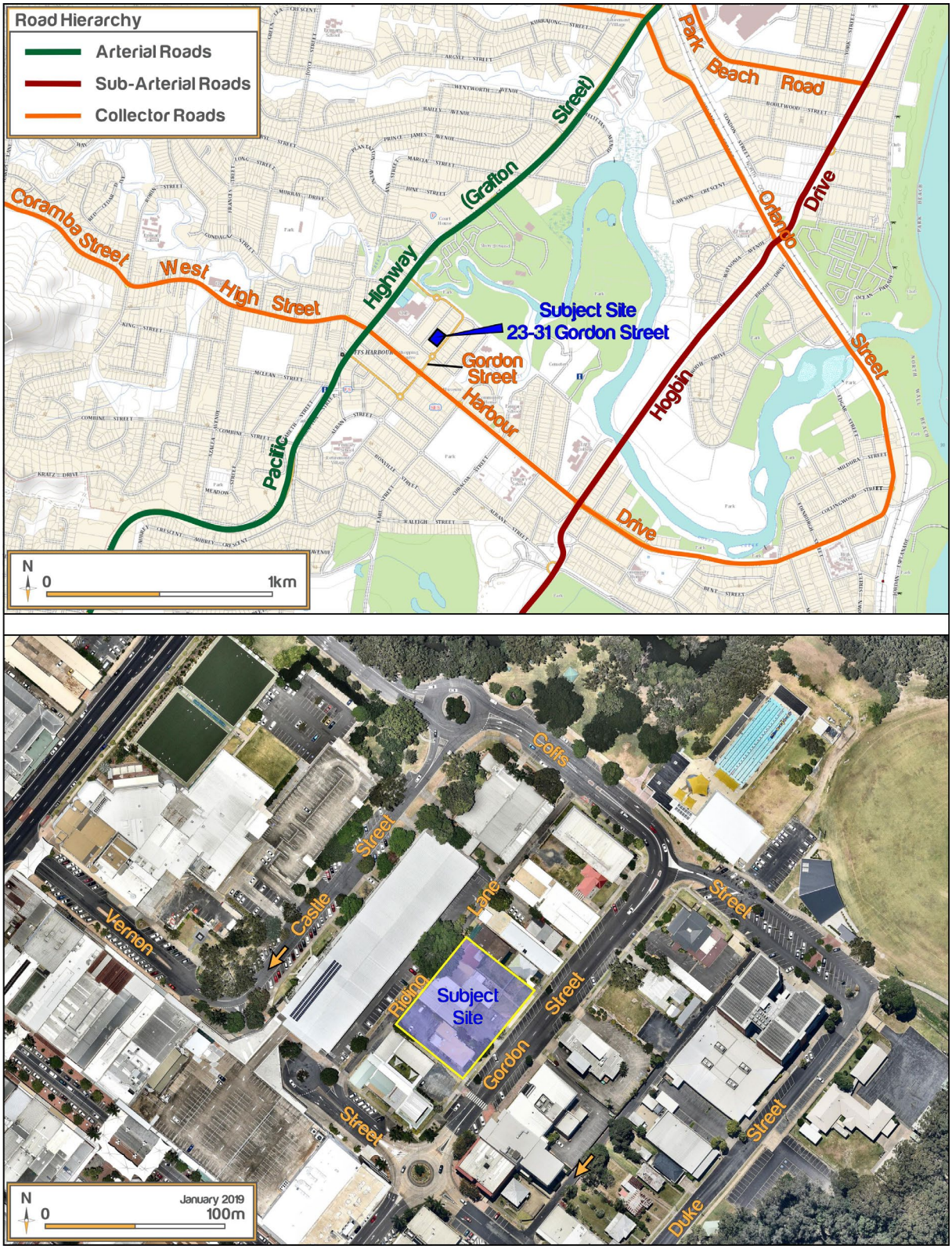


Figure 11: Site Context and Road Hierarchy

5.2 Road Hierarchy

5.2.1 Gordon Street

Gordon Street is a local road which runs in the north-south direction along the eastern frontage of the Site. This bidirectional road provides two trafficable lanes and two parking lanes with 2P parking restrictions. Gordon Street is restricted to a speed limit of 40 km/h in the vicinity of the Site as Coffs Harbour CBD is classified as a High Pedestrian Activity Area (HPAA).

5.2.2 Riding Lane

Riding Lane is a one-way lane that runs along the western frontage of the Site and is subject to a speed limit 40 km/h. It provides one travel lane in the southbound direction and provides vehicular to properties along Gordon Street and the existing Council offices. Furthermore, Riding Lane provides two exit points from the Castle Street Carpark complex.

5.2.3 Coff Street

Coff Street is a local road that runs in the east-west direction and is located to the north of the Site. The road is bidirectional and generally provides five travel lanes with a posted speed limit of 40km/h.

5.2.4 Vernon Street

Vernon Street is a local road that runs in an east-west direction and is located to the south of the Site. The road is bidirectional and generally provides two travel lanes and two parking lanes with 1P parking restrictions and has a posted speed limit of 40km/h except for a small section of Shared Zone (10km/h speed limit) at the Coffs Central pedestrian entrance.

5.2.5 Pacific Highway

Pacific Highway is a State (arterial) road that runs in a north-south direction to the west of the Site. The road provides four travel lanes and two parking in both directions and provides a link between Korora and Boambee. Pacific Highway has a posted speed limit of 60 km/h in the vicinity of the Site.

5.3 Existing Parking Conditions

5.3.1 Off-Street Parking

As discussed, the Bitzios Parking Study is a study into the existing car parking demand which was undertaken by Bitzios Consultants in March 2018. The Coffs Central Car Park (Castle Street) is a large

off-street carpark adjacent to the Site which was surveyed from 8:00AM to 8:00PM on Thursday 23 November and from 8:00AM to 5:00PM Saturday 25 November 2017.

Figure 12 illustrates the occupancy patterns during the Weekday survey period.

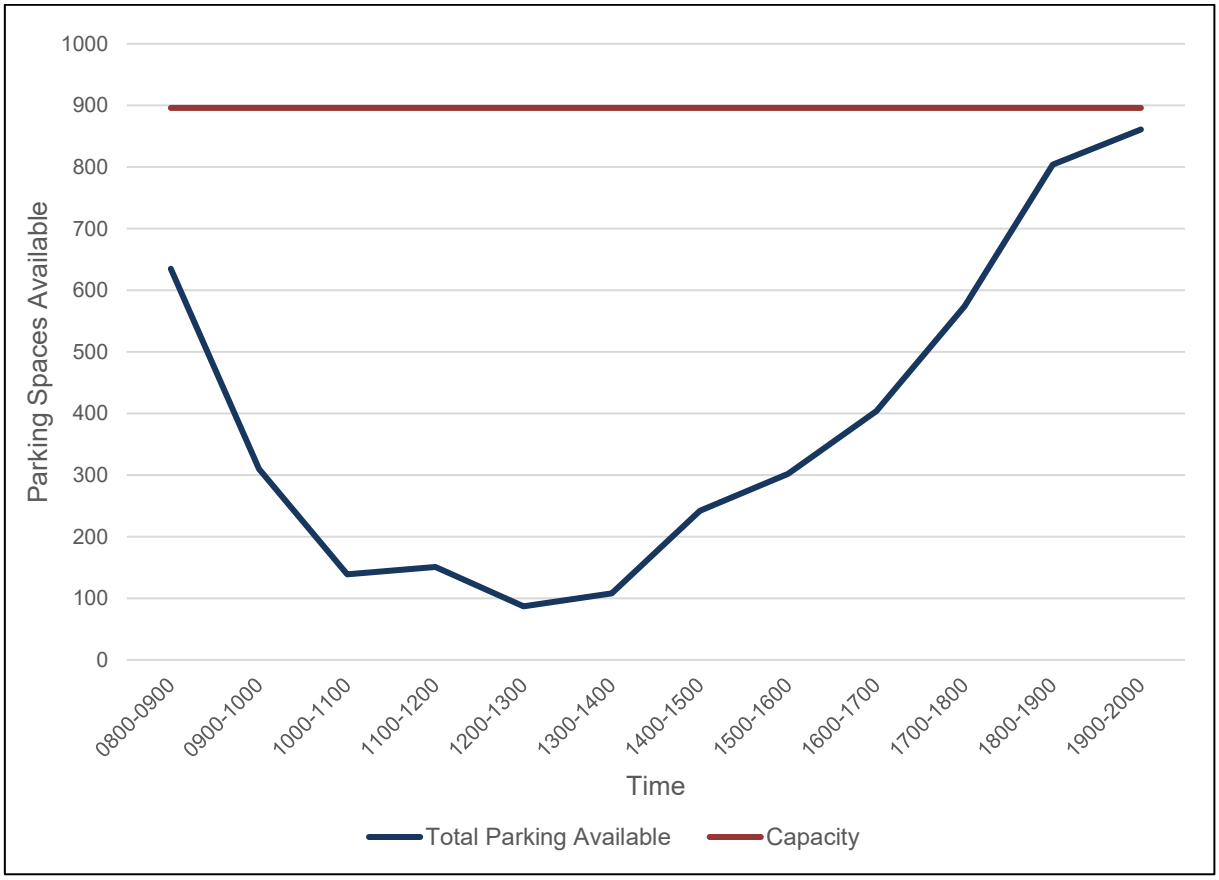


Figure 12: Castle Street Carpark Occupancy – Weekday

The weekday survey results indicate common parking profiles expected for shopping complexes, with the peak parking demand occurring at 12:00PM-1.00PM. At this time, the Castle Street carpark occupancy peaked at 90%.

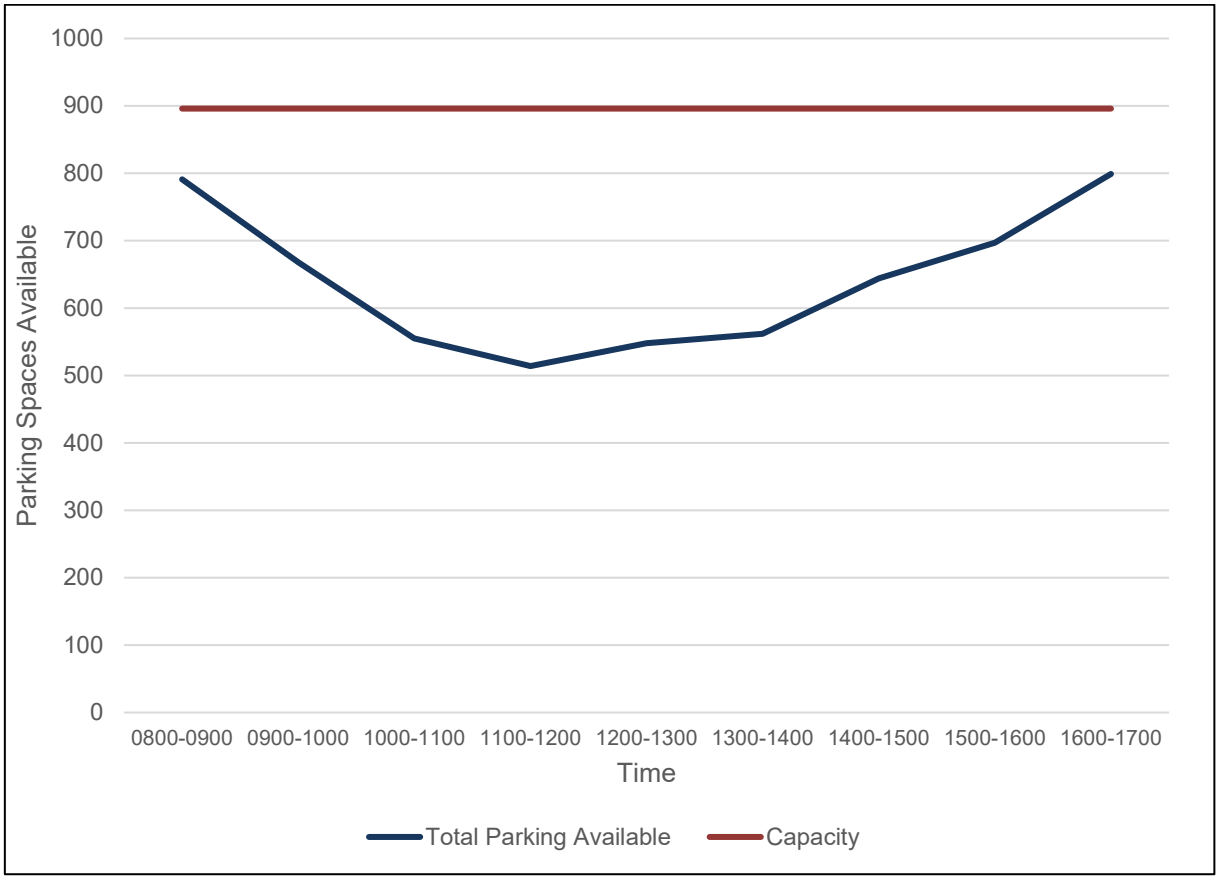


Figure 13: Castle Street Carpark Occupancy – Saturday

The Saturday survey results indicate the peak parking demand occurring between 11:00AM-12.00PM with occupancy peaking at 46%.

5.3.2 On-Street Parking

To determine the on-street parking capacity within the local road network, a review of the Bitzios Parking Study of a Thursday and Saturday was undertaken, noting that an on-street parking occupancy surveys of the Coffs Harbour CBD was undertaken. With reference Figure 6 and the Precinct Analysis of Gordon Street Library and Gallery, a 5-minute walking distance was determined to include the following local roads:

- Gordon Street,
- Vernon Street,
- Coff Street,
- Riding Lane,
- Castle Street,
- Harbour Drive,
- Duke Street,
- Park Lane Avenue, and
- The Pacific Highway

The parking study area is detailed in **Figure 14**.

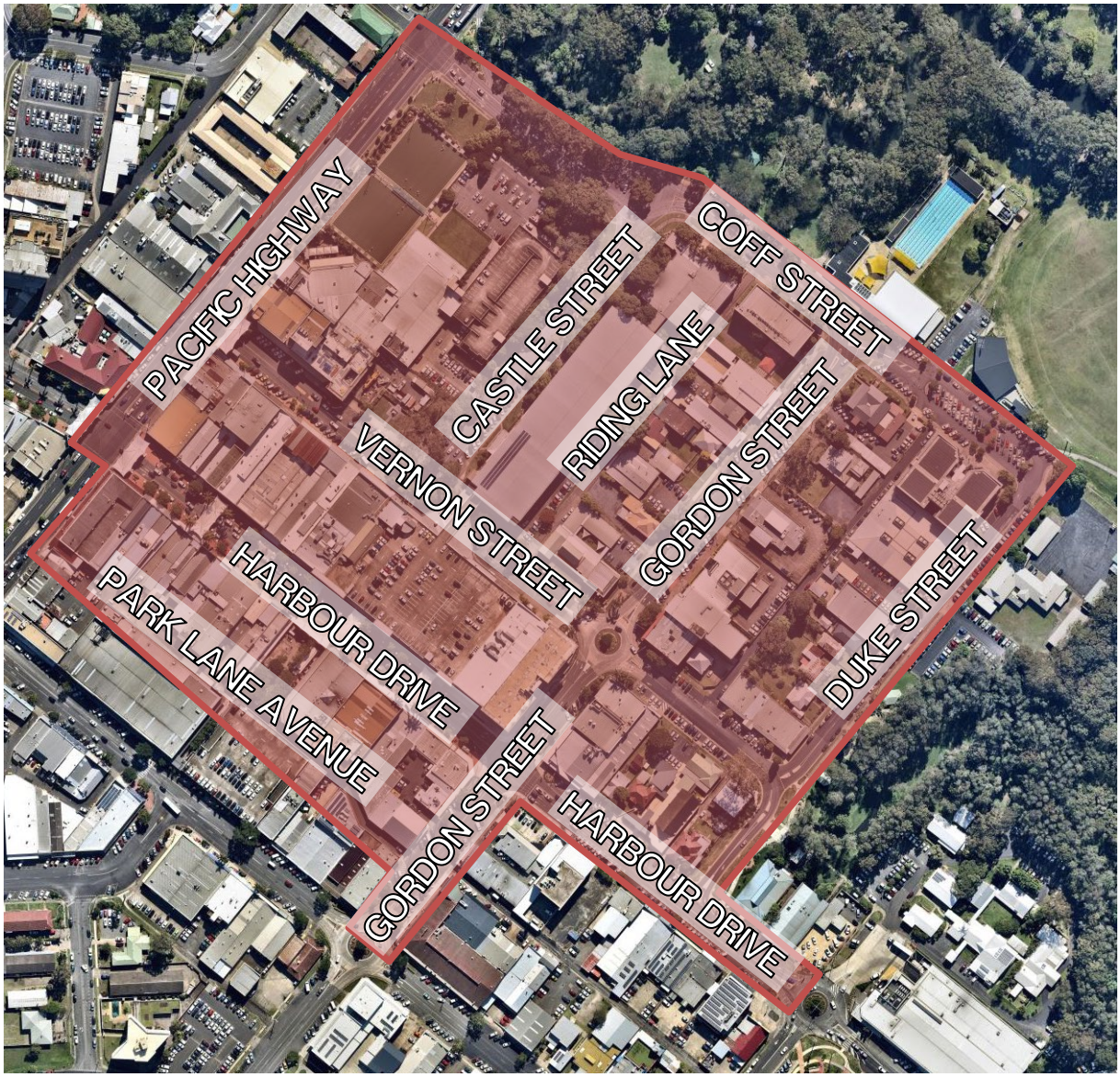


Figure 14: On-street Parking Occupancy Study Area

Noting the above roads and the Bitzios Parking Study, **Figure 15** and **Figure 16** detail the on-street parking availability.

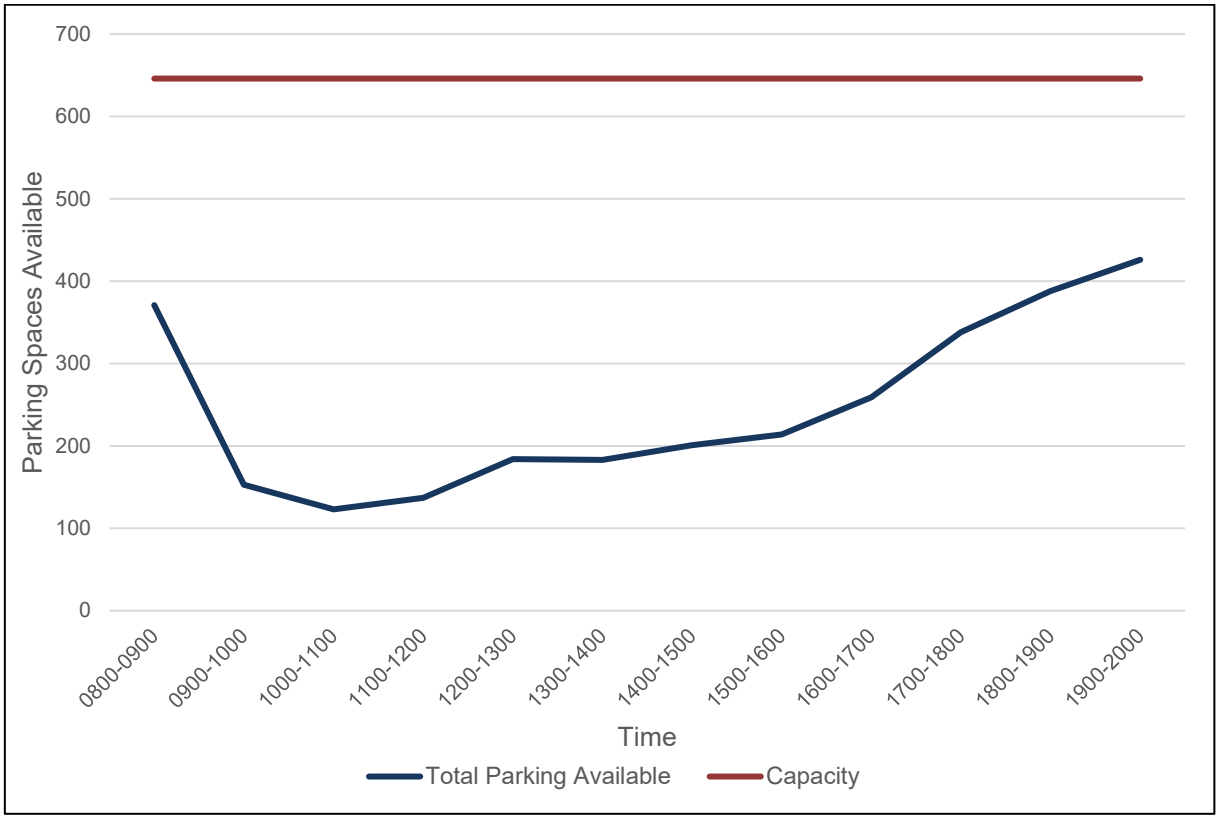


Figure 15: On-street Parking Occupancy – Thursday

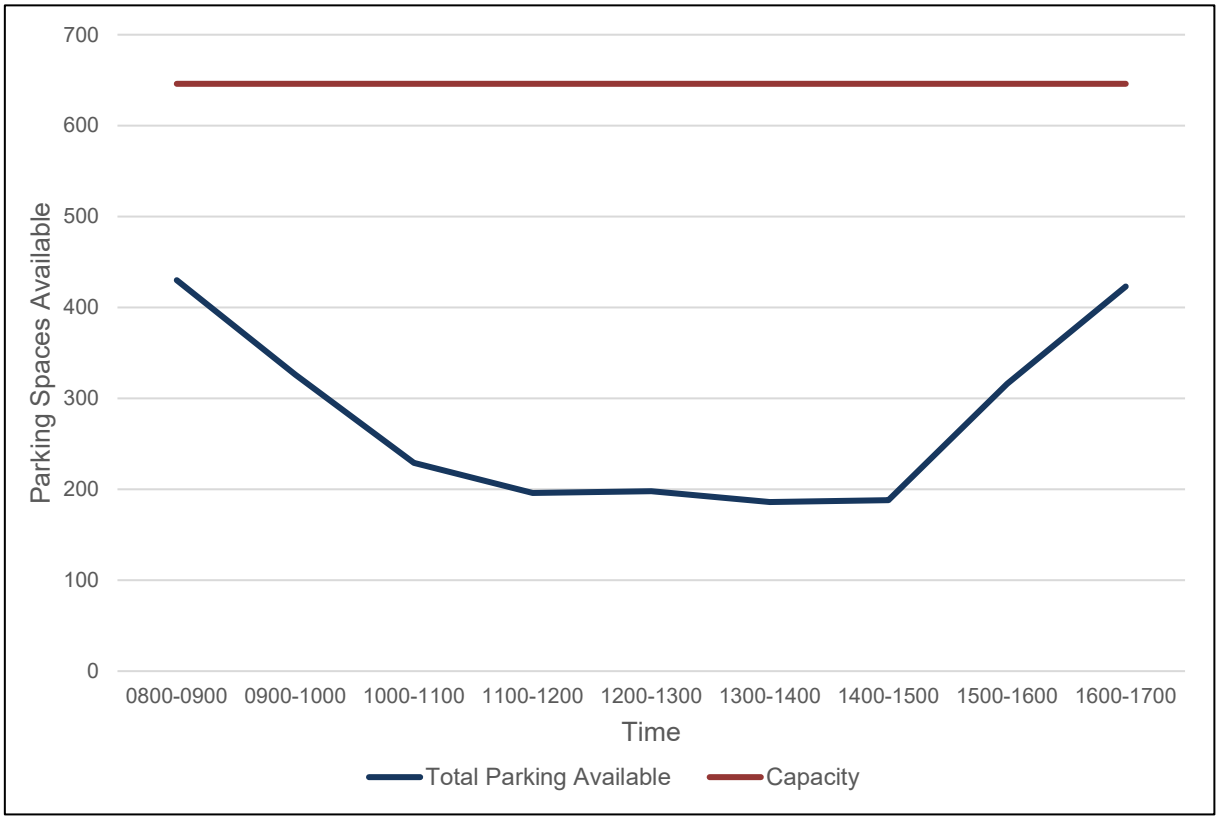


Figure 16: On-street Parking Occupancy – Saturday

As is evident from the above, during the week the on-street parking peaks occur between 11.00AM-12.00PM with 81% of on-street spaces occupied. During the weekend, the peak occurs between 2.00PM-3.00PM with 71% of on-street spaces occupied.

5.4 Existing Travel Data

The existing travel patterns of residents and workers within the surrounding locality was surveyed within the 2016 Census and has been provided by the Bureau of Transport Statistics. **Table 3** details the Journey to Work Method of Travel Data for the Coffs Harbour Urban Area.

Table 3: Coffs Harbour Urban Area Travel Mode Summary

Travel Mode	Mode Share (%)
Bus	0.6
Car – as driver	69.7
Car – as passenger	6.5
Truck	0.8
Motorbike	0.6
Bicycle	1.2
Walked Only	3.8
Other	1.3
Worked at home	4.8
Did not go to work	9.7
Not stated	1.0

As is evident from the above, the majority of employed persons within the Coffs Harbour Urban Area drive to work (69.7%). The data also indicated a low utilisation of public transport, that only 0.6% of commuters used bus services as their primary mode of transport in the Coffs Harbour Urban Area. Further, the Coffs Harbour City Council 2018 Community Wellbeing Survey (Coffs Community Wellbeing Survey) determined that only 16% of 505 respondents used local public transport in the last year.

It is also apparent from the available data that active transport modes are low with 1.2% of commuters cycling to work and 3.8% walking to work. It is noted that the Coffs Community Wellbeing Survey results show that the use of walking of cycling tracks has decreased over time, from 77% to 70% currently.

It is therefore surmised that the existing bus network can readily accommodate the current demand and that bicycle and pedestrian movements in the peak hour periods are low. This conclusion has been validated through various discussion with Council employees

5.5 Existing Traffic Flows

Traffic surveys were undertaken in April 2019 to determine the existing intersection flows. The surveys were conducted as at the following intersections:

- Gordon Street / Vernon Street,
- Coff Street / Riding Lane, and
- Vernon Street / Riding Lane.

The surveys indicated that the peak hours occurred from 8:00-9:00AM and 3:30-4:30PM in the morning and afternoon peak periods, respectively. The existing peak hour intersection flows are provided in **Figure 17** and **Figure 18** below.

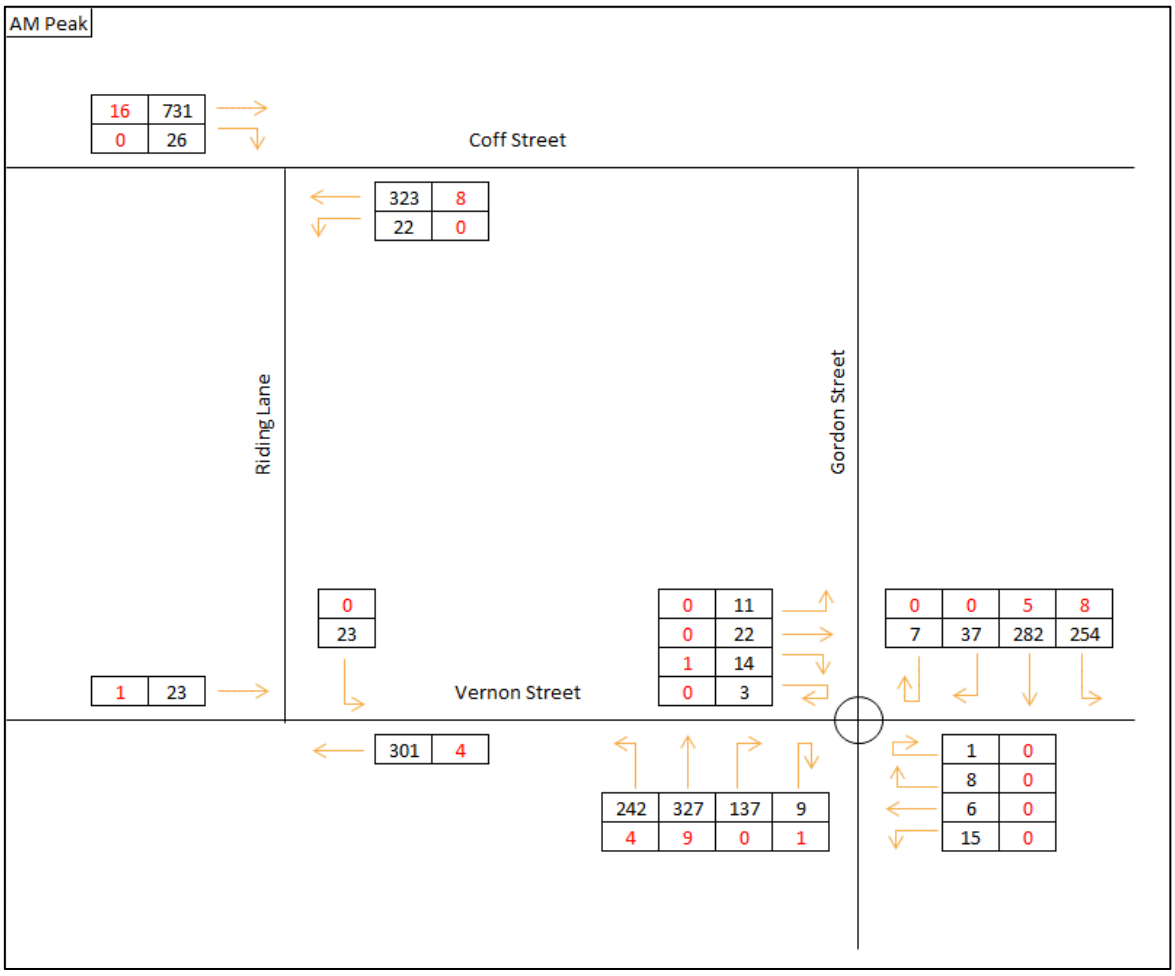


Figure 17: Existing Peak Hour Intersection Flows – AM Peak

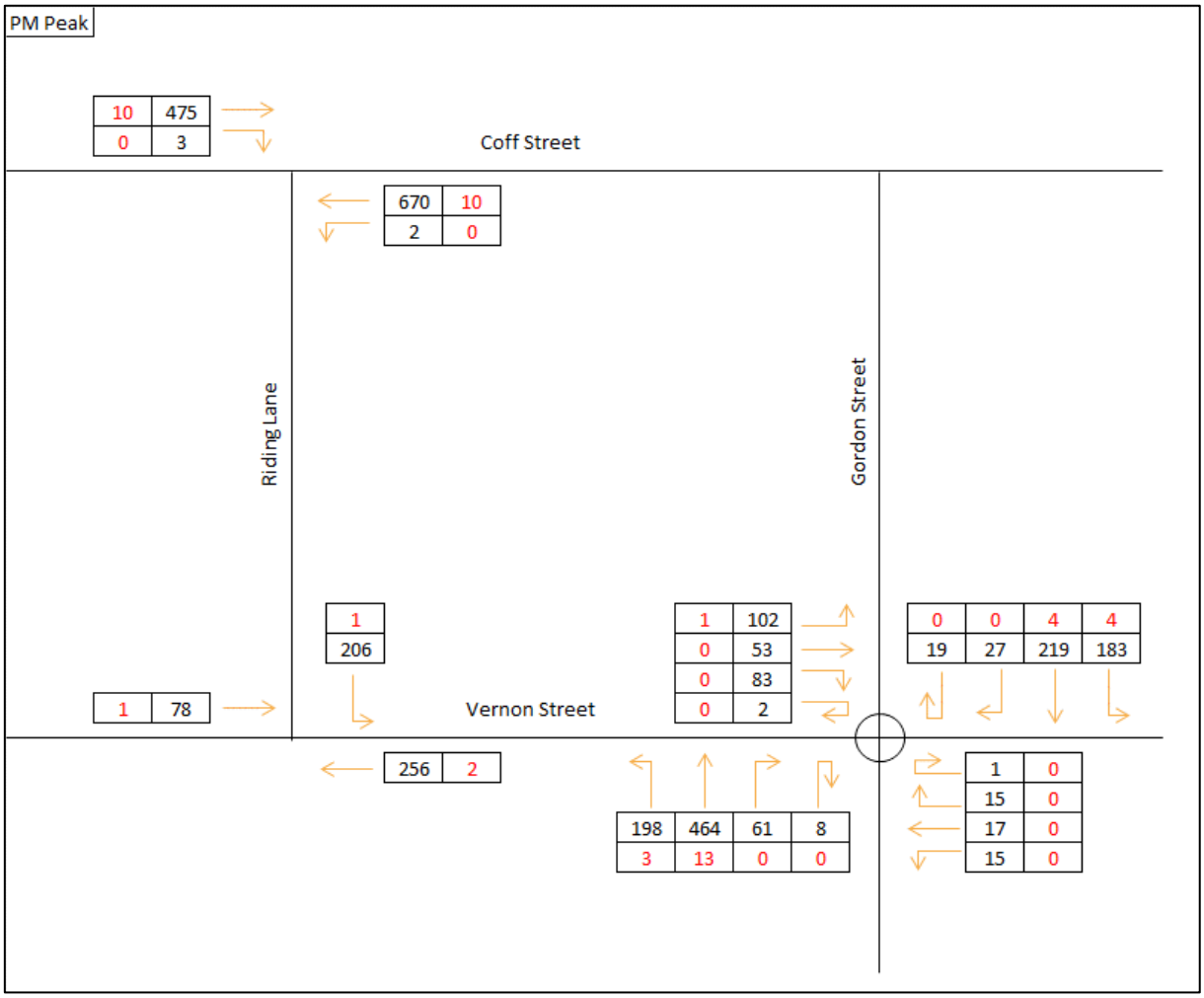


Figure 18: Existing Peak Hour Intersection Flows – PM Peak

5.6 Existing Intersection Performance

5.6.1 Baseline SIDRA Performance Testing

The performance of the key intersections of Gordon Street / Vernon Street, Coff Street / Riding Lane, and Vernon Street / Riding Lane have been analysed using the RMS approved SIDRA Intersection modelling program. SIDRA outputs provide a range of performance measures, including:

- *Degree of Saturation (DOS)* – The DOS is defined as the ratio of demand (arrival) flow to capacity. The DOS is used to measure the performance of intersections where a value of 1.0 represents an intersection at theoretical capacity, above 1.0 represent over-saturated conditions (demand flows exceed capacity) and degrees of saturation below 1.0 represent under-saturated conditions (demand flows are below capacity). As the performance of an intersection approaches DOS of 1.0, queue lengths and delays increase rapidly. It is usual to attempt to keep DOS to less than 0.9, with satisfactory intersection operation generally achieved with a DOS below 0.8.

- *Average Vehicle Delay (AVD)* – The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- *Level of Service (LOS)* – This is a comparative measure that provides an indication of the operating performance, based on AVD. For signalised and roundabout intersections, LOS is based on the average delay to all vehicles, while at priority-controlled intersections LOS is based on the worst approach delay.

Table 4 provides the recommended criteria for the assessment of LOS as per the RMS Guide.

Table 4: RMS Level of Service Summary

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

A summary of the existing intersection performances are provided in **Table 5** which presents the SIDRA intersection modelling results of the key intersections under the existing 'baseline' scenario.

Table 5: Baseline Intersection Performance

Intersection	Period	Degree of Saturation	Average Vehicle Delay	Level of Service
Gordon Street / Vernon Street	AM	0.355	9.4 sec	A
	PM	0.412	10.3 sec	A
Coff Street / Riding Lane	AM	0.218	5.6 sec	A
	PM	0.183	8.1 sec	A
Vernon Street / Riding Lane	AM	0.083	2.9 sec	A
	PM	0.091	2.9 sec	A

With reference to Table 4, the SIDRA modelling results demonstrate that the intersections of Gordon Street / Vernon Street, Coff Street / Riding Lane and Vernon Street / Riding Lane all currently operate at LOS A (good operation) with spare capacity during the AM and PM peak hours. The longer delays times experienced by Gordon Street / Vernon Street are associated with vehicles performing U-turn manoeuvres.

Overall, the existing traffic network generally operates well with minimal delays.

5.7 Crash History Data

A review of the Roads and Maritime crash database has been undertaken to establish the crash history within Vernon Street, Coff Street, Castle Street, and Gordon Street fronting and within the immediate vicinity of the Site.

The results show the crashes over a five-year period between 2013 and 2017. The findings are summarised in **Table 6** below.

In 2014 the NSW Police Force implemented changes to the way data is captured about some crashes. *"Transport for New South Wales (TfNSW) Definitions and notes to support LGA Visualisations – NSW Centre for Road Safety, January 2016"* explains that crashes in which a vehicle is towed away but no person is injured are now able to be self-reported by the involved parties. All crashes in which a vehicle is towed away are still required to be reported, however will only be investigated by Police in certain circumstances such as a failure to exchange details.

Table 6: RMS Crash Statistics

Year	Location	RUM – Description of Crash	Injury
2013	Coff Street x Castle Street	41 – U turn into object	-
	Gordon Street (mid-block)	73 – Off road, right into object	-
	Castle Street (mid-block)	39 – Other same direction	-
2014	Castle Street x Vernon Street	2 – Ped far side	1 - Serious
	Coff Street x Castle Street	10- Cross traffic	1 – Moderate
2015	Gordon Street x Vernon Street	30 – Rear end	-
2017	Castle Street x Vernon Street	0 – Ped nearside	1 - Moderate

Source: RMS Crash Statistic Website

The results indicate that there is not a systemic issue with the surrounding road network in terms of safety (i.e. all accidents are not constrained to a single intersection and a single RUM code). It can therefore be assumed that the existing road conditions are suitable and no amendments to existing infrastructure is required to improve pedestrian safety.

6 Public and Active Transport

6.1 Public Transport

The existing public and active transport service and infrastructure in the vicinity of the Site is shown in **Figure 19**. A pedestrian crossing is situated approximately 20m north of the Gordon Street / Vernon Street roundabout to facilitated safe crossing movements.

The TfNSW's *Integrated Public Transport Service Planning Guidelines* (TfNSW Guidelines) states that bus services influence the travel mode choices of areas within 400 metres walk (approximately 5 minutes) of a bus stop. In this regard, the bus services within walking distance to the Site are as follows:

- Bus route 360
  - Coffs Harbour Base Hospital to Park Beach Plaza – operates with one service during the morning peak period and approximately every 30 minutes during the evening peak period.
  - Park Beach Plaza to Coffs Harbour Base Hospital – operates with one service during the morning peak period and approximately every 30 minutes during the evening peak period.
- Bus route 361
  - Bellingen to Coffs Harbour – operates with one service during the morning peak period and does not operate during the evening peak period.
  - Coffs Harbour to Bellingen – does not operate during the morning peak period and operates with one service during the evening peak period.
- Bus route 365
  - Park Ave to Park Beach Plaza via The Jetty – operates approximately every 60 minutes and 30-60 minutes during the morning and evening peak periods, respectively.
  - Park Beach Plaza to Park Ave via The Jetty – operates approximately every 60 minutes and 30-60 minutes during the morning and evening peak periods, respectively.

Overall, the Site has moderate accessibility to bus services with infrequent services during the commuter peak periods.

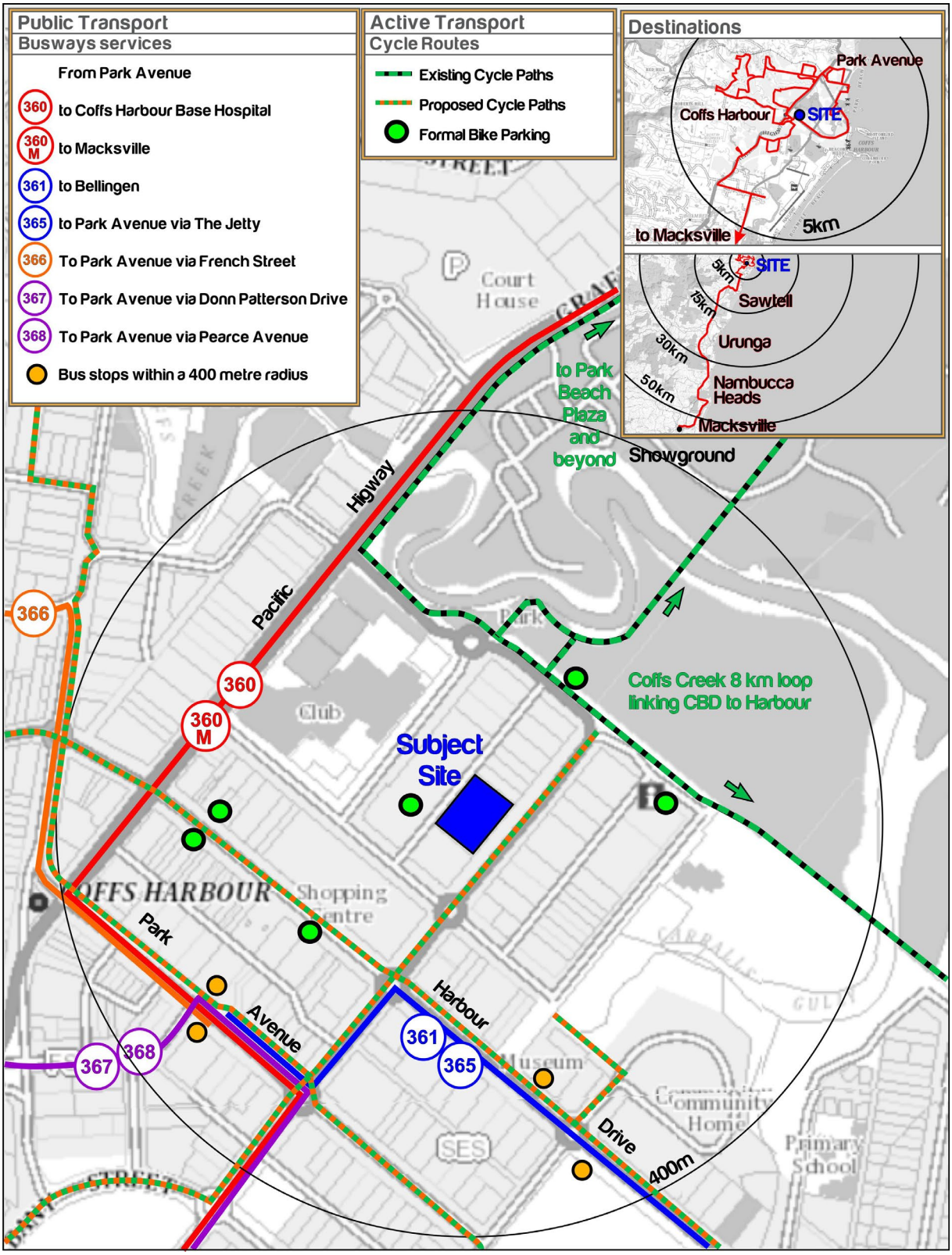


Figure 19: Existing Public Transport Network

6.2 Bicycle Network

The existing cycle networks in the vicinity of the Site are also shown in Figure 19.

The Coffs Creek Cycleway is located to the north-west of the Site, which provides a circuit around Coffs Creek and provides connections between Coffs Harbour CBD to the Harbour. This cycle route also links with Harbourside cycling route - Park Beach to South Wall (Corambirra Point) and Eastside Circuit - Park Beach to Howard Street Loop.

There is another cycling route along Coff Street between Pacific Highway and Riding Lane, to the north of the Site. This route also runs along Pacific Highway and connects to Marcia Street.

6.3 Pedestrian Network

Generally, footpaths are provided on both sides of roads in the vicinity of the Site, thus providing satisfactory pedestrian connections. A pedestrian crossing is situated approximately 20m north of the Gordon Street / Vernon Street roundabout to facilitate safe crossing movements.

7 Parking Requirements

7.1 DCP Parking Assessment

7.1.1 CHDCP Parking Rates

The rates provided in Part F General Development Controls – F1.5 On-site Parking – Non-Residential of Council's DCP uses outlines the parking requirements applicable to the Proposal. An overview of the parking requirements for Proposal is provided in **Table 7**.

Table 7: CHDCP Car Parking Requirements

Land Use	Yield	Parking Rate	Parking Requirement
Library	2,775 m^2 GFA	Subject to Parking Study	
Gallery	948 m^2 GFA		
Museum	577 m^2 GFA		
Multi-purpose civic (Council Chambers)	283 m^2 GFA		
Public Meeting Rooms / Function Space / Community Rooms	326 m^2 GFA		
Co-working space	156 m^2 GFA	1 space per 40 m^2 GFA	4
Customer Service Area	229 m^2 GFA	1 space per 40 m^2 GFA	6
Council Offices	2,938 m^2 GFA	1 space per 40 m^2 GFA	74
Total			**84**

Table 7 illustrates the available DCP parking rates for the relevant land uses within the Proposal however it is clear that the public amenities are not referred to and therefore a detailed transport study is required to understand the overall development parking demands.

In isolation, the commercial (office and retail) components technically require 84 parking spaces. It should be noted that the Café and Shop have been excluded from the above analysis as they are considered ancillary to the overall development noting that the patronage for these land uses would primarily be link trips and visitors associated with the library gallery, museum, etc. As such, no parking requirement has been considered for Café and Shop.

In this regard, the office use requires 84 parking spaces and in response the Proposal provides 74 spaces within a new internal basement for employee use and 37 spaces being retained within the existing Council Offices at 2 Castle Street, Coffs Harbour for a total of 111 spaces. These spaces are

dedicated solely to Council employees. In summary, the office parking requirements are met and achieve compliance with the DCP.

Notwithstanding, a number of the Land Uses provided by the Proposal require a Parking Study be undertaken. These land uses are of cultural significance to the region and the Coffs Harbour Urban Area. As such, to accurately provide and understanding the parking demand of the Proposal, a First Principles Assessment has been undertaken of the overall development. This is discussed in greater detail further below.

7.1.2 Accessible Parking

The CHDCP requires that accessible parking be provided in accordance with the *Disability (Access to Premises – Building Standards) 2010*. Given the mixed-use nature of the development, in particular, assembly areas on-site, a rate of 1 space per every 50 carparking spaces (or part thereof) is to be provided for buildings with up to 1,000 car parking spaces.

The Proposal provides 4 accessible parking spaces in the proposed basement for staff use. The provision of 4 spaces is compliant with minimum requirements of the CHDCP rates.

7.1.3 Bicycle Parking

Bicycle parking rates are not detailed in Council's DCP for new developments. Given the Proposal's significance as a cultural centre for the greater Coffs Harbour region, sufficient bicycle parking is to be provided to encourage visitors and staff to use alternative modes of transport. Rates have been adopted from the *Austroads Research Report AP-R528-16 – Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management* document. The below rates are considered ideal to encourage cycling as an alternative mode of transport and increase the travel mode share to 10%. In this regard, **Table 8** and **Table 9** detail the bicycle parking rates and provision for staff and visitors of the Site.

Table 8: Bicycle Parking Requirements – Visitors

Land Use	Yield / Visitors	Land Use per Austroads	Short Stay Rate	Short Stay Total
Regional Library	300 visitors	Place of Assembly (Library)	0.1 spaces per 1 visitor	30
Regional Gallery	184 visitors	Place of Assembly (Gallery)	0.1 spaces per 1 visitor	19
Regional Museum	51 visitors	Place of Assembly (Museum)	0.1 spaces per 1 visitor	6
Multi-purpose civic (Council Chambers)	283 m^2	Office	0.05 spaces per 100 m^2 GFA	1
Public Meeting Rooms / Function space / community rooms	326 m^2	Office	0.05 spaces per 100m^2 GFA	1
Co-working space	156 m^2	Office	0.05 spaces per 100m^2 GFA	1
Customer service area	229 m^2	Office	0.05 spaces per 100m^2 GFA	1
Council staff admin area / workplace (incl. executive)	2,968 m^2	Office	0.05 spaces per 100m^2 GFA	1
		Total		60

Table 9: Bicycle Parking Requirements – Staff/Employees

Land Use	Yield / Staff	Land Use per Austroads	Long Stay Rate	Long Stay Total
Regional Library	20 staff/employees	Place of Assembly (Library)	0.1 spaces per 1 staff	2
Regional Gallery	20 staff/employees	Place of Assembly (Gallery)	0.1 spaces per 1 staff	2
Regional Museum	20 staff/employees	Place of Assembly (Museum)	0.1 spaces per 1 staff	2
Multi-purpose civic (Council Chambers)	283 m^2	Office	0.45 spaces per 100m^2 GFA	2
Public Meeting Rooms / Function space / community rooms	326 m^2	Office	0.45 spaces per 100m^2 GFA	2
Co-working space	156 m^2	Office	0.45 spaces per 100m^2 GFA	1
Customer service area	229 m^2	Office	0.45 spaces per 100m^2 GFA	2
Council staff admin area / workplace (incl. executive)	2,968 m^2	Office	0.45 spaces per 100m^2 GFA	14
		Total		27

Based on the above rates, the Site should provide 60 bicycle rails for visitors and 27 bicycle racks for staff and employees of the All Welcome Centre. In response, the Proposal provides a total of 60 “Sheffield Loop” bicycle rails located at ground level for visitors and 40 bicycle racks for staff within the basement. This provision is considered ideal as it provides sufficient facilities that will encourage both visitors and staff to cycle to work as an alternative mode of travel. This would, in turn, reduce the reliance on private vehicles thereby decrease the parking demand and traffic generation.

7.2 First Principles Assessment

7.2.1 Parking Assessment Criteria

To accurately assess the impacts of the proposed development, it must first be established the overall benefits of the Proposal. The All Welcome Centre provides significant cultural and long-term economic benefits to the Coffs Harbour City Centre and the greater Coffs Harbour area. The provision of a centralised location for key cultural amenities for the public warrants an assessment of the overall on-street parking capacity and availability within the locality. Furthermore, it should be noted that the existing Library and Gallery do not provide on-site parking, instead relying on the availability within the surrounding road network, which is common practice for community facilities.

In this regard, in order to undertake a holistic parking assessment, a review of the proposed off-street public car parks and on-street parking capacity is warranted. Detailed review of the spare capacity in the local area has been discussed in Section 5.3. With consideration for Figures 12-16, the following figures details the parking capacity within the Castle Street carpark and the surrounding road network on a typical weekday and weekend, which is consistent with the study area considered for parking consumption within the Gordon Street analysis.

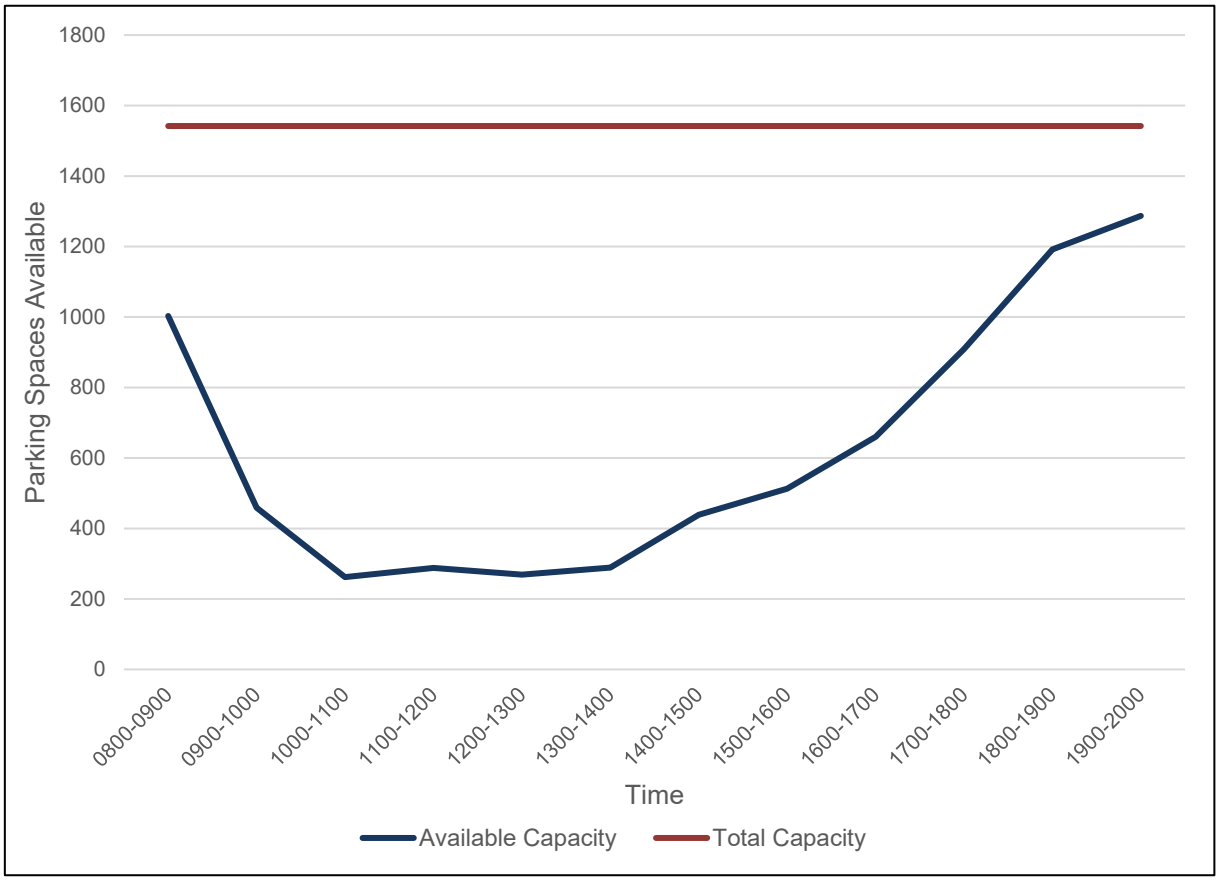


Figure 20: Available Parking within Local Road Network and Castle Street Carpark – Weekday

The above figure details that there are 1,542 spaces within the Castle Street carpark and the on-street parking study area. During the weekday peak period between 12.00PM-1.00PM there is a total of 262 (17%) available parking spaces.

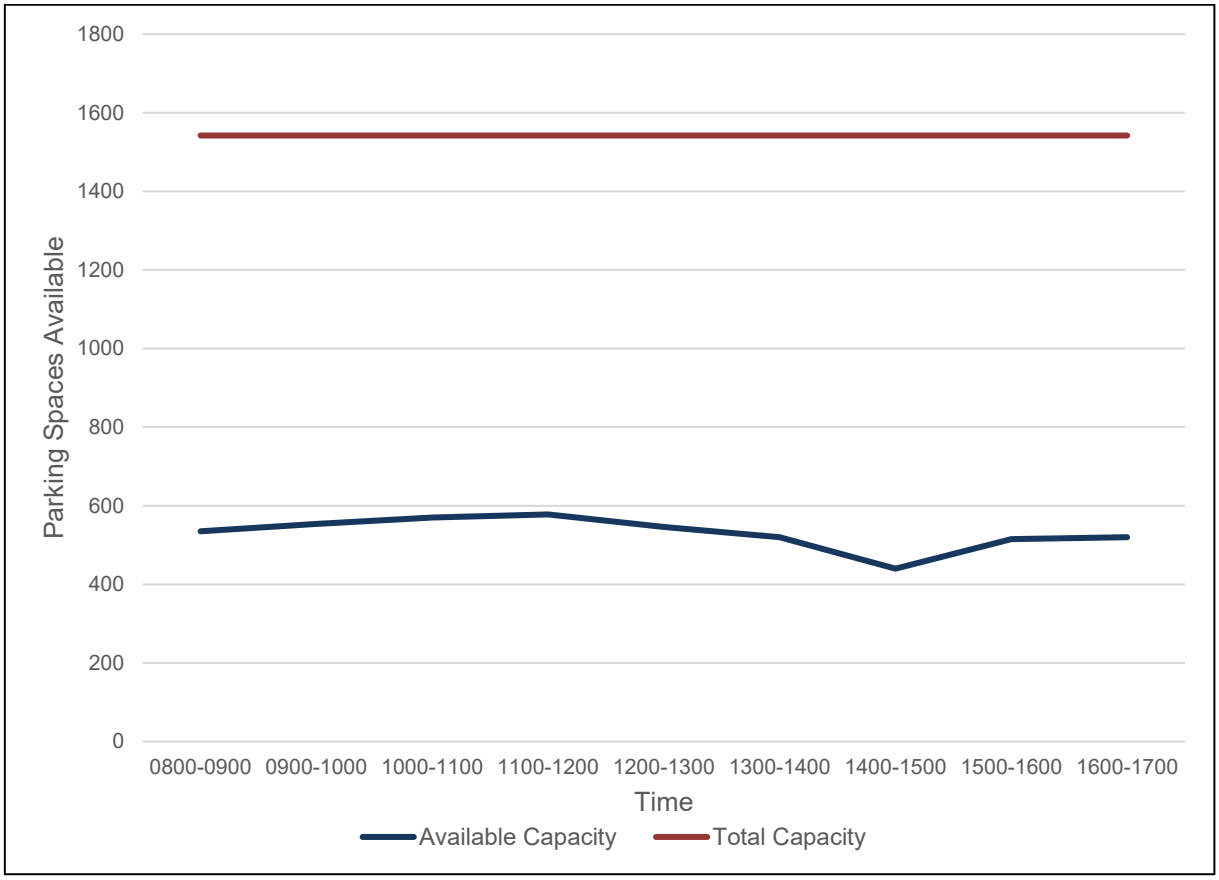


Figure 21: Available Parking within Local Road Network and Castle Street Carpark – Weekend

During the weekend peak period between 2.00PM-3.00PM there is a total of 440 (29%) available parking spaces.

7.2.2 Operational Data

To determine the parking demand of the Proposal, Council has provided projected visitation data for the Library, Museum, and Gallery based on assessments undertaken of similar improvement projects to similar land uses. In addition, Council has also provided projected visitation numbers for the multi-purpose, co-working, function space, and community rooms.

To supplement data provided by Council, discussions have been undertaken regarding length of stay for the aforementioned land uses data and timings have been agreed upon with Council. Daily in and out movements for the staff within the proposed development has been adopted from the RMS Guide Update. The RMS Guide Update provides data on hourly traffic movements which has been used to inform the arrival times and departures of Council employees throughout the day.

Finally, travel mode data detailed in Section 5.4 has been used to inform private vehicle mode share for visitors and staff members alike to the proposed development. The data has been collated and is presented in **Appendix A**.

7.2.3 Weekday Parking Assessment Methodology

To accurately assess the impact of the proposed development on the surrounding road network, it is important to note the land uses that already operate within the network. These are as follows:

- Library.
- Gallery.
- Multi-purpose, co-working, function space, and community rooms.
- Customer Service Area.
- Council Offices.

For these land uses, the parking analysis will assess the **net increase** and the subsequent impact.

It should be noted that the proposed museum is to be relocated from the existing regional museum located at 215 Harbour Drive, Coffs Harbour approximately ~650m from the Site. To determine the impacts of the museum, an assessment of the total visitation numbers is required unlike a net impact assessment as per the above land uses.

As previously discussed, information provided by Council details that 37 spaces within the basement of the existing Council offices will be retained, and 74 new spaces within the basement of the All Welcome Centre, both of which are dedicated for Council use only. However, 78 spaces are lost due to the future dedication of these spaces to the future tenants of the existing Council offices. It should also be noted that 20 spaces within the new car park will be dedicated to Council vehicles (e.g. dog catching vehicles, ranger vehicles, etc.). Given that Council parking is separated from the public parking demand, this has been assessed independently.

For the public parking demand, this assessment reviews the available on-street parking capacity within the local road network and the Castle Street Carpark. Noting this, an additional 14 spaces are lost on Gordon Street for the provision of Bus and Taxi pick-up / drop-off facilities, this is discussed further below. Consideration has been given in the below analysis for the proposed provision as well as the lost spaces.

To accurately assess the traffic impacts of the All Welcome Centre, 3 different scenarios have been assessed. These are as follows:

- Year of Opening.
- 5 Year Horizon.
- 10 Year Horizon.

7.2.4 Weekend Parking Assessment Methodology

Similar to the assessment of the weekday peak period, using the on-street parking capacity detailed in Section 5.3 and the data provided in Appendix A, the weekend parking demand has been determined. It should be noted that this analysis does not include the additional demand generated by the 78 spaces that are to be lost with the relocation of the basement. Nor does it allow for the 111-space provision provided by the Proposal as these spaces are exclusively dedicated to Council. This assessment does however consider the 14 spaces lost along the Gordon Street frontage.

The weekend parking demand analysis assesses the same 3 scenarios as the weekday parking demand assessment.

7.2.5 Year of Opening Parking Assessment

Using the data detailed in Appendix A, the methodology detailed above, and the existing parking capacity within the local road network, **Figure 22** and **Figure 23** detail the weekday parking demand on-street and Council's parking demand respectively. **Figure 24** details the parking demand of the Proposal at Year of Opening on a typical weekend.

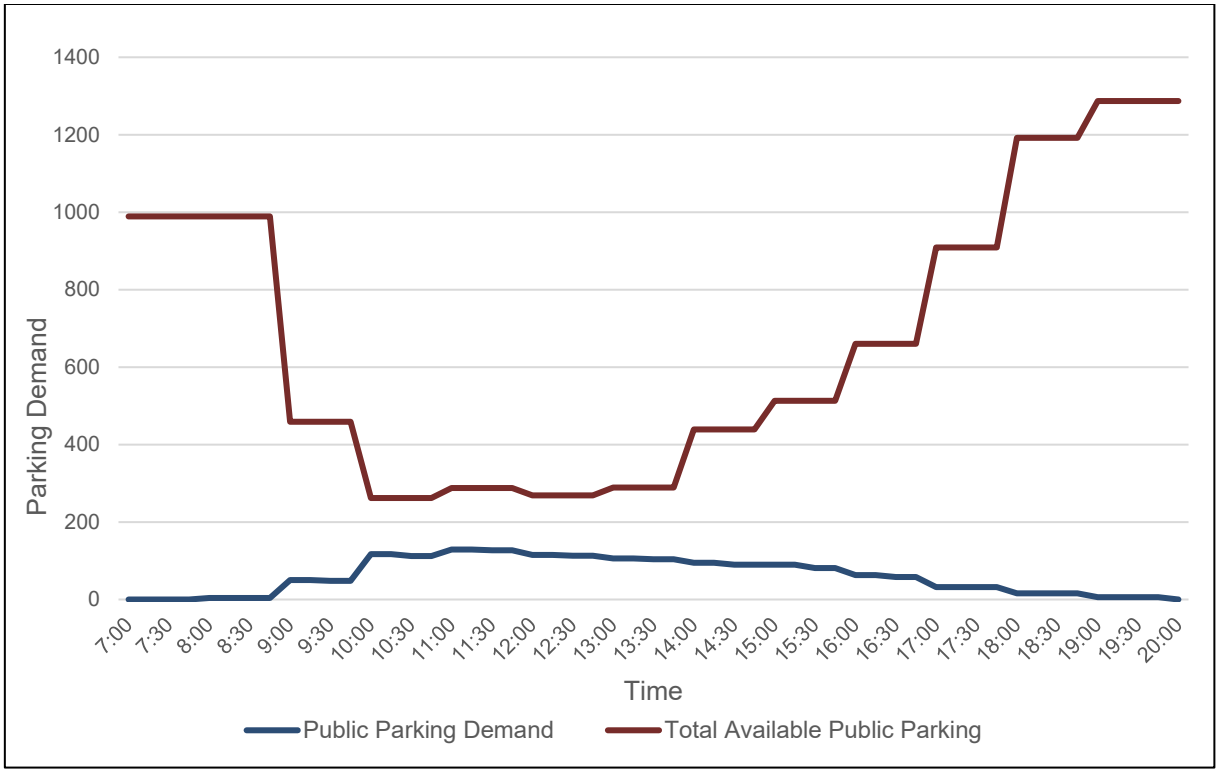


Figure 22: Year of Opening Public Parking Demand – Weekday

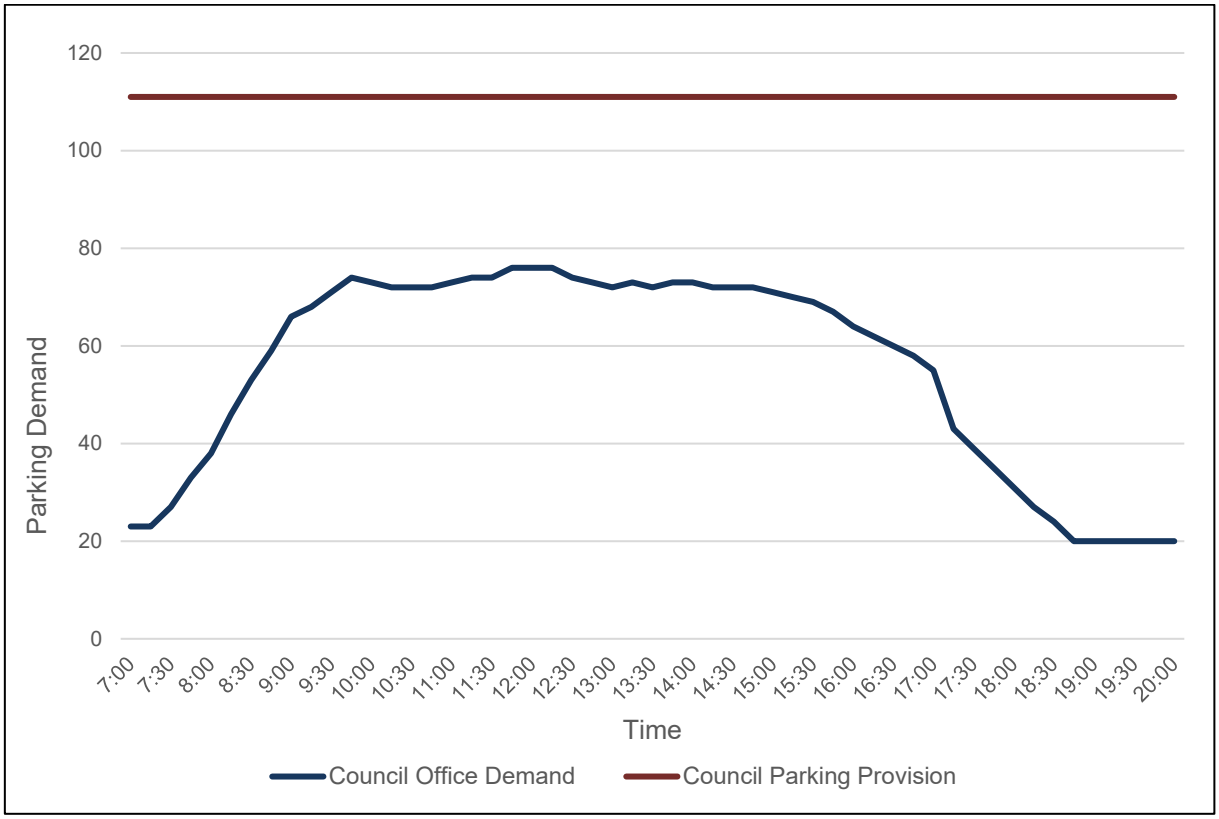


Figure 23: Year of Opening Council Parking Demand – Weekday

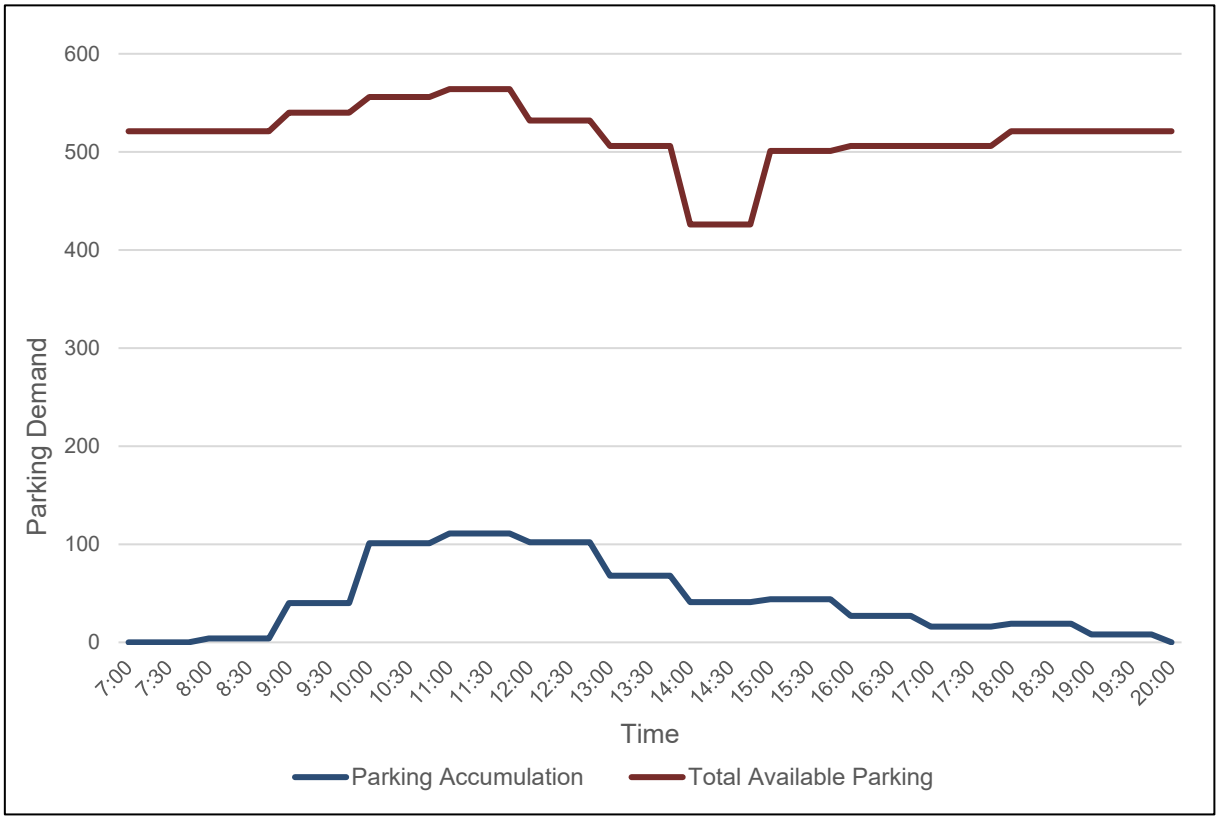


Figure 24: Year of Opening Public Parking Demand – Weekend

During the key peak between 11.00AM-12.00PM during the weekday, the maximum on-street parking demand generated by the All Welcome Centre is 129 spaces. Utilising the on-street and off-street public carpark, the spare capacity within the local road network is 150 spaces.

The Council parking provision can accommodate the parking demand with a maximum requirement of 76 spaces, with a remaining capacity of 35 spaces.

During the key peak between 11.00AM-12.00PM during the weekend, the maximum parking demand generated by the All Welcome Centre is 111 spaces. Utilising the available on-street parking, the remaining capacity within the local road network is 453 spaces.

As such, the Proposal's parking demand can be adequately accommodated at Year of Opening.

7.2.6 5 Year Horizon Parking Assessment

Similar to the above, **Figure 25**, **Figure 26**, and **Figure 27** details the parking demand of the Proposal 5 Years after Opening.

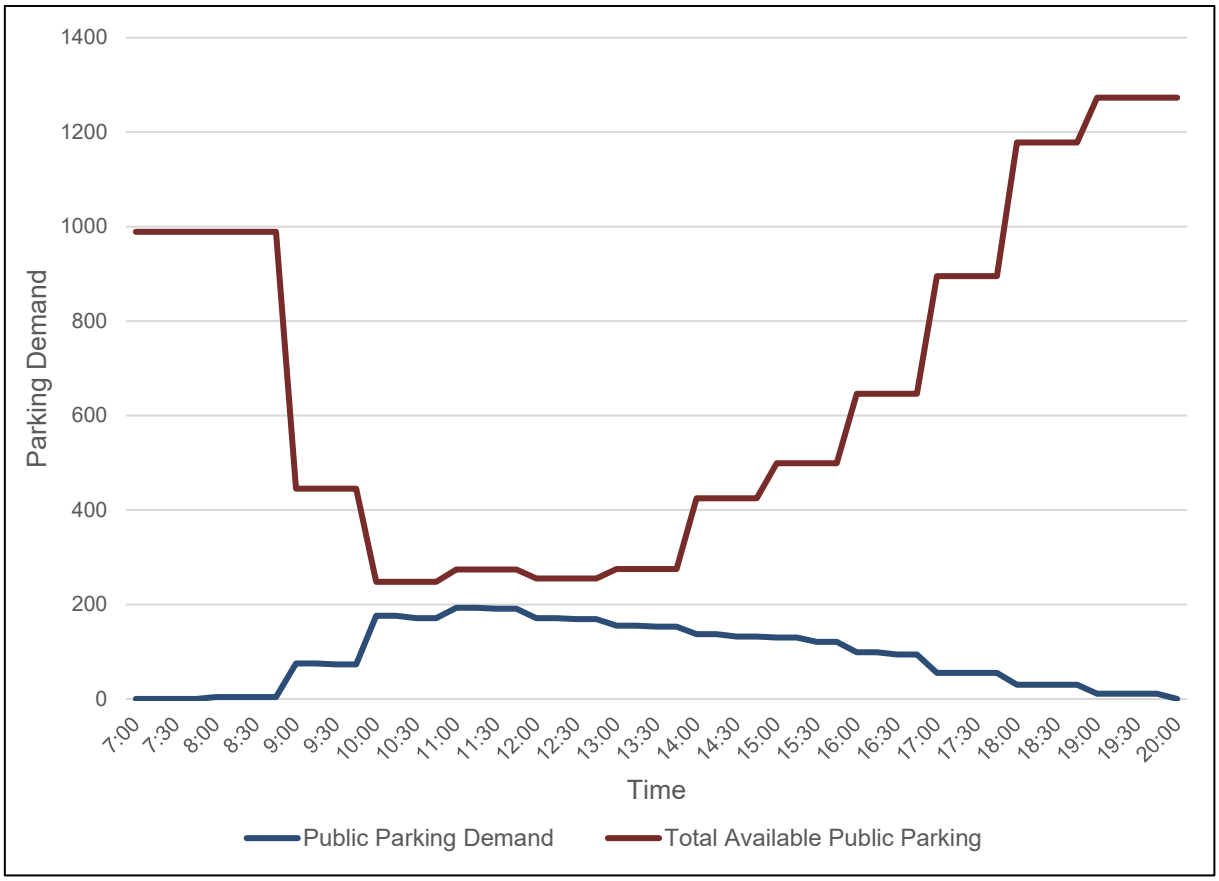


Figure 25: 5 Year Horizon Public Parking Demand – Weekday

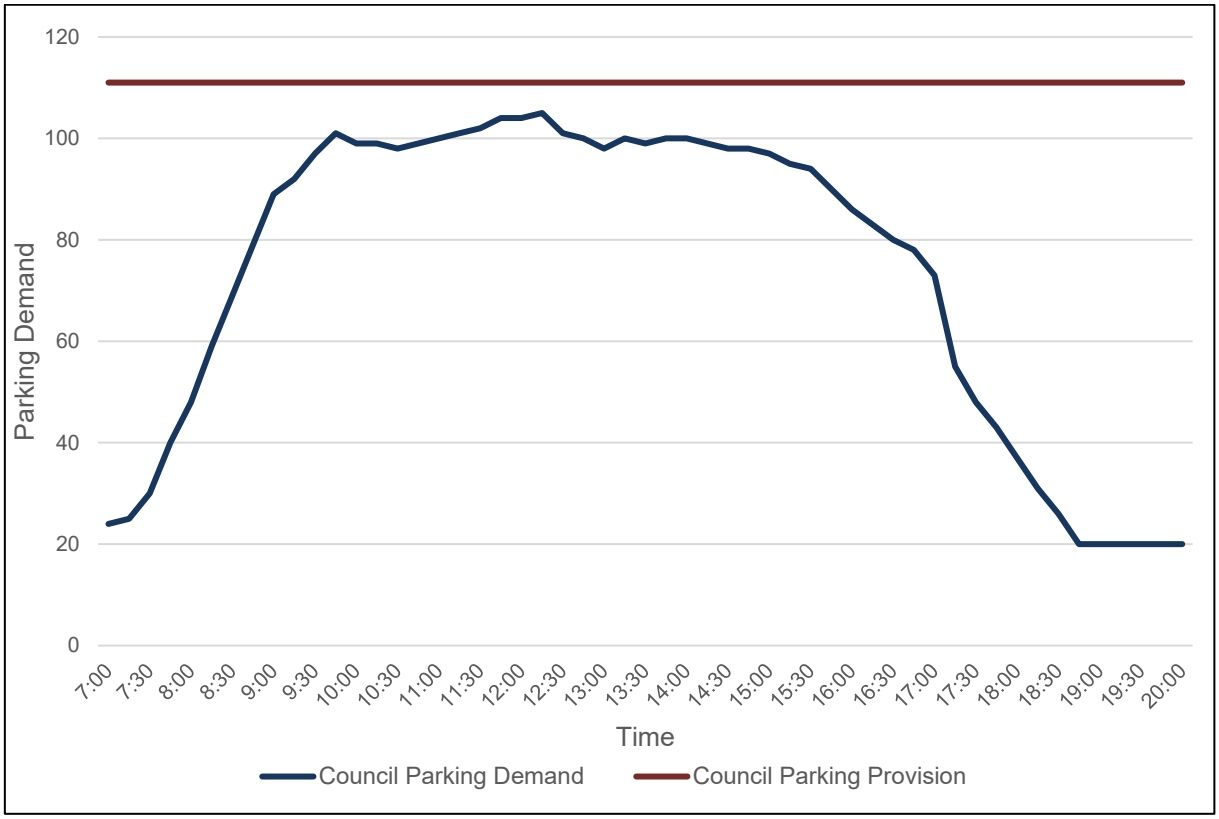


Figure 26: 5 Year Horizon Council Parking Demand – Weekday

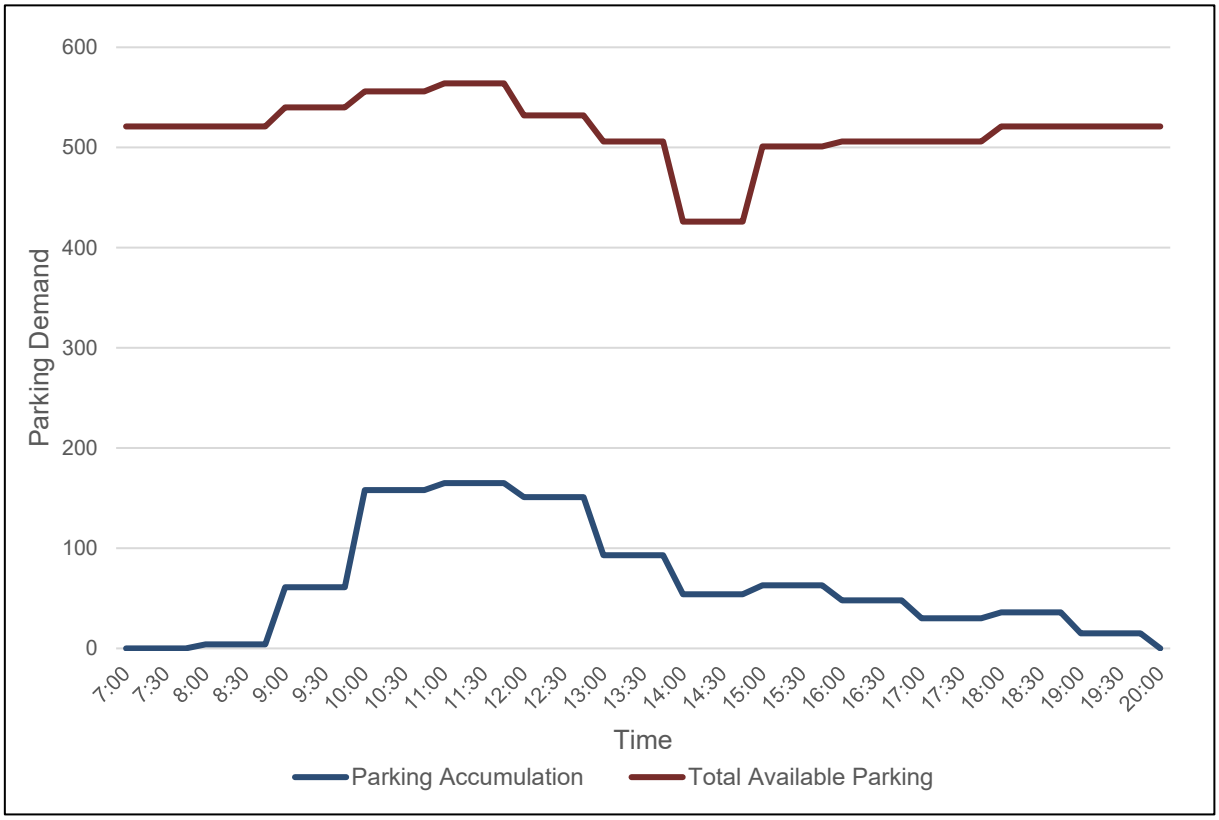


Figure 27: 5 Year Horizon Parking Demand – Weekend

During the weekday peak between 11.00AM-12.00PM, the maximum parking demand generated by the All Welcome Centre is 193 spaces. Utilising on-street and off-street public carpark, the spare capacity within the local road network is 81 spaces.

The Council parking provision can accommodate the parking demand with a maximum requirement of 104 spaces, with a remaining capacity of 7 spaces.

During the key peak between 11.00AM-12.00PM during the weekend, the maximum parking demand generated by the All Welcome Centre is 165 spaces. Utilising the available on-street parking, the remaining capacity within the local road network is 399 spaces.

As such, the Proposal's parking demand can be adequately accommodated 5 Years after the initial opening date.

7.2.7 10 Year Horizon Parking Assessment

For the 10 Year Horizon assessment, a review of the travel mode data has been undertaken. This is due to The Coffs Harbour City Centre Master Plan anticipating higher levels of public transport usage and increased cycling as a mode of transport. The updated values for private vehicle mode share for staff and visitors are detailed in **Table 10**.

Table 10: Staff and Visitor Private Vehicle Mode Share per Land Use – 10 Year Horizon

Land Use	Weekday		Weekend	
	Staff Mode Share (%)	Visitor Mode Share (%)	Staff Mode Share (%)	Visitor Mode Share (%)
Regional Library	70	80	80	80
Regional Gallery	70	60	80	75
Regional Museum	70	60	80	75
Multi-purpose civic (Council Chambers) / Public Meeting Rooms / Function space / community rooms / Co-working space	70	50	80	70
Customer service area	70	80	N/A	N/A
Council staff admin area / workplace (incl. executive)	70	80	N/A	N/A

Using the updated mode share values, **Figure 28, Figure 29,** and **Figure 30** details the parking demand of the Proposal 10 Years after Opening.

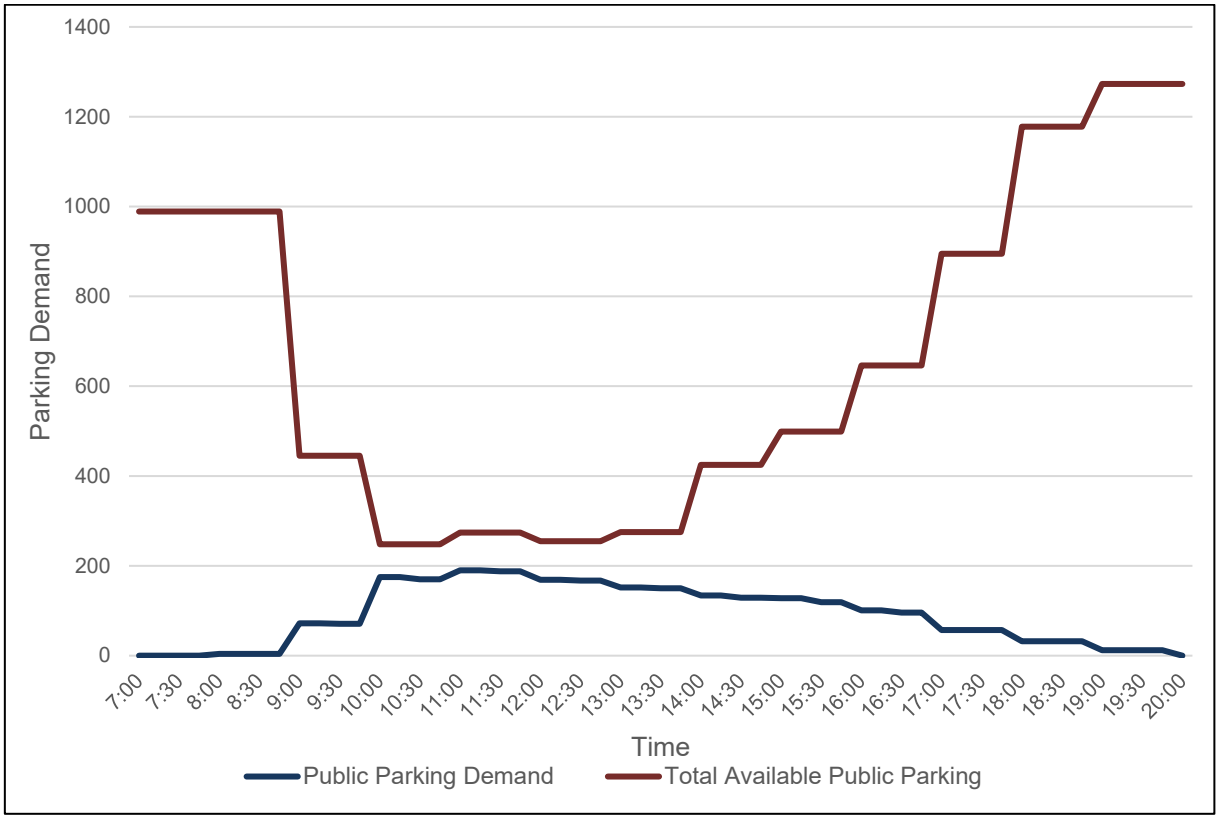


Figure 28: 10 Year Horizon Public Parking Demand – Weekday

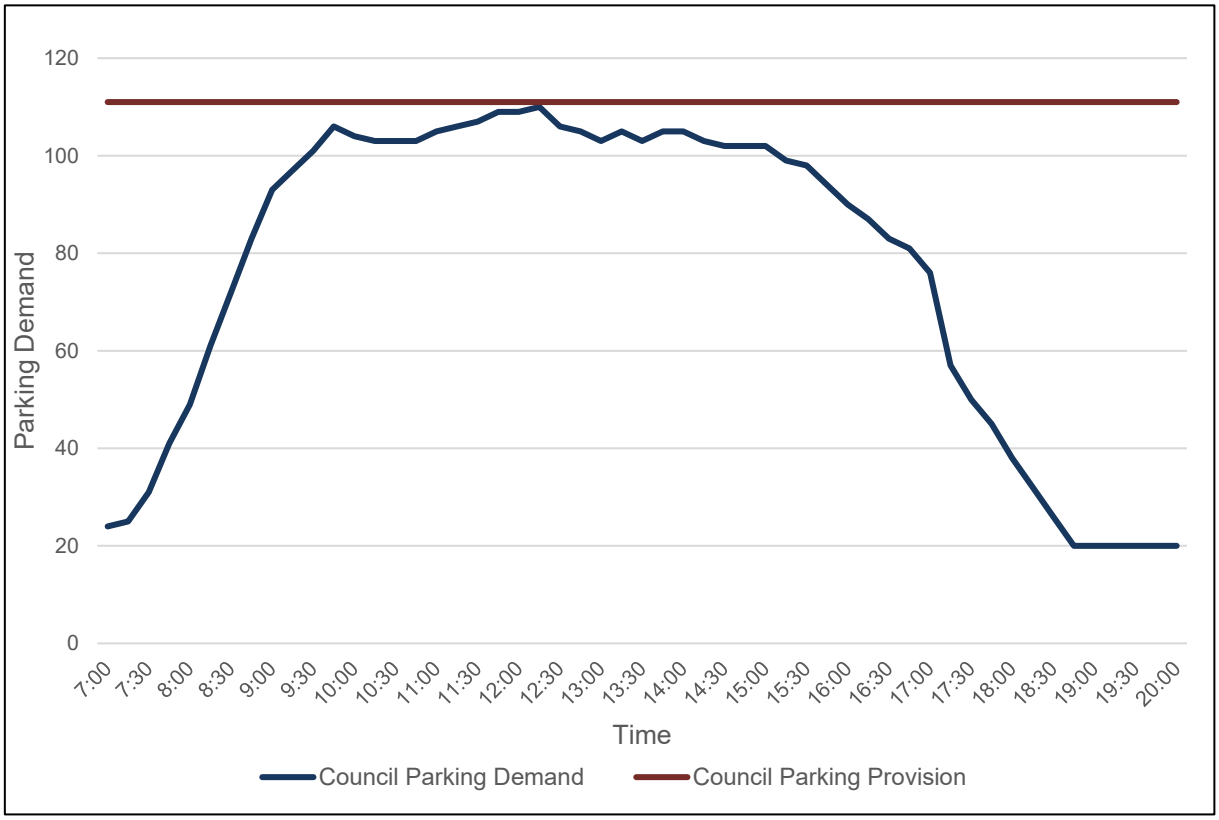


Figure 29: 10 Year Horizon Council Parking Demand – Weekday

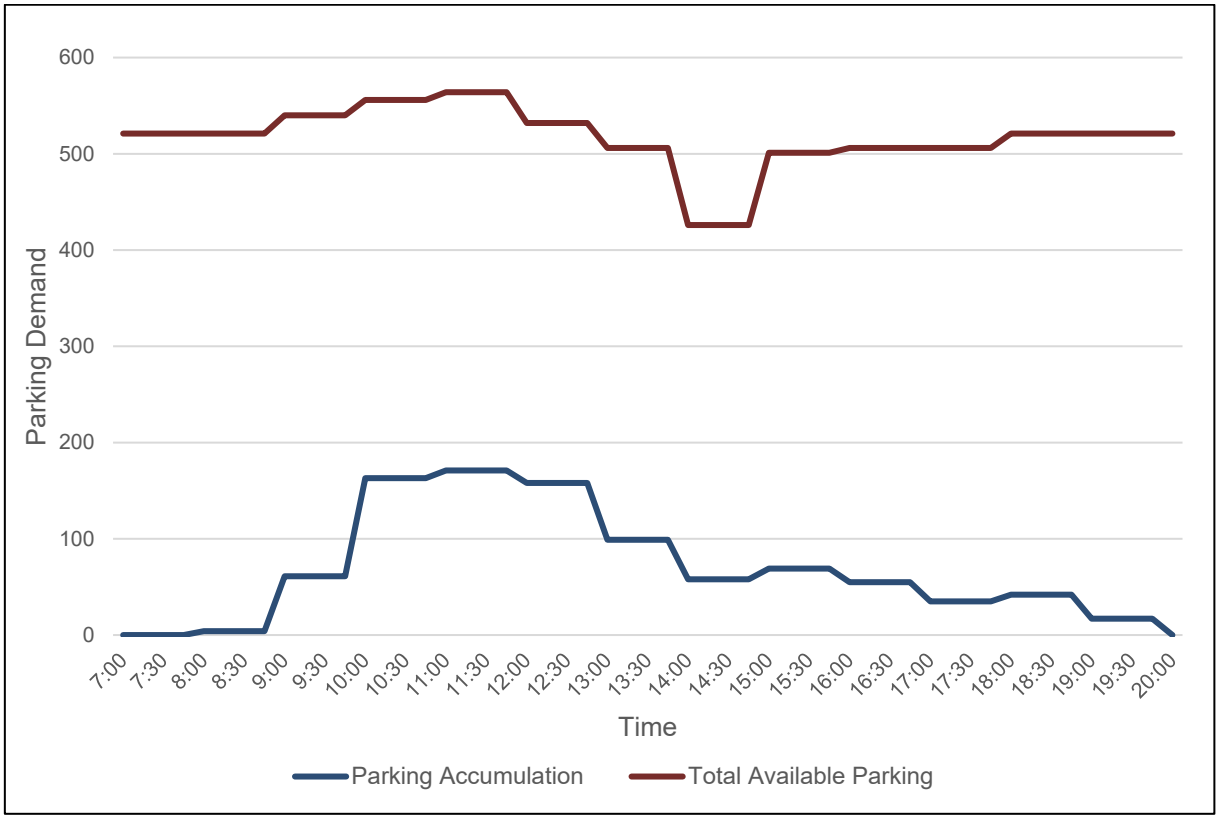


Figure 30: 10 Year Horizon Parking Demand – Weekend

During the key peak between 11.00AM-12.00PM, the maximum parking demand generated by the All Welcome Centre is 190 spaces. Utilising the on-street, off-street public carpark and provided basement parking, the spare capacity within the local road network is 84 spaces.

The Council parking provision can accommodate the parking demand with a maximum requirement of 110 spaces, with a remaining capacity of 1 space.

During the key peak between 11.00AM-12.00PM during the weekend, the maximum parking demand generated by the All Welcome Centre is 171 spaces. Utilising the available on-street parking, the remaining capacity within the local road network is 393 spaces.

As such, the Proposal's parking demand can be adequately accommodated 10 Years after the initial opening date.

7.2.8 Summary

The parking demand of the proposed All Welcome Centre has been assessed using a First Principles analysis. The analysis reviewed the net impact of the Proposal noting that the proposed development relocates existing land uses (Council offices, gallery, library) and consolidates these in a single location. Given the significance of this development to the cultural identity of the greater Coffs Harbour area and

the long-term economic benefits, a holistic parking assessment is considered appropriate. This assessment reviewed the on-street and off-street public parking capacities within a 5-minute walk from the development as well as the proposed 111 basement parking spaces for Council use.

The assessment reviewed 3 scenarios using visitation numbers provided by Council and length of stay per land use timings were adopted following discussion with Council officers. The existing impact of the regional museum was also considered noting that the existing museum is approximately ~650m from the Site on Harbour Drive. The 3 scenarios assessed were: Year of Opening, 5 Year Horizon, and 10 Year Horizon. Consideration was also given to the existing travel mode data of the Coffs Harbour CBD for the Year of Opening and the 5 Year Horizon Scenarios. For the 10 Year Horizon Scenario, private vehicle mode share was reduced in accordance with the Coffs Harbour City Centre Master Plan.

The parking demand analysis determined that a maximum parking demand of 193 spaces would during the weekday 11.00AM-12.00PM peak period 5 years after the development is constructed. During this peak period, the surrounding road network is able to accommodate this demand with a spare capacity of 81 spaces. The weekend analysis determined a maximum parking demand of 171 spaces between 11.00AM-12.00PM for the 10 Year Horizon Scenario. The surrounding road network is able to accommodate this demand with a space capacity of 393 spaces.

Therefore, the Proposal is considered supportable on parking impact grounds.

7.3 Servicing

7.3.1 Loading and Delivery

It is proposed to undertake loading/unloading activities at a dedicated loading bay with access via Gordon Street. It is anticipated that a provision of one (1) loading bay would suffice in managing the forecast demand, based on the anticipated truck frequency schedule provided by Council. The largest vehicle is expected to be a Heavy Rigid Vehicle (HRV). A summary of the delivery schedule is provided in **Table 11** below.

Table 11: Forecast Delivery Frequency

Component	Delivery vehicle	Delivery times	Delivery frequency
Australia Post	Van (B99)	9:30AM – 10:30AM	1 per day
Courier	Van (B99)	1:30PM – 4:30PM	Varies
Council Deliveries	Van (B99)	9:30AM – 3:30PM	1-2 per day
Library	HRV	9:30AM – 3:30PM	1 per annum
Museum	HRV	9:30AM – 3:30PM	4 per annum
Gallery	HRV	9:30AM – 3:30PM	15 per annum

Based on the anticipated delivery schedule, it is not expected that the loading bay would be highly utilised as deliveries are not expected to exceed 20 trucks per year. Smaller vehicles such as vans would undertake delivery activities from the proposed pick-up / drop-off zone (discussed in Section 6.5) for the sake of efficiency. Notwithstanding, there is sufficient space on-street to provide a dedicated loading zone should the need for implementation arise.

7.3.2 Waste Collection

With regard to waste collection, garbage storerooms are provided on Ground level on the north western corner of the Site. It is proposed to undertake waste collection services off Riding Lane, as is the existing operation. This would also align with the intended function of a service laneway.

7.4 Pick-up / Drop-off

A pick-up / drop-off zone is proposed on Gordon Street along the Site frontage. Minor works would be required to standardise the facility, including (but not limited to) removal/installation of on-road line markings and reconfiguration of signposting and signage. It is intended for the facility to be used by both light vehicles and buses/coaches and would be restricted to 5 minutes stays. The required works are detailed in **Appendix B**. The provision of this zone requires the removal of 14 parking spaces along Gordon Street. This is considered acceptable noting that the 10 Year Horizon parking demand can be accommodated within the surrounding road network with spare capacity during both the weekday and weekend peak periods.

7.5 Emergency Vehicle

It is proposed that the pick-up / drop-off and 'No Stopping' area (discussed in Section 9 Design) be utilised as a de-facto emergency vehicle zone. Logically, the location of the 'No Stopping' zone is

desirable for fire trucks due to the close proximity to the fire hydrant location. It would be safe to assume that between the 'No Stopping' area and pick-up / drop-off facility, which it limited to 5-minute parking, that there would be space for emergency vehicles to stop. This would also be a superior outcome in terms of efficiency as there would be multiple uses for the pick-up / drop-off and 'No Stopping' areas.

The emergency vehicle stopping area is presented in Appendix B.

7.6 Special Events

It is expected that large scale events would periodically occur. The special events program was provided by Council and is presented in **Table 12**.

Table 12: Forecast Special Events

Events	Space/Area	Frequency	Hours of operation	Patronage
Gallery/Museum exhibition openings (regular program)	Gallery & Museum exhibition spaces, Internal street (when required)	Every 5-6 weeks	Usually 6:00PM – 9:00PM on a Friday or Saturday	300
STILL opening night (biennial art competition)	Gallery temporary exhibition spaces, Internal street	Once every 2 years	Exhibition opening + public programs	500
Blockbuster exhibitions	Gallery temporary exhibition spaces	Once every 5 years	Over an exhibition period of 2-3 months	20,000
Conferences and seminars	Multi-function space, Outdoor event area, Meeting spaces	1-2 times per year	Normal business hours over 1-2 days but likely include evening reception, social and networking functions in the evening	200-250
Meeting/function room hire for large private functions or commercial events	Multi-function space, Outdoor event area, Meeting spaces	12 times per year	Likely to be in evening or on weekends	200-250
Citizenship ceremonies	Multi-function space, Outdoor event area	4-5 times per year	Normally conducted in early evening	200

As would be typical of developments of this nature, a suitable Traffic Management Plan (TMP) would be implemented subject to Council's approval. The TMP aims to mitigate the traffic and parking aspects of the event, such as the use of Traffic Controllers to direct traffic flow, allocating areas to accommodate overflow parking and general procedures to ensure pedestrian safety. A TMP would be submitted prior to each event to ensure that traffic and parking are appropriately managed.

8 Traffic Assessment

8.1 Traffic Generation

8.1.1 RMS Guide

As mentioned in Section 7.2.2, the RMS Guide Update has been used to inform the hourly entering and exiting traffic movements throughout the day. However, for the other land uses of the land, in particular the library, museum and gallery, no direction is provided by the RMS Guide or RMS Guide Update on the traffic generating potential of these land uses. As such, similar to the parking assessment, a first principles analysis is necessary to determine the traffic generation of the Proposal.

8.1.2 First Principles Assessment

As discussed in Section 7.2.3, the analysis will assess the net impact of the proposed development noting that the Proposal relocates a number of land uses within the immediate vicinity to the Site, and as such, there would be no material change to the surrounding road network.

The following information has been used to assess the traffic generation:

- The staffing and visitation numbers,
- Travel mode data,
- Length of stay per land use,

The above data is that same as that adopted for the parking assessment and are detailed in Appendix A. The traffic generation of the Proposal is discussed below.

8.1.3 Peak Period Traffic Generation

Using the above information, the AM, PM and site peak periods can be calculated for the weekday and weekend for the Year of Opening and 10 Year Horizon scenarios. Assessing the 10 Year Horizon is considered standard practice in accordance with the RMS. These values are detailed in **Table 13** and **Table 14**.

Table 13: Net Traffic Generation – Weekday

Peak Period	Scenario	
	Year of Opening	10 Year Horizon
Network AM (9.00AM-10.00AM)	82 (77 in, 5 out)	128 (120 in, 8 out)
Site Peak (12.00PM-1.00PM)	109 (52 in. 57 out)	228 (105 in. 123 out)
Network PM (3.00PM-4.00PM)	94 (42 in, 52 out)	175 (79 in, 96 out)

Table 14: Net Traffic Generation – Weekend

Peak Period	Scenario	
	Year of Opening	10 Year Horizon
Network AM (10.00AM-11.00AM)	60 (50 in, 10 out)	146 (107 in, 39 out)
Site Peak (12.00PM-1.00PM)	91 (47 in. 44 out)	220 (107 in. 113 out)
Network PM (3.00PM-4.00PM)	44 (16 in, 28 out)	70 (28 in, 42 out)

Assessing the 10 Year Horizon is standard practice in accordance with RMS guidance and given the level of certainty regarding the projections for the use of the centre, the 10 Year Horizon scenario and traffic assessment is particularly relevant. In order to respond to the SEAR condition which requested analysis of the 20 Year Horizon scenario, a growth rate of 1.5% has been adopted within the local road network in the CBD. Whilst this analysis has been provided, it should be noted that travel behaviours within the CBD will change due to emerging smart technology, growth in public transport usage, and the Coffs Harbour City Centre Master Plan which aims at altering travel modes within the CBD. Therefore, it is that the 10 Year Horizon should be the baseline for this assessment.

8.2 Trip Distribution

Based on a review of the existing traffic volume data obtained in the intersection surveys, **Figure 31** and **Figure 32** details the trip distribution of the study area during the AM and PM peaks respectively.

Figure 31: Development Traffic Flows – AM Peak

Figure 32: Development Traffic Flows – PM Peak

8.3 Traffic Impacts

A breakdown of the traffic volumes calculated in Table 13 and the trip distribution detailed in the above figures is provided below for the weekday peak periods for the Year of Opening and 10 Year Horizon Scenario.

Table 15: Traffic Distribution Per Zone – Year of Opening

Zone	Period	Traffic Volumes	Existing Zone Traffic	Percentage of Net Traffic to Existing Traffic
1	AM	39 in, 2 out	1,126	3.5%
	PM	16 in, 29 out	1,156	3.7%
2	AM	37 in, 2 out	1,036	3.6%
	PM	24 in, 14 out	1,060	3.5%
3	AM	1 in, 1 out	450	0.4%
	PM	1 in, 8 out	348	2.5%
4	AM	0 in, 0 out	305	0%
	PM	0 in, 1 out	256	0.4%

Table 16: Traffic Distribution Per Zone – 10 Year Horizon Scenario

Zone	Period	Traffic Volumes	Existing Zone Traffic	Percentage of Net Traffic to Existing Traffic
1	AM	61 in, 3 out	1,126	5.4%
	PM	31 in, 54 out	1,156	6.8%
2	AM	58 in, 3 out	1,036	5.6%
	PM	46 in, 25 out	1,060	6.3%
3	AM	1 in, 2 out	450	0.7%
	PM	2 in, 15 out	348	4.7%
4	AM	0 in, 0 out	305	0%
	PM	0 in, 2 out	256	0.8%

As is evident from the above, the traffic generated by the proposed development amounts to less than 4% of the existing traffic volumes during the Year of Opening Scenario. As such, these volumes are of such a low order that they would have no material impact on the operation of the local road network.

For the 10 Year Horizon Scenario, similarly the overall net traffic increase amounts to less than 7% of the existing traffic on the network. In this regard, there would be no material impact to the operation of the local road network.

To assess the future impacts of the above SIDRA intersection analysis has been undertaken of three scenarios: Year of Opening; 10 Year Horizon; and 20 Year Horizon. A growth rate of 1.5% of growth per annum has been applied to the background traffic for both the 10 Year and 20 Year scenarios. The same intersections have been assessed as per Section 5.6. Table 17 details the modelling results.

Table 17: Intersection Performance – All Scenarios

Intersection	Period	Year of Opening		10 Year Horizon		20 Year Horizon	
		Average Vehicle Delay	Level of Service	Average Vehicle Delay	Level of Service	Average Vehicle Delay	Level of Service
Gordon Street / Vernon Street	AM	9.5	A	10.3	A	11.1	A
	PM	10.4	A	11.6	A	13.1	A
Coff Street / Riding Lane	AM	5.8	A	6.6	A	7.5	A
	PM	8.4	A	10.5	A	13.0	A
Vernon Street / Riding Lane	AM	2.9	A	2.9	A	2.9	A
	PM	2.9	A	2.9	A	2.9	A

As is evident from the above, the intersections within the local road network would continue to operate at LOS A within minimal delay increases, and therefore minimal impact on the operation of the surrounding road network.

The traffic generated by the Proposal would remain relatively consistent to the existing situation with minor increased in Average Vehicle Delay. The Proposal is therefore supportable from a traffic impact perspective.

8.3.1 Pacific Highway / Coff Street

To assess the intersection of Pacific Highway / Coff Street, Ason Group were provided historical traffic volumes by Council. A generic growth rate of 2% was applied to the historical data to determine the 2019 traffic volumes, which are provided in **Figure 33** and **Figure 34.**

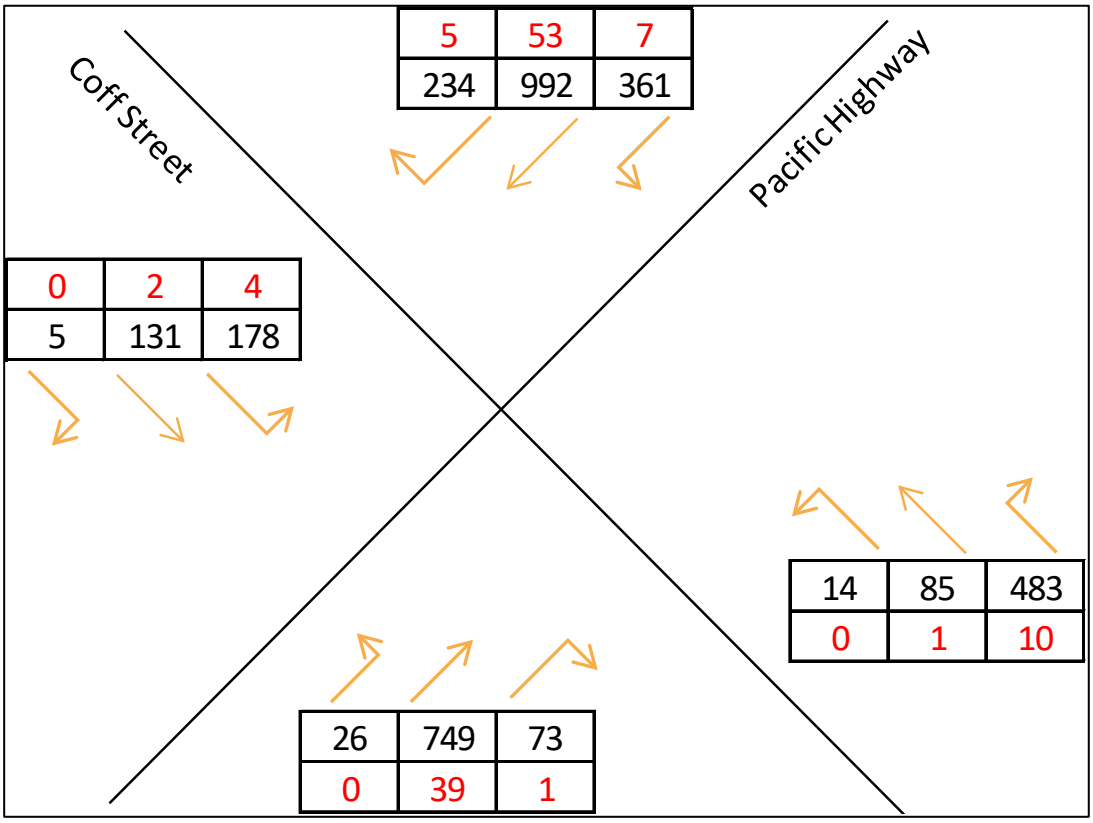


Figure 33: **Pacific Highway / Coff Street** 2019 Traffic Flows – AM Peak

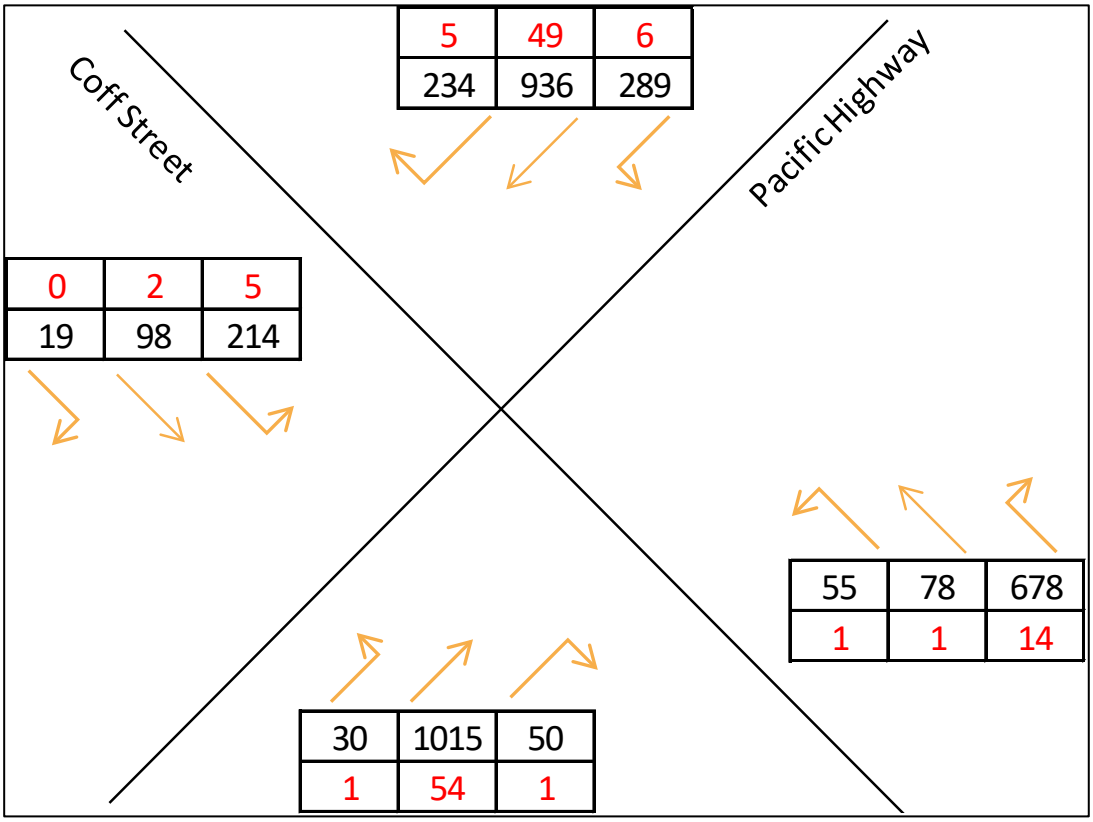


Figure 34: Pacific Highway / Coff Street 2019 Traffic Flows – PM Peak

The net increase of traffic generated by the Proposal is summarised in **Table 18**, noting that the traffic increase calculations account for the growth rate for each individual scenario.

Table 18: Net Traffic Increase – All Scenarios

Intersection	Period	Total Vehicle Increase		% of Total Traffic Increase	
		Year of Opening	10 Year Horizon	Year of Opening	10 Year Horizon
Pacific Highway / Coffs Street	AM	66 veh/hr	73 veh/hr	1.9%	1.7%
	PM	45 veh/hr	93 veh/hr	1.3%	2.2%

Based on the table above, the highest forecast increase of traffic generated by the Proposal would be in the order of 93 veh/hr. With reference to the above figures and tables, this traffic increase corresponds to an overall increase of 2.2% in the traffic travelling through the intersection of Pacific Highway / Coff Street. This increase would not have any material impact on the Pacific Highway / Coffs Street intersection.

Furthermore, the Coffs Harbour Bypass project is a committed project which would significantly reduce the traffic volumes on Pacific Highway. The anticipated reduction in traffic is shown in **Figure 35**.

	Base Daily Volumes			Project Daily Volumes		
Location	2024	2034	2044	2024	2034	2044
Bypass						
North of Coramba Road	-	-	-	19,100	21,200	23,400
South of Coramba Road	-	-	-	24,600	27,100	29,300
Existing Pacific Hwy						
South of Bruxner Park Rd	38,600	43,300	46,500	33,400	36,600	40,000
North of Orlando St	45,800	49,700	52,000	35,000	37,700	39,600
South of Albany St	34,300	36,000	36,000	19,500	21,200	21,200
Local Network						
Hogbin Dr north of Park Beach Rd	8,900	11,000	10,000	6,500	8,000	8,400
Hogbin Dr north of Harbour Dr	18,000	19,100	18,800	13,800	14,800	15,100
Hogbin Dr north of Stadium Dr	28,900	31,300	31,700	20,700	21,800	22,600
Stadium Dr east of Pac Hwy	10,400	11,600	13,500	11,300	11,800	13,200
Bray St east of Joyce St	10,600	11,400	12,200	8,000	8,200	8,400
West High St west of Murdock St	9,000	10,500	11,800	9,500	10,200	10,600
Coramba Rd between Shephards Lane and Robin St	12,800	13,600	14,500	10,800	11,700	13,000
Coramba Rd between Bypass and Shephards Lane	9,200	9,500	9,900	9,900	10,900	12,600

Figure 35: Coffs Harbour Bypass Traffic Reduction

As discussed previously, it is anticipated that the Coffs Harbour Bypass would results in a ~40% decrease in traffic south of Albany Street and ~25% decrease north of Orlando Street. Noting that the Proposal is between Albany Street and Orlando Street, the Coffs Harbour Bypass would significantly

reduce daily traffic flows on Pacific Highway and would therefore improve intersection operation in the future within the vicinity of the Site.

To summarise, in the short-term traffic volumes will increase due to a combination of growth and traffic generated by the Proposal, however in the long-term traffic volumes would indeed decrease upon completion of the Coffs Harbour Bypass project. In this regard, the Pacific Highway / Coff Street intersection has been addressed and due to the proceeding discussion, SIDRA analysis is considered unnecessary due to the vastly changing conditions and travel behaviours that would occur at this location.

The operation of the Pacific Highway (Grafton Street) / Coff Street intersection will therefore generally be consistent with the existing conditions and will be accommodate the traffic generated by the Proposal.

8.4 Turning Warrants

As discussed in Section 6.4, the forecast servicing frequencies were provided by Council and presented in Table 11. It was demonstrated that the overall volumes were low for servicing vehicles, with HRV deliveries accounting for approximately 20 trips a year.

It is also proposed that the existing waste collection practices be retained and would therefore continue to occur off Riding Lane.

Given the low volumes associated with truck movements and the retaining of existing waste collection operations, no road upgrades would be required and turning lane warrants would not be applicable.

9 Sustainable Travel

9.1 Introduction

It is proposed to prepare a Green Travel Plan (GTP) for the Site in response to a suitable condition of consent. The primary objectives of the GTP will be to:

- Reduce the environmental footprint of the Site;
- Promote the use of 'active transport' modes such walking and cycling, particularly for short-medium distance journeys;
- Reduce reliance on the use of private vehicles for all journeys; and
- Encourage a healthier, happier and more active social culture.

Having regard for the above, the GTP would seek to adopt the following movement hierarchy with priority given to 'active transport'.

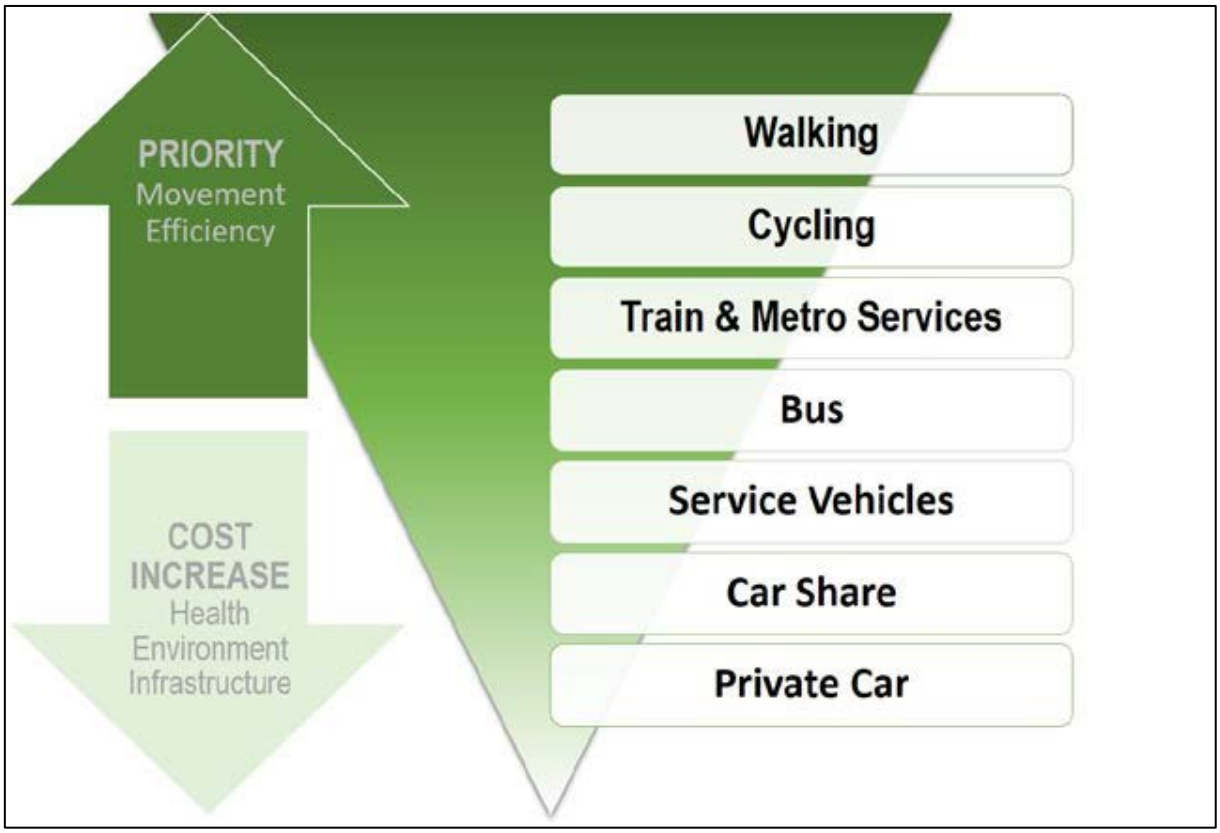


Figure 36: Movement Hierarchy

9.2 Site Audit and Targets

The GTP would provide a package of Site-specific measures to promote and maximise the use of sustainable travel modes, including walking, cycling, public transport and car sharing. It will include a review of existing transport choices and set targets so that the effective implementation of the plan can be assessed. The audit would the following:

- Public transport services in the area, including proximity to the site, frequency of services and accessibility;
- Location of nearby car share pods;
- Existing bike and pedestrian facilities, including accessibility, connectivity and safety;
- Existing mode-split data for the Site and local area.

Existing travel patterns of employees within the surrounding locality were surveyed as part of the 2016 Census and presented in the Journey to Work (JTW) data provided by the Bureau of Transport Statistics (BTS).

Table 19 details the existing mode share for the Coffs Harbour urban area, as well as mode share targets. These targets have been developed with consideration to Coffs Harbour Master Plan, Coffs Commuting Report and direct Council input. A target of 10% of trips undertaken by public transport is proposed in the aforementioned documents.

Table 19: Mode Share – Existing and Proposed Targets

Travel Mode	Existing (%)	Proposed (%)
Car (as driver)	77.1	70
Car (as passenger)	7.7	10
Bus	0.7	10
Taxi	0.1	0.0
Truck	1.3	1.2
Motorbike	0.8	0.8
Bicycle	0.9	3.0
Walked only	3.2	5.0
Other	1.3	
Worked at Home	5.7	
Not Stated	1.2	

It is noted that the existing modal split percentages outlined in Table 19 accounted for a minor discrepancy when compared to existing modal data in Table 3. This is due to the distribution of the 'Did not go to work' component which is redundant for planning purposes.

The plan shall be reviewed regularly as part of an ongoing review to ensure it remains relevant and reflective of current conditions.

With regards to the Proposal; bicycle parking, end of trip facilities including secure bike racks, locker and shower facilities will be provided on-site to promote active transport modes (i.e. walking and cycling). Further investigation would be undertaken for cycle paths, pedestrian links, bus stops, bus routes and additional bus services as per the objections of Coffs Harbour Master Plan. It is therefore expected that the future transport system would accommodate the increased patronage further to the Proposal.

9.3 Action Strategies

Three main strategies have been identified and the actions required for each are detailed in **Table 20**. The table details how the targets the specific actions to be implemented as part of the GTP and the timeframe for implementation. Council would be responsible for implementing each action or provide the responsibility to someone of their nomination.

In developing the GTP and the strategies and actions comprising it, it is recognised that Council facilitates the important process of monitoring and review.

The GTP would be further developed at OC stage and it is expected that a suitable condition of consent would be imposed.

Table 20: Travel Plan Framework Action Table

STRATEGY	HOW IT WORKS	IMPLEMENTATION
1 Managing Car Use		
1.1 Car Sharing	Staff and visitors are encouraged to use a shared car (e.g. GoGet) to reduce the number of private cars.	Provide car share spaces on-site and actively promote to staff and students. Contact GoGet to organise the allocation of on-street GoGet parking modules across Coffs Harbour CBD.
1.2 Carpooling	Establish a carpooling program to help staff find someone to share in their daily drive to the Proposal.	Prepare information sheets specific to staff. Incorporate a green travel space into the basement car park.
2 Promoting Public Transport		
2.1 Provision of Opal Cards with Credit for a period of free rides.	Council may consider subsidising Opal tickets to increase public transport use.	Subject to Council implementation.
2.2 New bus services/routes	Encourage bus patronage with an efficient bus network system.	Provide additional bus routes, bus stops and increase service frequencies.
3 Promoting Cycling and Walking		
3.1 Providing End of Journey Facilities	Providing EOT facilities such as showers, change rooms, lockers.	Bicycle parking spaces will be provided in accordance with *Austroads Research Report AP-R528-16 Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management*.
3.2 New cycling routes	Encourage cycling as an alternative means of transport.	Provide new, attractive and well-connected cycling routes.
4 Other		
4.1 Distribution information Fact Sheet	Provides more information about the sustainable travel options.	Prepare information sheets, such as a Travel Access Guide (TAG) for distribution to staff and visitors.

9.4 Travel Mode Audit Requirements

Travel mode surveys may be undertaken to determine the proportion of persons travelling to/from the site by each transport mode. This will be in the form of annual travel mode questionnaire surveys to be completed by all persons attending the site, as far as practicable. This could also be in the form of online surveys (such as SurveyMonkey), as previously undertaken by Council.

A physical survey recording the mode of travel for all persons entering and exiting the site shall be undertaken following a year of operation to establish a reliable baseline data set from which to base future iterations of this GTP.

10 Strategic Transport Review

As discussed in Section 3, the Coffs Harbour Master Plan and Precinct Analysis Gordon Street nominated conceptual plans with respect to future strategic transport and urban design objectives. The Proposal aligns with the key objectives of Council's Masterplans and is capable of facilitating any changes or upgrade works that may be delivered and funded in the future.

The Gordon Street reconfiguration works further to the Coffs Harbour Master Plan would affect on-street parking capacity. Notwithstanding, this TA assesses the Proposal with respect to the existing parking configuration. This would form the most appropriate parking assessment as Gordon Street works are at a planning stage. It is important to note once the development has been constructed and is operational, the Gordon Street reconfigurations would still be feasible. Further, Council have developed plans and strategies relating to other car parks (nominated 8 sites) to address the proposed changes to Gordon Street and indeed the other roads affected by the reconfiguration works nominated in the Masterplan.

The development (from a transport perspective) aligns with the urban design objectives of Gordon Street as per the Precinct Analysis Gordon Street (refer to Figure 7) . The key items of note are summarised below:

- The walking distance specified in the subject car parking assessment is consistent with Section 7.0 Walkability and Existing Parking of the Precinct Analysis Gordon Street, see Figure 6 for reference. In this regard, the parking assessment methodology aligns with the Council's strategic analysis which supported the Gordon Street Masterplan.
- The provision of on-street parallel pick-up / drop-off spaces would allow for the Precinct Analysis Gordon Street reconfiguration works to be implemented, which intends to remove angled parking and provide parallel parking on Gordon Street.
- Similarly, Council's intention to provide cycle paths parallel to Gordon Street would be permissible due to the proposed parallel pick-up / drop-off spaces and the boundary that would be reattained as part of this development.
- The access driveway on Gordon Street would not be affected by the possible upgrade to Gordon Street / Vernon Street intersection as the potential signalised intersection would allow for all turning movements.
- The Precinct Analysis Gordon Street concept plan stipulates a pedestrian through-link on the north-eastern boundary of the Site. The Proposal accommodates a pedestrian walkway through the Site as shown within Figure 1.

- It is noted that the precise location of the pedestrian link is not wholly consistent with the concept plan, though would ultimately achieve the same principles from an urban design perspective.

The Proposal would therefore achieve the intended urban design and planning objectives of Council's Masterplans, Coffs Harbour Master Plan and Precinct Analysis Gordon Street.

10.1 Coffs Harbour Bypass Project

The Coffs Harbour Bypass is a confirmed project which will be funded by the Australian and NSW governments. It is important to note that the works associated with the Proposal would not affect the progression of the Coffs Harbour Bypass Project.

10.2 Riding Lane - Urban Design Study

It is understood that Riding Lane - Urban Design Study (Riding Lane Study) will be commissioned by Council to investigate upgrade, reconfiguration and layout concepts to achieve greater pedestrian connectivity. Notwithstanding, the Riding Lane Study is a separate project that would be undertaken simultaneously to the Proposal. Of note, the Proposal allows the Riding Lane Study to occur without conflict.

11 Design Commentary

11.1 Relevant Design Standards

The site access, car park and loading areas have been designed to comply with the following relevant Australian Standards:

- AS2890.1 for off-street car parking areas;
- AS2890.2 for commercial vehicle loading areas;
- AS2890.3 for bicycle areas;
- AS2890.5 for on-street car parking areas; and
- AS2890.6 for accessible (disabled) parking.

It is expected that any detailed construction drawings in relation to any modified areas of the car park or site access would comply with these Standards. Furthermore, compliance with the above Standards would be expected to form a standard condition of consent to any development approval.

11.2 Site Access

The access point to the basement car parking level is proposed to be located on Gordon Street. The proposed driveway has been assessed with respect to AS2890.1 and the following items are noted:

- The proposed access width complies with the requirements for a Category 1 Access Driveway.
- Visual splays at the Site boundary are sufficiently clear of visual obstructions, noting the requirement to remove one (1) tree.
- A 10m 'No Stopping' area is proposed along Gordon Street west of the vehicle crossing to allow for compliant Stopping Sight Distance (SSD), noting that buses/coaches would become a visual obstruction if parked at the vehicle splay. Generally, SSD is achievable due to the lack of visual obstructions along Gordon Street verge.
- The 'No Stopping' zone would also serve as a de-facto emergency vehicle area, noting the close proximity to the fire hydrant which would be preferable for emergency situations.

The proposed access driveway is therefore in full accordance with the requirements of AS2890.1.

11.3 Car Park Design

A detailed review of the basement car park has been undertaken and the following features are noteworthy:

- All staff parking spaces are designed in accordance with a User Class 1A and are to be provided with a minimum space length of 5.4m, a minimum width of 2.4m and a minimum aisle width of 5.8m.
- Dead-end aisles are provided with the required 1.0m aisle extension in accordance with Figure 2.3 of AS2890.1.
- All accessible parking spaces are provided in accordance with AS2890.6, which requires a space with a clear width of 2.4m and located adjacent to a minimum shared area of 2.4m.
- All spaces located adjacent to obstructions greater than 150mm in height (including landscaping items) are provided with an additional width of 300mm.
- All bicycle parking racks are designed in accordance with AS2980.3, which requires a minimum dimension of 1.0m x 1.8m for with a 1.5m aisle width.
- The bicycle parking spaces are provided in a secure room in the basement carpark, which is in line with the highest security rating of AS2980.3.

11.4 On-street Parking Design

A technical review of the pick-up / drop-off facility on Gordon Street has been assessed with the following points of note:

- The on-street pick-up / drop-off zone is able to accommodate 6 light vehicle spaces as per AS2890.5 for parallel parking, which requires a minimum length of 5.4m for unobstructed spaces and 6.0m for intermediate spaces.
- The minimum clear width of 2.6m is provided for the on-street pick-up / drop-off zone, as required by AS2890.5, to accommodate trucks and buses. The available space allows for two 14.5m long rigid buses to be parked at the same time, determined through swept path analysis.

It is expected that any detailed construction drawings in relation to any modified areas of the car park, Site access or on-street parking zone would comply with the relevant Standards. Furthermore, compliance with the above Standards would be expected to form a standard Condition of Consent to any development approval.

Swept Path Analysis of the proposed basement is provided as Appendix B.

11.5 Loading Bay Design

The proposed loading facility off Gordon Street has been designed with regard to the largest anticipated vehicle (HRV), which requires minimum bay dimensions of 3.5m width, 12.5m length and 4.5m vertical clearance throughout the length of the bay. It is understood that the HRV is a side-loader and would not require additional length for loading/unloading purposes.

It is important to note that AS2890.2 allows commercial (heavy) vehicle reverse manoeuvres into loading bays for 'occasional' servicing. As discussed, the loading bay is forecast to accommodate approximately 20 commercial vehicles a year and would therefore be categorised as 'occasional' servicing. In this regard, reversing into the loading bay from Gordon Street is permissible as per AS2890.2

Furthermore, a Loading Dock Management Plan (LDMP) would be prepared in response to a suitable Condition of Consent. The objectives of a LDMP are to ensure safe practices for heavy vehicle manoeuvring which includes, but is not limited to, traffic controllers to assist reversing, delivery timings (e.g. deliveries outside peak pedestrian periods) and general safety procedures.

The proposed loading bay is compliant with the requirements of AS2890.2.

11.6 Design Summary

The internal configuration of the Site and on-street parking facilities have been designed generally in accordance with the requirements of the relevant Australian Standards (AS2890.1, AS2890.2, AS2890.3, AS2890.5 and AS2890.6). It is expected that a Condition of Consent would be imposed requiring compliance with these Standards and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

12 Conclusions

Ason Group has been commissioned by Coffs Harbour City Council to prepare a Transport Assessment (TA) in support a State Significant Development Application (SSDA) for a multi-purpose development (the Proposal) at 23-31 Gordon Street, Coffs Harbour (the Site). All SEARs have been addressed within this Transport Assessment report and the key findings of the study are summarised below.

- The development includes mixed land uses which include a regional library, regional gallery, regional museum, shop, café, function space, co-working space, multi-purpose rooms, Council chambers, customers service area, Council administration and offices. With respect to parking, the new building accommodates a basement car park for 74 spaces, 60 bicycle rails for visitors, 40 bicycle spaces for staff/employees, end-of-trips facilities and a pick-up / drop-off area for light vehicles and buses/coaches along the Gordon Street frontage. It should be noted that 37 spaces would be retained for Council use within the existing car park located in Council's existing chambers, resulting in a total of 111 spaces for Council employee usage.
- The Site is located within walking distance of 3 bus services (as per TfNSW's *Integrated Public Transport Service Planning Guidelines*) with infrequent services in the peak periods. There is also a bicycle network located to the north of the Site.
- Council's DCP provides guidelines for various land uses and outlines parking rates that are applicable to individual developments. The All Welcome Centre proposes a mix of community and workplace facilities which can be defined as short-term and long-term parking demands respectively. As such, the parking assessment has considered these two elements whereby the long-term demands would generally be accommodated by the private off-street parking facilities and the short-term within the available public parking availabilities consistent with the existing library / gallery developments and the Gordon Street Precinct Master Plan study.
- In accordance with Council's DCP, the commercial / office land uses require 84 parking spaces. In response, the Proposal provides 111 spaces for employee use, thereby satisfying Council's DCP requirements. In addition, Ason Group has also undertaken a First Principles analysis for the office land uses which confirms that the 111 parking spaces would satisfy the future parking demand. As discussed below, a draft Green Travel Plan has been prepared to drive behavioural change with respect to private vehicle usage and these targets have been incorporated into the parking assessment.
- As mentioned above the above, the parking demand of the proposed All Welcome Centre has been assessed using a First Principles analysis. A holistic parking assessment is considered wholly appropriate and applicable due to the provision of community facilities as well as the long-term economic and cultural benefits to the Coffs Harbour Urban Area. The analysis reviewed the net

impact of the Proposal noting that the proposed development relocates existing land uses and consolidates these in a single location.

- The assessment has therefore considered the on-street and off-street public parking capacities within a 5-minute walk from the development noting that the study area was set as the criteria for the Gordon Street Precinct analysis prepared by Council. The methodology has been discussed and agreed with Council which seeks to generally accommodate the long-term parking demands associated with employees off-street and satisfy the transient short-term parking demands of the community facilities within the local street network and available parking capacities.
- The assessment considered 3 scenarios (future year horizons) using operational data provided by Council and agreed parameters following discussion with Council officers. The scenarios assessed were: Year of Opening, 5 Year Horizon, and 10 Year Horizon. The parking demand analysis determined that a maximum parking demand of 193 spaces would occur during the weekday 11.00AM-12.00PM peak period 5 years after the development is constructed. During this peak period, the surrounding road network is able to accommodate the demand with a spare capacity of 81 spaces.
- The weekend analysis determined a maximum parking demand of 171 spaces between 11.00AM-12.00PM for the 10 Year Horizon Scenario. The surrounding road network is able to accommodate this demand with 393 space spare capacity.
- In summary, the parking assessment concludes that the proposed development is supportable. The objective to satisfy the long-term parking demands within the private off-street carpark and short-term community demands within the available on-street and off-street public carpark is achieved. Compliance with the office use and parking supply accords with Council's DCP and the holistic temporal parking demand profile confirms that the peak parking demands can be met by the All Welcome Centre.
- The traffic impact assessment methodology investigated the local road network using SIDRA intersection analysis. The arterial road network was also considered with specific reference to the cumulative impact of the future Coffs Harbour Bypass.
- SIDRA intersection analysis was undertaken of the study road network and determined that the assessed intersections within the local road network would continue to operate at LOS A with minimal increases to vehicle delay in all 3 Scenarios. The analysis demonstrated that the intersection operation would remain relatively consistent to the existing conditions with minor increases in Average Vehicle Delay.
- The traffic generated by the Proposal has been assessed with consideration for the various arrival and departure routes available for visitors and staff to the Site based on existing travel data. Taking into consideration that the visitors associated with the community facilities are provided with multiple potential routes to access and depart the parking study area, the dispersion of traffic that

the largest increase at any one intersection would equate to 93 veh/hr (approximately 2% of the total traffic) at the intersection of Pacific Highway and Coff Street during PM peak of the 10 Year Horizon Scenario. Given the relatively low percentage increase, the intersection (and arterial road network) would therefore continue to operate in a consistent manner.

- Furthermore, the Coffs Harbour Bypass is a committed project which would significantly reduce the daily traffic volumes on Pacific Highway between Albany Street and Orlando Street, and would thus decrease traffic at the Pacific Highway and Coff Street intersection. As such, the long-term operation of this intersection would improve upon completion of the Coffs Harbour Bypass Project.
- A preliminary Construction Traffic Management Plan has been prepared and submitted with this Transport Assessment. The Construction Traffic Management Plan intends to minimise potential impacts to the road network during the construction period.
- A Green Travel Plan would be prepared for the Site to reduce the traffic impacts of the Proposal and maximise travel by public and active transport. A target modal split has been developed based on relevant data, reports and Council input. It is expected that the
- The access, internal design, pick-up / drop-off area and loading bay has been designed having regard for relevant Australian Standards (AS2890 series). It is expected that a future Condition of Consent would be imposed requiring compliance with these Standards, and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate

In summary, the Proposal is supportable on traffic planning grounds.

Appendix A

Parking Demand Analysis Data

Table 21: Staff and Visitor Private Vehicle Mode Share per Land Use – Year of Opening & 5 Year Horizon

Land Use	Weekday		Weekend	
	Staff Mode Share (%)	Visitor Mode Share (%)	Staff Mode Share (%)	Visitor Mode Share (%)
Regional Library	77	90	85	80
Regional Gallery	77	66	85	75
Regional Museum	77	66	85	75
Multi-purpose civic (Council Chambers) / Public Meeting Rooms / Function space / community rooms / Co-working space	77	50	85	70
Customer service area	77	90	N/A	N/A
Council staff admin area / workplace (incl. executive)	77	90	N/A	N/A

Table 22: Additional Visitation Numbers per Land Use

Land Use	Year of Opening	5 Year Horizon	10 Year Horizon
Library	88,000	154,017	170,047
Gallery	37,879	42,889	47,353
Museum	7,120	10,769	11,890
Multi-purpose civic (Council Chambers) / Public Meeting Rooms / Function Space / Community Rooms / Co-working space	25,000	60,000	66,245
Customer Service Area	85	85	85

Table 23: Additional Staff Numbers

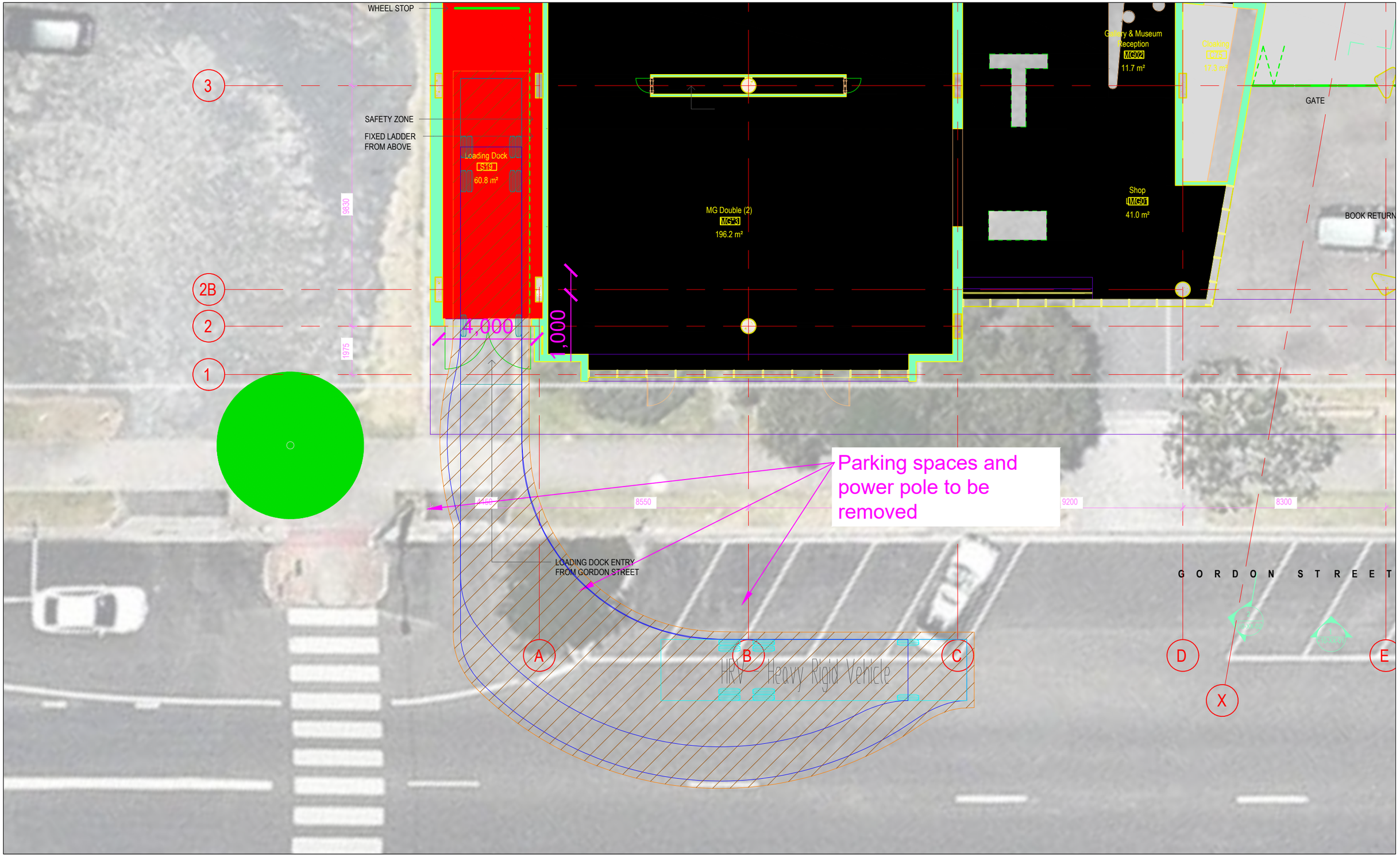
Land Use	Year of Opening	5 Year Horizon	10 Year Horizon
Library	20	20	20
Gallery	20	20	20
Museum	20	20	20
Multi-purpose civic (Council Chambers) / Public Meeting Rooms / Function Space / Community Rooms / Co-working space	20	20	20
Customer Service Area & Council Offices	0	12	25

Table 24: Length of Stay per Land Use

Land Use	Average Length of Stay
Library	2 hours
Gallery	2 hours
Museum	2 hours
Multi-purpose civic (Council Chambers) / Public Meeting Rooms / Function Space / Community Rooms / Co-working space	2 hours
Customer Service Area	30 minutes
Council Offices	8 hours

Appendix B

Swept Path Analysis



Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: AT

Client: Coffs Harbour City Council

Project: 0914 The Cultural and Civic Space Project, Coffs Harbour

Drawing Title: Servicing Layout Heavy Rigid Vehicle (HRV)

Date: 31-May-19

Scale @ A3: [scale]

Drawing Number: AG01

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Suite 5.02, Level 5, 1 Castlereagh Street
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Revision notes:

Rev:	Date:	Notes:

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Drawn By: AT

Client: Coffs Harbour City Council

Project: 0914 The Cultural and Civic Space Project, Coffs Harbour

Drawing Title: Pick-up / Drop-off Layout Works Required

Date: 31-May-19

Scale @ A3: [scale]

Drawing Number: AG02

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Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: AT

Client: Coffs Harbour City Council

Project: 0914 The Cultural and Civic Space Project, Coffs Harbour

Drawing Title: Pick-up / Drop-off Layout 14.5m Long Rigid Bus

Date: 31-May-19

Scale @ A3: [scale]

Drawing Number: AG03

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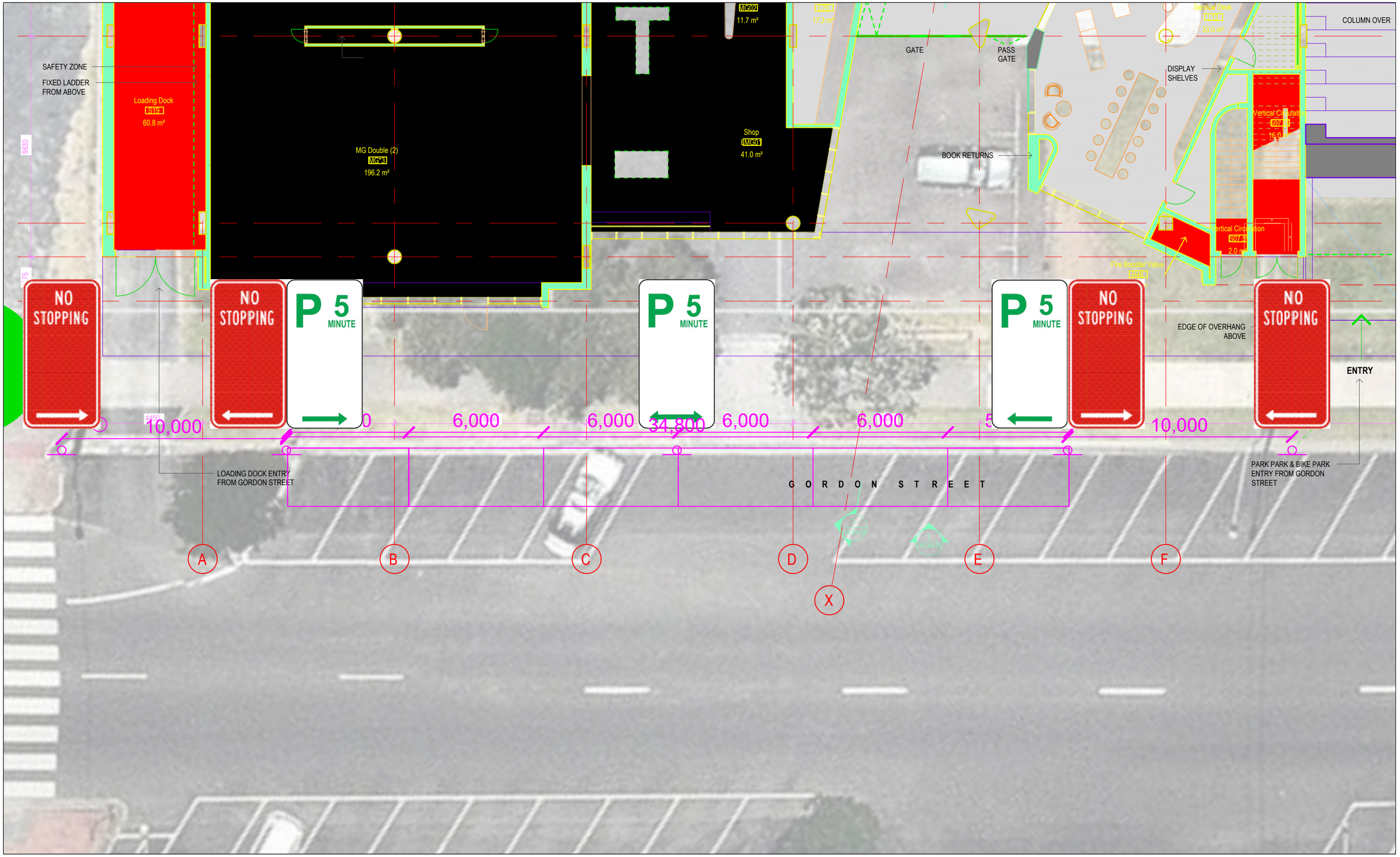

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: AT

Client: Coffs Harbour City Council

Project: 0914 The Cultural and Civic Space Project, Coffs Harbour

Drawing Title: Pick-up / Drop-off Layout Light Vehicles

Date: 31-May-19

Scale @ A3: [scale]

Drawing Number: AG04

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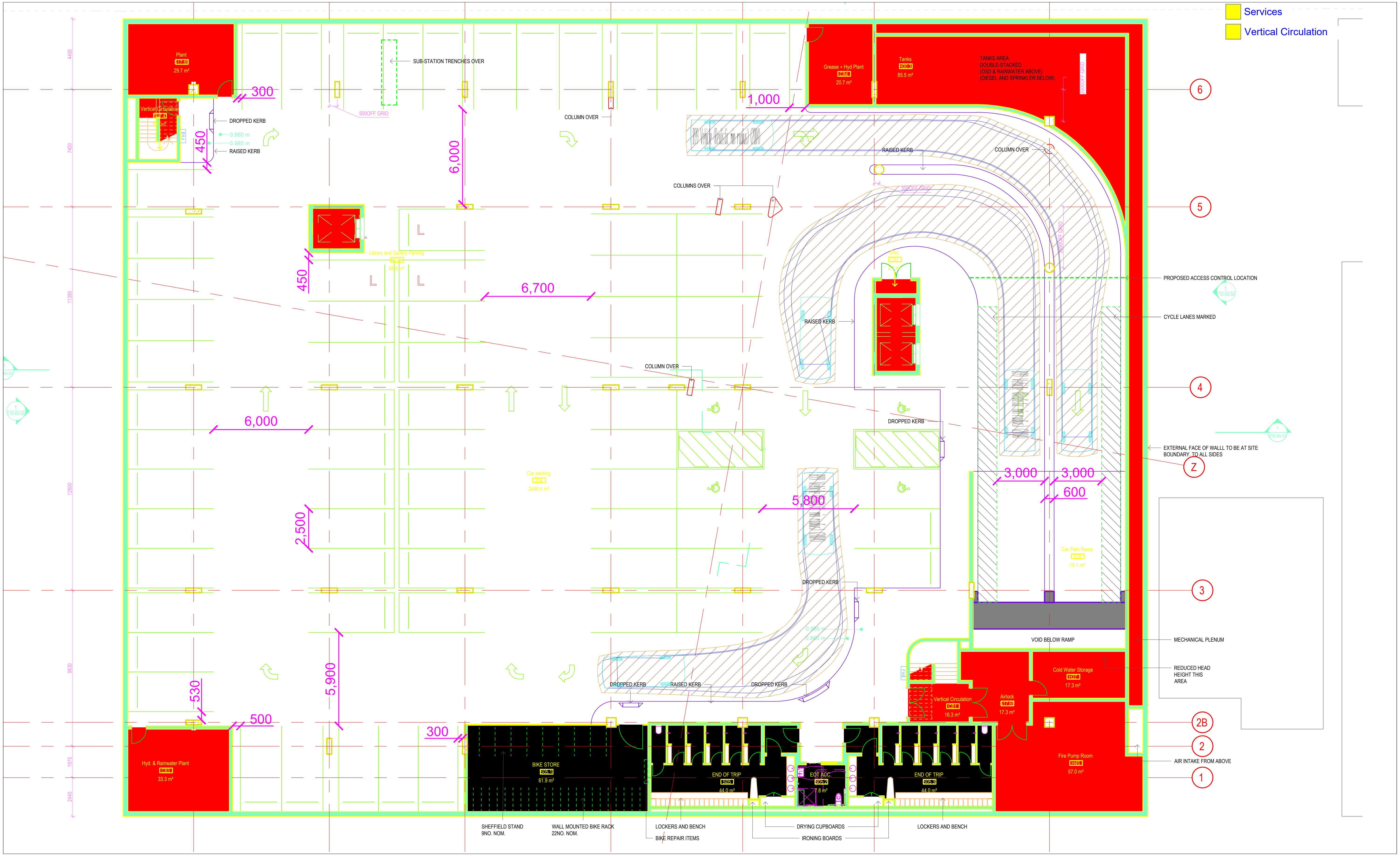

Services
Vertical Circulation
SUB-STATION TRENCHES OVER
DROPPED KERB
RAISED KERB
COLUMN OVER
COLUMNS OVER
TANKS AREA
DOUBLE-STACKED
(OSD & RAINWATER ABOVE)
(DIESEL AND SPRINKLER BELOW)
PROPOSED ACCESS CONTROL LOCATION
CYCLE LANES MARKED
EXTERNAL FACE OF WALL TO BE AT SITE BOUNDARY, TO ALL SIDES
VOID BELOW RAMP
MECHANICAL PLENUM
REDUCED HEAD HEIGHT THIS AREA
AIR INTAKE FROM ABOVE
SHEFFIELD STAND 9NO. NOM.
WALL MOUNTED BIKE RACK 22NO. NOM.
LOCKERS AND BENCH
BIKE REPAIR ITEMS
DRYING CUPBOARDS
IRONING BOARDS
LOCKERS AND BENCH
300
1,000
450
6,000
6,700
3,000
3,000
600
5,800
2,500
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4
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3
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Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: AT

Client: Coffs Harbour City Council

Project: 0914
The Cultural and Civic Space Project, Coffs Harbour

Drawing Title: Basement Car Park
Design Checks

Date: 31-May-19

Scale @ A3: [scale]

Drawing Number: AG05

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Appendix C

Preliminary CTMP

Prepared for

COFFS HARBOUR CITY COUNCIL

Construction Traffic Management Plan

Proposed Mixed-Use Development
23-31 Gordon Street, Coffs Harbour

Ref: 0914r02v1
17/06/2019

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Document Control

Project No: 0914r02v1

Project: 23-31 Gordon Street, Coffs Harbour CTMP

Client: Coffs Harbour City Council

File Reference: 0914r02v1 CTMP_23-31 Gordon Street, Coffs Harbour, Issue I

Revision History

Revision	Date	Details	Author	Approved by
Draft	30/05/2019	Working Draft	J. Laidler	
Issue I	17/06/2019	Issue I	J. Laidler	

Table of Contents

Appendices

1 Introduction

1.1 Overview

Ason Group has been engaged by Coffs Harbour City Council (Council) to prepare a Construction Traffic Management Plan (CTMP) to be included within a SSDA for the construction of a multi-purpose development (the Proposal) at 23-31 Gordon Street, Coffs Harbour (the Site), in response to SEARS which states:

"In relation to construction traffic addressing the following:

- *Assessment of cumulative impacts associated with other construction activities in the local area;*
- *An assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity;*
- *Details of the construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process;*
- *Details of anticipated peak hour and daily construction vehicle movements to and from the site;*
- *Details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicles*
- *Details of temporary cycling and pedestrian access during construction.*
- *Details of proposed construction vehicle access arrangements at all stages of construction*
- *Traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport. This shall include the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact (which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities).*
- *Relevant Policies and Guidelines:*
  - *Guide to Traffic Generating Developments (Roads and Maritime Services)*
  - *Austroads Guide to Traffic Management Part 6*
  - *Austroads Guide to Road Design Part 4A"*

Demolition works shall be subject to a separate an Assessment, therefore this CTMP shall address issues on construction works post demolition.

The purpose of this report is to detail a traffic plan for construction that would minimise traffic impacts on the surrounding road network, ensure the safety and efficiency of all workers, pedestrians and road users, and provide information regarding the construction vehicle access routes and any changed road conditions (if applicable).

It is expected that this plan would be updated should any necessary changes to the currently proposed arrangements arise in the future. Any changes to this plan shall be done in consultation with Council. Any special events would be subject to a separate request for a specific permit not covered by this report (if required).

Please note, Ason Group is responsible for the preparation of this Plan only and not for its implementation, which is the responsibility of the project manager / builder.

1.2 CTMP Compliance with Draft Condition of Consent

A summary of the relevant requirements of the conditions of consent and this CTMP's compliance with each is provided below for clarity.

Table 1: Compliance Table

Reference	Requirement	Response
8	In relation to construction traffic addressing the following:	*n/a*
a)	Assessment of cumulative impacts associated with other construction activities in the local area;	The cumulative construction impacts of other projects within the area have been assessed within Section 3.1.4 It is noted that there are no construction projects that will compound the impacts of this project.
b)	An assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity;	An assessment was undertaken to determine if there were any existing road safety issues along key intersections of the heavy vehicle construction route. The findings are outlined within Section 1.5
c)	Details of the construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process;	Section 2.1 provides a breakdown of the expected construction program. If in the event the construction program changes significantly, the contractor will notify the Council accordingly.
d)	Details of anticipated peak hour and daily construction vehicle movements to and from the site;	Work hours can be found within Section 2.2 of this report. Additionally, the proposed vehicle movements to and from the Site have been outlined within Section 3.1.1
e)	Details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicles	Access arrangements for light and heavy construction vehicles, and emergency vehicles, can be found within Section 2.3

Reference	Requirement	Response
f)	Details of temporary cycling and pedestrian access during construction.	Section 3.4 outlines the details of temporary cycling and pedestrian access during construction.
g)	Details of proposed construction vehicle access arrangements at all stages of construction	Details of construction vehicle access arrangements can be found within Section 2.3
h)	Traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport. This shall include the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact (which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities).	Traffic and transport impacts during construction have been outlined within Section 3.1. Traffic Control Plans (TCP's) have been prepared to mitigate any impacts as best as possible and can be found within Appendix B
i)	Relevant Policies and Guidelines: - Guide to Traffic Generating Developments (Roads and Maritime Services) - Austroads Guide to Traffic Management Part 6 - Austroads Guide to Road Design Part 4A"	Noted, these policies will be used in developing the CTMP. Additionally, it was essential that the RMS Traffic Control at Worksite's Manual is also used.

1.3 Site Location

The subject Site has a street address of 23-31 Gordon Street, Coffs Harbour and is legally known as Lot 20, Section 6 of DP 758258, Lot B of DP 346105 and Lot 123 of DP 749233. The Site is currently occupied by three (3) commercial developments and is located within the Coffs Harbour CBD. It is bound by Gordon Street to the east and Riding Lane to the west. The Site shares a frontage with a single storey church to the south and a low-rise office development to the north.

Within the broader locale, surrounding developments comprise predominantly commercial, business and retail uses.

The Location and Road Hierarchy Plan presented as **Figure 2** provides an appreciation of the Site and its location.

1.4 Road Hierarchy

The road hierarchy in the vicinity of the Site is shown in Figure 1, with the following roads considered noteworthy:

- **Pacific Highway** – a State (arterial) road that runs in a north-south direction to the west of the Site. The road provides four travel lanes and two parking in both directions and provides a link between Korora and Boambee. Pacific Highway has a posted speed limit of 60 km/h in the vicinity of the Site.
- **Gordon Street** – a local road which runs in the north-south direction along the eastern frontage of the Site. This bidirectional road provides two trafficable lanes and two parking lanes with 2P parking restrictions. Gordon Street is restricted to a speed limit of 40 km/h in the vicinity of the Site as Coffs Harbour CBD is classified as a High Pedestrian Activity Area (HPAA).
- **Coff Street** – a local road that runs in the east-west direction and is located to the north of the Site. The road is bidirectional and generally provides five travel lanes with a posted speed limit of 40km/h.
- **Vernon Street** – a local road that runs in an east-west direction and is located to the south of the Site. The road is bidirectional and generally provides two travel lanes and two parking lanes with 1P parking restrictions and has a posted speed limit of 40km/h except for a small section of Shared Zone (10km/h speed limit) at the Coffs Central pedestrian entrance.
- **Riding Lane** – a one-way lane that runs along the western frontage of the Site and is subject to a speed limit 40 km/h. It provides one travel lane in the southbound direction and provides vehicular to properties along Gordon Street and the existing Council offices. Furthermore, Riding Lane provides two exit points from the Castle Street Car Park complex.

The Site is conveniently located with primary access to the arterial and local road network serving the region (Pacific Highway to the north). It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts on local roads.

Figure 1: Location Plan

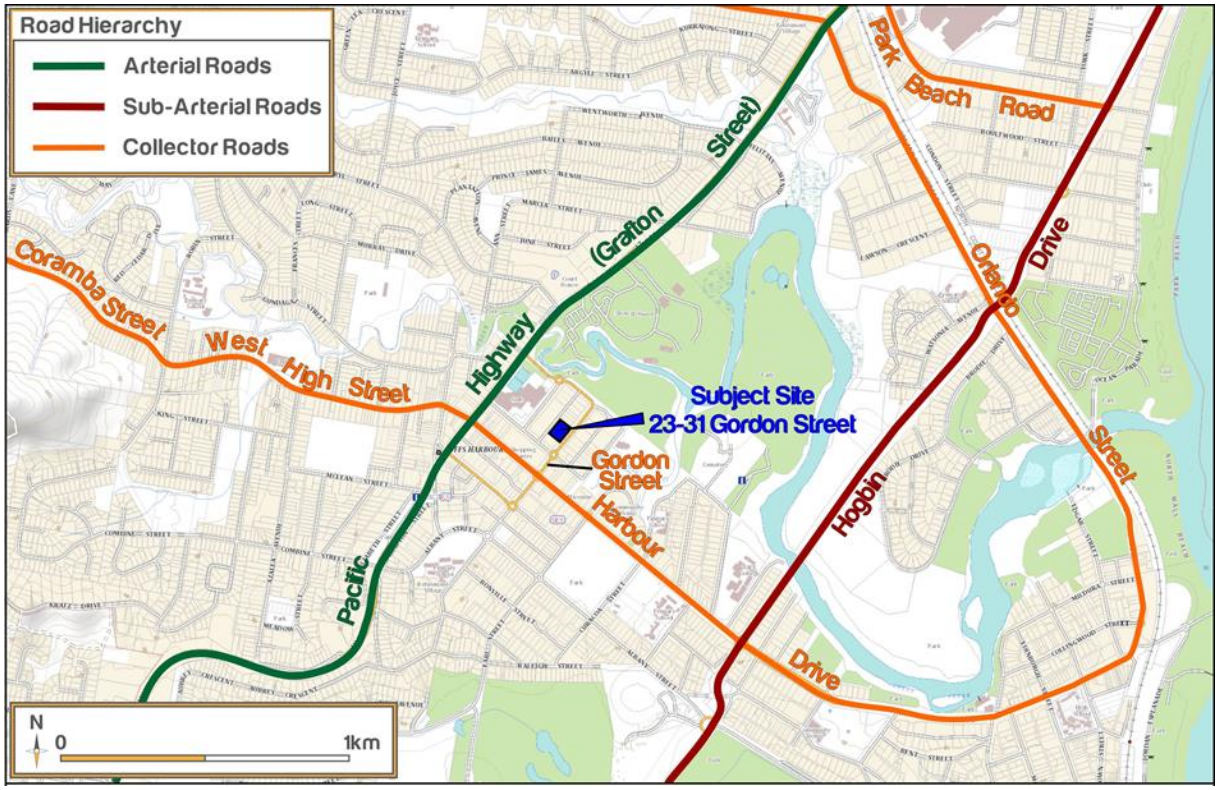


Figure 2: Road Hierarchy

1.5 Road Safety

A review of the Roads and Maritime crash database has been undertaken to establish the crash history within Pacific Highway, Coff Street, and Gordon Street fronting and within the immediate vicinity of the Site.

The results show the crashes over a five-year period between 2013 and 2017. The findings are summarised in **Table 2** below.

In 2014 the NSW Police Force implemented changes to the way data is captured about some crashes. *"Transport for New South Wales (TfNSW) Definitions and notes to support LGA Visualisations – NSW Centre for Road Safety, January 2016"* explains that crashes in which a vehicle is towed away but no person is injured are now able to be self-reported by the involved parties.

All crashes in which a vehicle is towed away are still required to be reported, however will only be investigated by Police in certain circumstances such as a failure to exchange details. The result of this is that the number of reported crashes has dropped, therefore questions surrounding 'incidents' and 'near misses' were included within the tenant survey.

Table 2: RMS Crash Statistics

Year	Location	RUM – Description of Crash	Injury
2013	Coff Street x Castle Street	41 – U turn into object	-
	Gordon Street (mid-block)	73 – Off road, right into object	-
2014	Pacific Highway x Coff Street	2 – Pedestrian far side	1 – Serious
	Coff Street x Castle Street	10- Cross traffic	1 – Moderate
2015	Pacific Highway x Coff Street	30 – Rear end	1 – Moderate
	Pacific Highway x Coff Street	9 – Pedestrian other	1 – Moderate
2016	Pacific Highway x Coff Street	11 – Right far	-
2017	Pacific Highway x Coff Street	10 – Cross traffic	-

Source: RMS Crash Statistic Website

The results indicate that there is not a systemic issue with the proposed construction traffic routes in terms of safety (i.e. all accidents are not constrained to a single intersection and a single RUM code). It can therefore be assumed that the addition of construction traffic will not exacerbate or make worse the safety at each intersection.

1.6 Non-Car Access

1.6.1 Existing Public Transport

The Site's proximity to public transport is shown in **Figure 3**, which highlights the locations and distances to bus services surrounding the Site.

Existing Bus Services

The *Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area* (Transport for NSW (TfNSW), December 2013) states that bus services influence the travel mode choices of areas within 400 metres walk (approximately 5 minutes) of a bus stop. In this regard, the bus services within walking distance to the Site are as follows:

- Bus route 360
  - Coffs Harbour Base Hospital to Park Beach Plaza – operates with one service during the morning peak period and approximately every 30 minutes during the evening peak period.
  - Park Beach Plaza to Coffs Harbour Base Hospital – operates with one service during the morning peak period and approximately every 30 minutes during the evening peak period.
- Bus route 361
  - Bellingen to Coffs Harbour – operates with one service during the morning peak period and does not operate during the evening peak period.
  - Coffs Harbour to Bellingen – does not operate during the morning peak period and operates with one service during the evening peak period.
- Bus route 365
  - Park Ave to Park Beach Plaza via The Jetty – operates approximately every 60 minutes and 30-60 minutes during the morning and evening peak periods, respectively.
  - Park Beach Plaza to Park Ave via The Jetty – operates approximately every 60 minutes and 30-60 minutes during the morning and evening peak periods, respectively.

Pedestrian Connectivity

The Site provides a high level of pedestrian connectivity. The key pedestrian desire lines within the vicinity of the Site primarily relate to connections to the town centre and existing public transport infrastructure (bus stops close by). In this regard, footpaths are provided along both sides of all roads surrounding the site.

The footpaths provided are of a high quality, with generous widths and dropped kerbs provided at points of crossing. The footpaths vary in width but most within the vicinity of the site are at least 2.5m. There are signalised pedestrian crossings located at the intersection of Gordon Street and Harbour Drive. These signalised crossings provide connectivity to the retail and restaurant precincts surrounding the site.

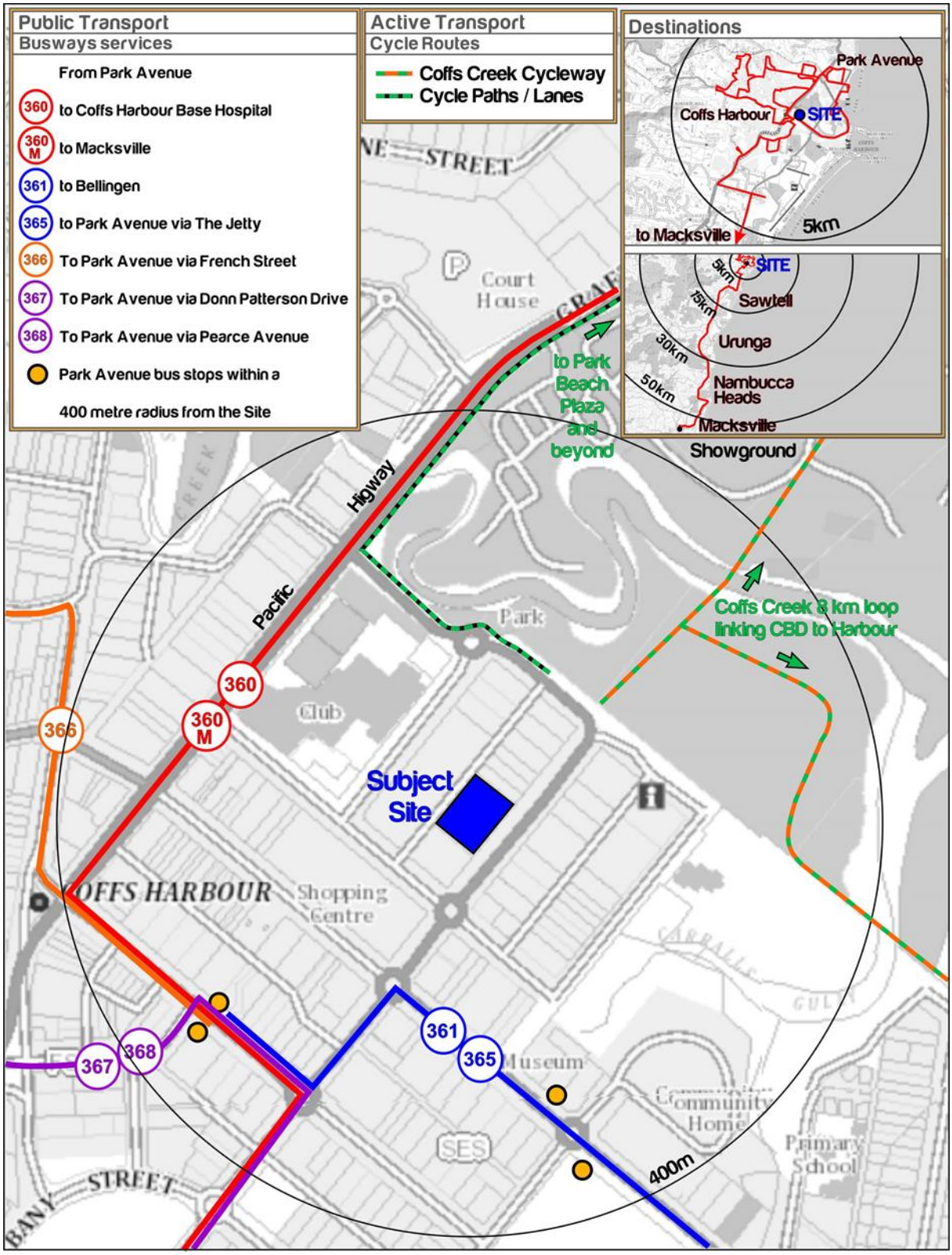


Figure 3: Existing Public Transport Map

2 Overview of Works

2.1 Staging and Duration of Works

Recognising the purpose of this CTMP, it is estimated that the total duration of the construction works will be approximately 30 months from the commencement date. The following summarises key aspects of the construction stages:

- Demolition and Excavation is estimated to begin in May 2020 and to continue for 5 months.
- General Construction and Concrete Pours are estimated to begin in October 2020 and to continue for approximately 19 Months. Peak construction activities are expected to occur during this stage of works – especially during Concrete Pours.
- External Finishes are expected to begin in March 2022 and continue for approximately 2 months.
- Completion of works are expected to commence in May 2022 and also continue for 2 months. During this time, it is expected that occupancy certificates and other 'practical completion' works are to be undertaken

2.2 Hours of Operation

The type of work being undertaken will vary depending on the phase of construction and associated activities. This includes both construction and design personnel. Notwithstanding, all works will be undertaken within the following timeframes which are as follows:

- Monday to Friday (other than Public Holidays): 7:00am – 6:00pm.
- Saturday: 8:00am – 1:00pm
- Sunday & Public Holidays: No works to be undertaken.

2.3 Proposed Site Access

Construction vehicles will enter and exit the Site via a temporary entrance to the south of the Site on Gordon Street. The largest vehicle accessing the Site could be a 19.6m Truck and Dog, although at this stage it is expected that 12.5m Heavy Rigid Vehicles (HRV's) would be the largest vehicles to access to site. Notwithstanding, Appendix C demonstrates that Truck and Dogs can arrive and depart site without crossing the centreline of the road.

During this time, Pedestrians attempting to cross the Site's access are to be managed through signage, and traffic controllers (or worker). Site personnel will also be able to access the Site by foot via a secure access gate along Gordon Street.

Emergency vehicle access to and from the Site will be available at all times while the Site is occupied by construction workers. This process would be implemented through emergency protocols on the site which will be developed by the Contractor.

2.4 Construction Vehicle Access Routes

All construction vehicles would enter and exit the Site via the routes shown in **Figure 4**. The routes shown are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available - hence minimising the impacts of the construction process. A copy of the approved routes will be distributed by the Contractor to all drivers before their arrival to Site.

All Truck and Dog movements will access the construction site via Pacific Highway before turning onto Coff Street and then right onto Gordon Street before turning into site. All construction vehicles are to exit the Site via the identified route during the AM and PM peak:

Any oversized or over-mass vehicles travelling to and / or from the Site will be required to obtain a permit from the Roads and Maritime Services (RMS) and / or the National Heavy Vehicle Register (NHVR). Notwithstanding, this CTMP relates to general construction which does not seek the use of oversize vehicles. A separate application would be submitted to Council if required. Swept paths (attached in **Appendix C**) demonstrate all critical turns at nearby intersections as outlined within **Figure 4.**

All construction vehicles associated with the construction project will enter and exit the Site (internal and Work Zone) in a forward direction.

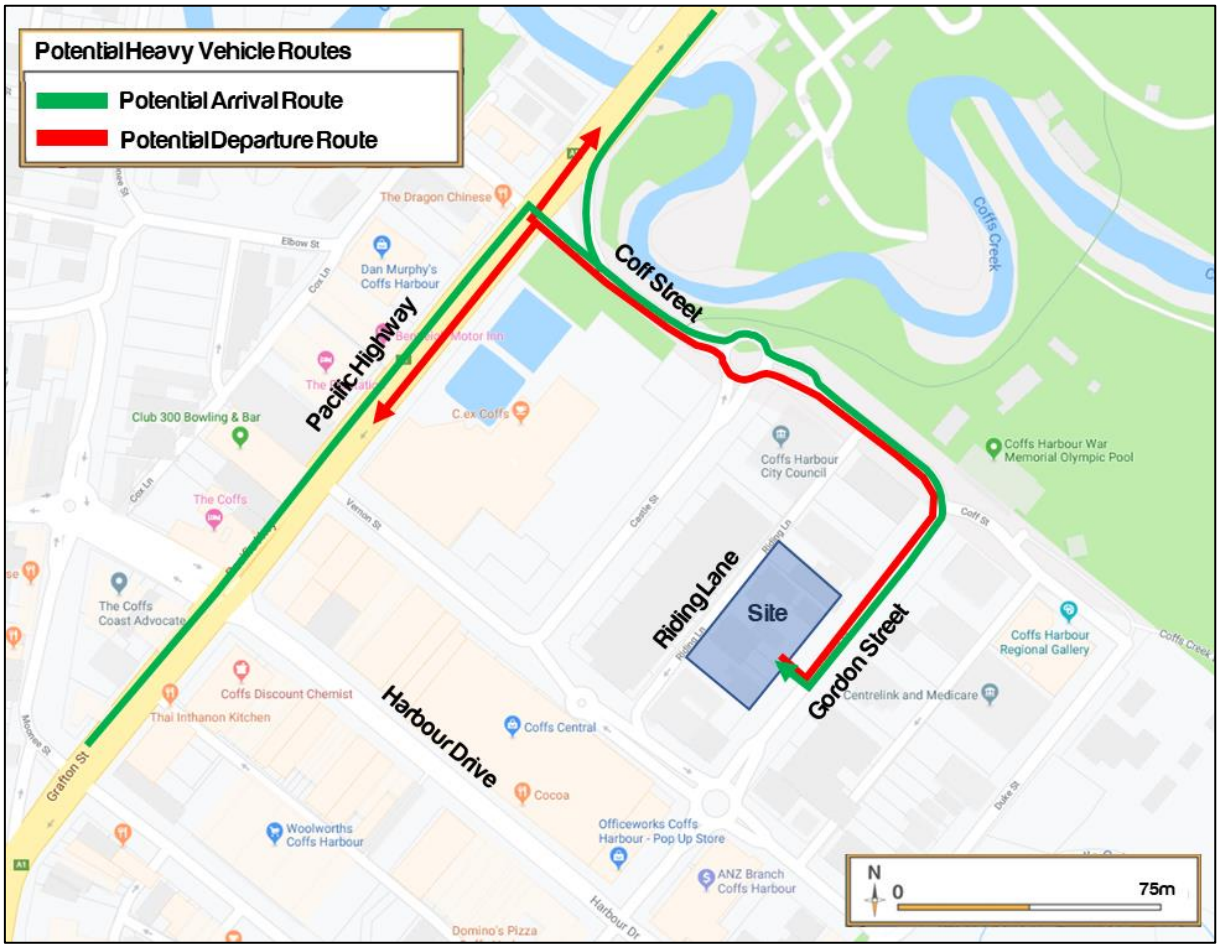


Figure 4: Construction Vehicle Route

2.5 Fencing Requirements

Security fencing will be erected along the entire boundary of the site and will be maintained for the duration of the construction program. The fencing is to ensure unauthorised persons are kept out of the Site. Site access gates would be provided along Gordon Street and will be closed at all times outside of the permitted construction hours.

A combination of A class and B class hoarding will be installed along Gordon Street and Riding Lane throughout the construction of the development. The proposed hoarding types and timelines are outlined within Table 3. Hoarding layout and timings may change throughout the development, however prior approval shall be sought from Council.

Table 3: Proposed Hoarding

Street Frontage	Estimated Timeline	Hoarding Type
Riding Lane	Entire Project	A Class
Gordon Street		B Class

2.6 Work Zone

Site constraints restrict the ability for all vehicles to be contained wholly within the Site. Swept Paths attached within Appendix C highlight that a Truck and Dog is suitably the largest vehicle able to access the Site. A work zone is to be proposed to assist with the demolition, excavation and construction activities.

The work zone shall be located on Gordon Street, directly adjacent to the Site to the south. The work zone is to run the length of the site frontage and is capable of providing parking for up to 3 Truck & Dogs at any one time. The proposed Work Zone plan is provided Appendix B

2.7 Materials Handling

It is proposed that all material loading will occur within the construction site boundary. Equipment, materials and waste will be kept within the construction site boundary. Should materials handling be required from the public roadway then prior approval shall be sought and obtained from Council.

2.8 Site Management

Site management will be required to notify adjacent properties of any temporary traffic restrictions and measures being implemented at least fourteen (14) days in advance.

Some works may be required within the roadway during the external finishes stage. These works would most likely be undertaken at night or during off peak periods to limit any interaction with peak traffic conditions along Gordon Street.

Any Traffic Control measures necessary for these works will be submitted to Council for approval and 14 days' notice would be provided to adjoining property owners as required. Pedestrian amenities and footpaths will be kept to serviceable conditions during the construction periods. Remediation of any damaged footpaths and pedestrian facilities will be undertaken at the discretion of Council.

2.9 Site Plan

Figure 5 provides the layout for the Site during the construction period and illustrates the main Site accesses to be used and the location of the internal roads and offices.

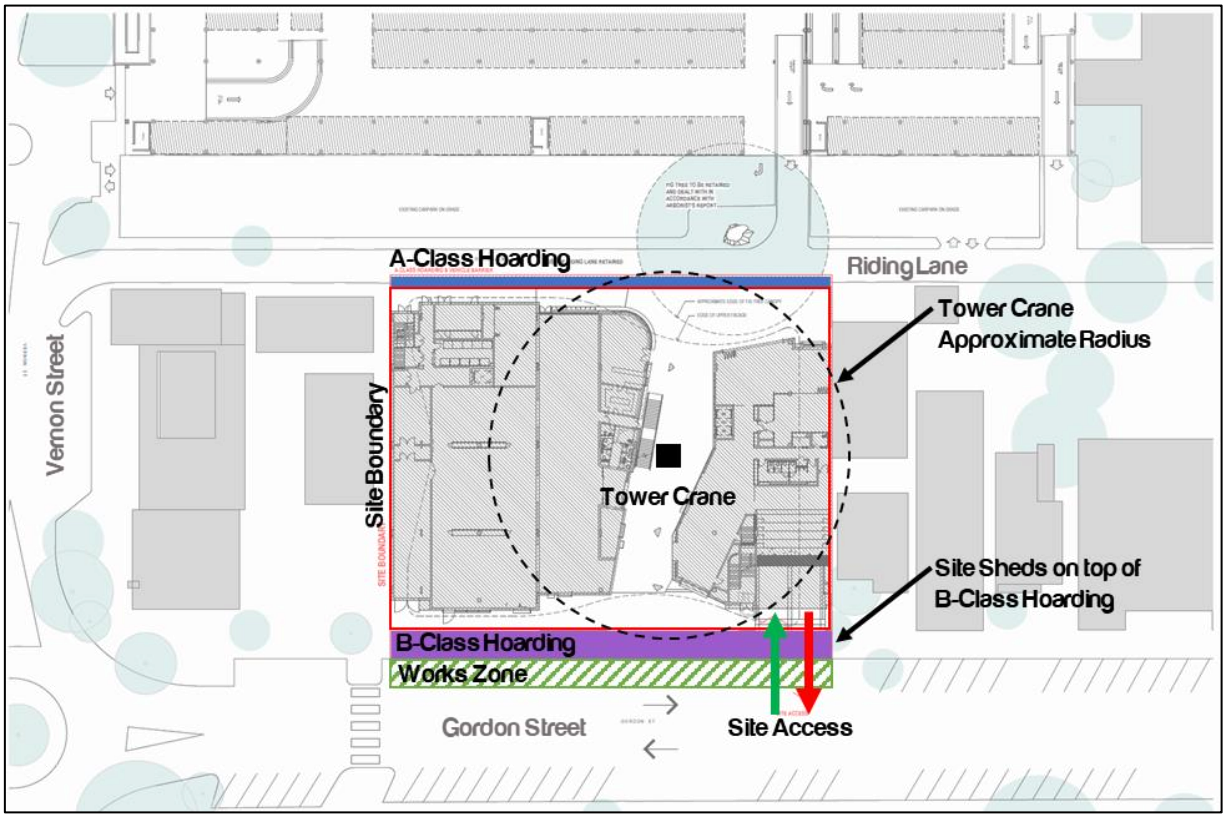


Figure 5: Site Plan (General Operation)

During, once the basement carpark has been constructed, the site sheds shall move to within the basement carpark, and shall include Site Offices, Change Rooms, Lunch Rooms and Amenities.

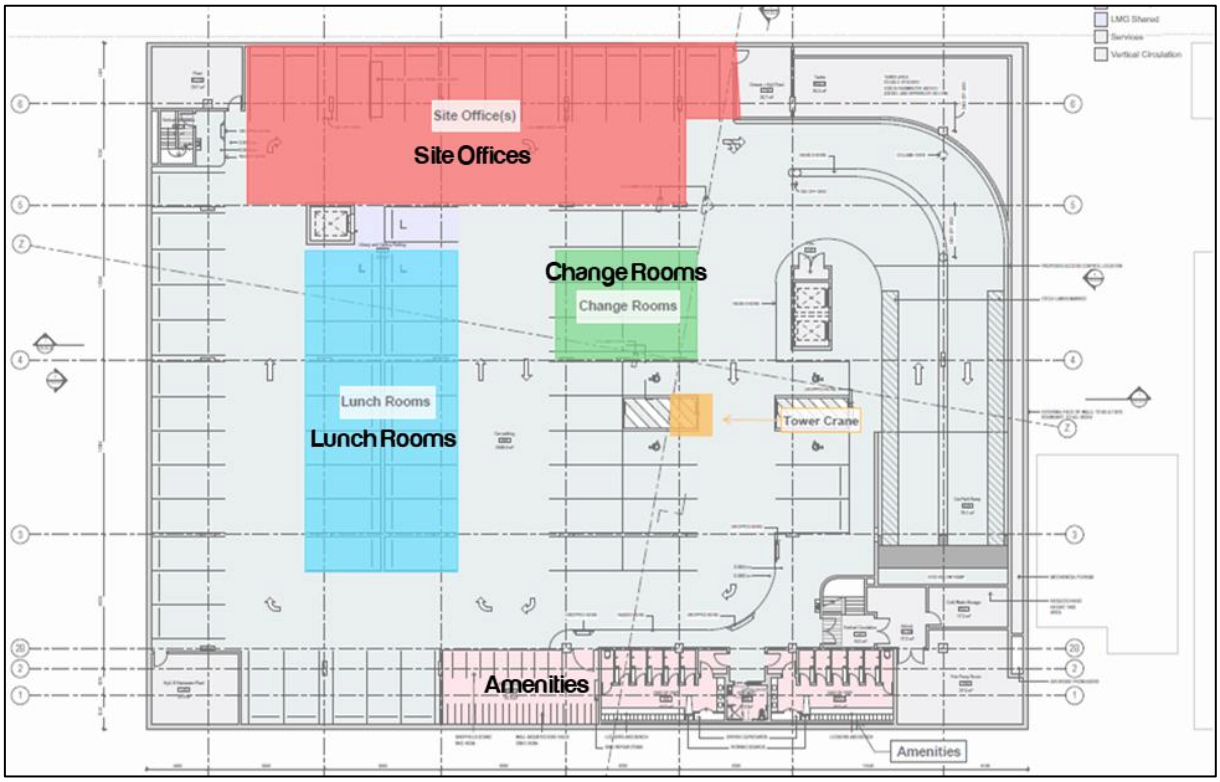


Figure 6: Site Offices Within Basement Carpark

2.10 CTMP – Monitoring & Review Process

The CTMP has been based on the existing site conditions and information provided by Council and BVN. Consultation with Council will continue to be undertaken to ensure that the cumulative traffic impacts of construction within the area does not adversely impact the road network. The CTMP will be reviewed and monitored frequently to confirm that the construction traffic methodologies reflect the current traffic situation in the Site's locality.

3 Assessment of Traffic & Transport Impacts

3.1 Construction Vehicle Traffic Generation

3.1.1 Truck Movements

Information provided by Council indicates the following breakdown of truck movements;

Table 4: Truck Movement Overview

Stage	Excavation	General Construction	Concrete Pours	External Finishes	Kerb / Footpath Works
Truck Frequency (Movements Per Day)	66	66	66	60	40
Largest Vehicle Size	Truck & Dog	Truck & Dog	Truck & Dog	MRV	AV

An estimated 66 truck movements a day can be converted to an average of 6 trucks movements an hour (5 in and 1 out) across an 11 hour day. It is understood that peak volumes would be associated with Excavation, General Construction and Concrete Pours. During these peak periods, trucks are expected to arrive and depart the Site between the hours of 7:00am – 6:00pm.

There may be occasions when some increase in volumes are required for concrete pours, however it is not expected to exceed the averages across a daily period.

3.1.2 Light Vehicle Movements

In relation to light vehicle movements, it is anticipated that a maximum of 150 workers would be on-site at any one time. No parking spaces for employees / contractors are proposed on-site.

3.1.3 Traffic Impact

Importantly, the peak hour construction traffic volumes (33 heavy vehicle arrivals / departures in each peak)are expected to be lower than the approved operational volumes associated with the development, which is forecast to generate a site peak of 109 veh/hr.

Site constructions vehicles will share Coff Street and Gordon Street with vehicles generated by the Coffs Harbour CBD, the most common of which are standard Vehicles. In the event that pedestrian vehicle arrivals coincide with a construction heavy vehicle arrival, there would be sufficient room within Gordon Street to not create a material impact to the existing road network, i.e. a westbound vehicle will be able to pass vehicle waiting to turn to the Site.

Regarding construction worker vehicles, as previously stated the workforce arrival and departure peaks sit outside the commuter peak hours; as such, these trips are not expected to impact on the operation of the broader local road network, given that background traffic flows are significantly lower than during peak periods.

3.1.4 Cumulative Traffic Impacts

Consultation has been undertaken with Council with regard to other construction projects within the immediate vicinity of the Site.

There is a single project approximately 60m to the west of the Site. This project has recently been completed and consists of a mixed use, 4 storey development which includes 2 levels of retail space, 2 levels of office space and provision of 28 spaces within an underground car park. The development has a subsequent stage which includes 6 levels of hotel space (80 rooms and a hotel dining room) which is indefinitely suspended.

For the purpose of this report, there will be no cumulative impacts on the road network as a result of construction works at 23 -31 Gordon Street, and is therefore considered acceptable.

3.2 Vehicle Management

3.2.1 Principles

In accordance with Road and Maritime Services (RMS) requirements, all vehicles transporting loose materials would have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site. All drivers are to be familiar with the Driver Code of Conduct before attending the Site. A copy of the Code is included in **Appendix A**.

Further to covering/securing the load to prevent deposits onto the roadway, a device is proposed at the point of vehicle egress to minimise the risk of dirt tracking out onto Gordon Street. The responsibility of the driver to ensure that the device is driven over would be included as part of the Driver Code of conduct.

All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The Head Contractor will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicle movements to, from and within the Site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

3.2.2 Queuing

It is expected that a schedule for deliveries of materials and goods will be established prior to that day, with Traffic Controllers maintaining radio contact with construction vehicles at all times. Thus, at no stage shall queueing occur on the public road network.

At the detailed CC design stage, an appropriate layover location for vehicles to utilise should be included within the detailed CTMP in the event that there is a requirement to use a layover prior to arrival to site. The appointed builder should discuss with Council any possible layover locations nearby in order to not create queuing issues along Gordon Street.

3.3 Contractor Parking

As previously mentioned, there will be no parking provided on-site. Contractors would be encouraged to utilise the available public transport services within the area. If Contractors still wish to use private vehicles travelling to and from site, then there are several public car parks which can be utilised within the immediate vicinity of the Site.

Parking on Gordon Street is restricted and is therefore unsuitable for contractor parking. It is subject to 2-hour parking from 8:30 AM to 6:00 PM Monday to Friday and 8:30 AM to 12:30 PM Saturday, and generally apply to the roads surrounding the subject Site.

The Coffs Central (Castle Street) Car Park is a large off-street car park adjacent to the Site. An off-street car parking demand survey was undertaken by GTA Consultants on Thursday 4 October 2012 from 9:00 AM to 3:00 PM as part of a Council commissioned traffic and parking study which indicated that approximately 85 spaces within the carpark can be utilised by employees / contractors.

3.4 Pedestrian and Cyclist Access

Works are to be undertaken from the proposed Works Zone on Gordon Street (as outlined within Section 2.6). These works shall cross the pedestrian footpath as they work between the Site and the Works Zone. B – Class Hoarding and pedestrian barriers shall be installed on either side of the footpath to ensure the safety of pedestrians.

Pedestrians and cyclists using the footpath fronting the Site will be halted by an accredited Traffic Controller or worker while construction vehicles are exiting the Site. Once the construction vehicles are clear from the footpath, the Traffic Controller / worker can allow the pedestrians and cyclists to continue along their journey.

The Contractor shall make clear to Traffic Controllers that pedestrians have right of way and, as far as reasonable (mostly associated with exit vehicle movements). Co-ordination and management of pedestrian/cyclist right of Way and interaction with traffic controllers should be undertaken.

4 Traffic Control

4.1 Traffic Control

The RMS guide “Traffic Control at Worksites” (TCAW) manual contains standard traffic control plans (TCPs) for a range or work activities. The manual’s objective is to maximise safety by ensuring traffic control at worksites complies with best practice. The RMS TCAW outlines the requirements for a Vehicle Movement Plan (VMP).

A VMP is a diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP should also show travel paths for trucks at key points on routes remote from the work site such as places to turn around, accesses, ramps and side roads.

Regarding construction work on roads with an average daily total (ADT) in excess of 1,500 vehicles, approach speeds of between 60 km/hr and 80 km/hr, with truck movements > 20 veh/shift, and sight distance is less than 2d, (where d equals the posted speed limit and in this instance the sight distance is required to be up to 120 metres), the following is required for the Gordon Street access by the RMS TCAW:

- TCP with Traffic controllers/Traffic Signals
- VMP
- Warning Signs required during shifts

Regardless of the above, it is proposed to implement the TCP’s as shown in Appendix B which is a site-specific version of standard TCP 195.

4.2 Authorised Traffic Controller

An authorised Traffic Controller is to be present on-site throughout the construction stage of the project. Responsibilities include:

- Supervision of all construction vehicle movements into and out of site at all times,
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project, and
- Pedestrian management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur, while maintaining radio communication with construction vehicles at all times.

5 Monitoring and Communication Strategies

5.1 Development of Monitoring Program

The development of a program to monitor the effectiveness of this CTMP shall be established by the lead contractor. It is not anticipated that the monitoring of the processes will have any material cost implications. We note the following items to consider when developing the processes and tasks involved within monitoring the CTMP.

This CTMP shall be subject to ongoing review and will be updated accordingly. Regular reviews will be undertaken by the on-site coordinator. As a minimum, review of the CTMP shall occur monthly, however a weekly review would be preferred.

All and any reviews undertaken should be documented, however key considerations regarding the review of the CTMP shall be:

- Tracking deliveries against the estimated volumes.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (Parking and access issues)
- To ensure TCP's are updated (if necessary) by "Prepare a Work Zone Traffic Management Plan" card holders to ensure they remain consistent with the set-up on-site.
- Regular checks undertaken to ensure all loads are leaving site covered as outlined within this CTMP.

5.2 Communications Strategy

The communications strategy will outline the most effective communication methods to ensure adequate information within the community and assist the project team to deliver the traffic changes with minimal disruption to the road network.

All surrounding occupants shall be notified of any work that is deemed disruptive to the surrounding network prior to commencement. Ongoing communication is also proposed so that all stakeholders are kept up to date of works and potential impacts.

Nearby property owners that may be affected by the construction works shall be included within the communications strategy.

6 Summary

This CTMP has been prepared to ensure appropriate pedestrian, cyclist and traffic management is undertaken during construction of 23-31 Gordon Street, Coffs Harbour. This CTMP report has regard for the principles outlined in the RMS Traffic Control at Worksites Manual (2010) and AS1742.3, Guide to Traffic Generating Developments (Roads and Maritime Services), Austroads Guide to Road Design Part 4A, and Austroads Guide to Traffic Management Part 6 and is recommended for adoption. Any minor variation to these standards is considered acceptable having regard to the constraints inherent by the Site and proposed development. The following measures should be undertaken to minimise the impacts across each construction phase:

- Traffic control would be required to manage and regulate construction vehicle traffic movements into and out of the site during construction.
- All vehicles transporting loose materials will have the load covered and/or secured to prevent any items depositing onto the roadway during travel to and from the Site.
- All vehicles to enter and exit the site in a forward direction with reverse movements to occur only within the property boundary as necessary, prior approval and subject to supervision.

In summary, the CTMP has provided the following targeted management measures:

- No On-Site Contractor Parking.
- Traffic Controllers to Manage Pedestrian / Cyclist traffic along the Site frontage.

In summary, the detailed CTMP report is proposed in accordance with the RMS TCAW.

Appendix A

Driver Code of Conduct

- Driver Code of Conduct -

Drivers Code of Conduct

Safe Driving Policy for 23-31 Gordon Street, Coffs Harbour.

Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks and construction on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise; and
- Ensure truck drivers use specified routes

Code of Conduct

All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Obey all applicable road rules and laws at all times.
- In the event an emergency vehicle behind your vehicle, pull over and allow the emergency vehicle to pass immediately.
- Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Ensure all loads are safely restrained, as necessary.
- Drive over devices – located at the Site's access – to vibrate off any loose material attached to construction vehicles.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Hold a current Australian State or Territory issued driver's licence.
- Notify their employer or operator immediately should the status or conditions of their driver's license change in any way.

- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which you know, or think may, present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the site, as necessary, to avoid unnecessary delays to other vehicles.

Crash or incident Procedure

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
  - Details of the other vehicles and registration numbers
  - Names and addresses of the other vehicle drivers
  - Names and addresses of witnesses
  - Insurers details
- Give the following information to the involved parties:
  - Name, address and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
  - If there is a disagreement over the cause of the crash.
  - If there are injuries.
  - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.

Appendix B

Traffic Control Plan(s)

Installed as per TCP and in accordance with any changes, as shown on TCP.

Team leader (on site):

Signature:

Date:

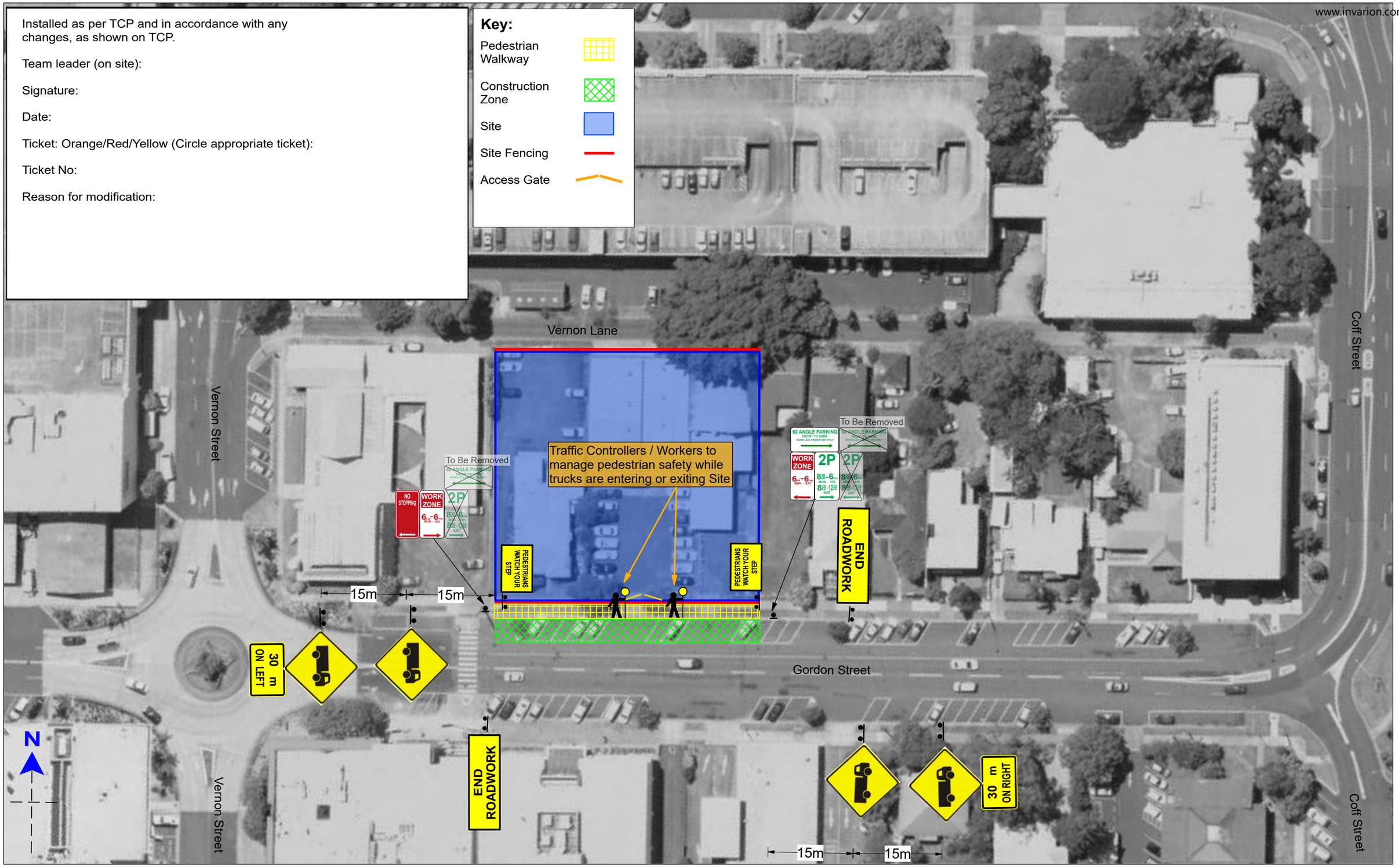
Ticket: Orange/Red/Yellow (Circle appropriate ticket):

Ticket No:

Reason for modification:

Key:

- Pedestrian Walkway
- Construction Zone
- Site
- Site Fencing
- Access Gate



NOTES

- All vehicles to have flashing orange lights
- Ensure signs are visible to vehicles
- Cover vehicle required for hard protection while TC's or workers are exposed to live traffic
- All staff to have reflective safety vests
- All signs to be Class 1 retro-reflective
- Maintain daily logs of ALL activities
- This PVMP is drawn in accordance with AS1742.3, the RTA's TCWS Manual & WHS Manual
- All staff to have reflective safety vests
- All trucks are to have prior notice of UHF channel to radio Foreman on arrival

Closure: Work Zone

Client: Coffs Harbour City COuncil

Project: Job No: 0914
Address: 23 - 31 Gordon Street, Coffs Harbour

Drawing Title: 0914-TCP-01-Gordon Street_ Coffs Harbour

Date: 30/05/2019

Scale @ A3:

Drawing Number: AG.01

asongroup

DESIGNER: JAMES LAIDLER
CERT: 0034322012

Appendix C

Swept Path Analysis

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
JL

Client:
Coffs Harbour City Council

Project:
0914
23 -31 Gordon Street, Coffs Harbour

Drawing Title:
Swept Path Analysis - Truck & Dog
Pacific Highway x Coff Street

Date:
31-May-19

Scale @ A3:
[scale]

Drawing Number:
AG.01

asongroup
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
JL

Client:
Coffs Harbour City Council

Project:
0914
23 -31 Gordon Street, Coffs Harbour

Drawing Title:
Swept Path Analysis - Truck & Dog
Coff Street and Gordon Street

Date:
31-May-19

Scale @ A3:
[scale]

Drawing Number:
AG.02

asongroup
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
JL

Client:
Coffs Harbour City Council

Project:
0914
23 -31 Gordon Street, Coffs Harbour

Drawing Title:
Swept Path Analysis - Truck & Dog
Gordon Street

Date:
31-May-19

Scale @ A3:
[scale]

Drawing Number:
AG.03

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Sydney NSW 2000
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Appendix D

Consultation with Council

James Laidler

Subject: FW: CoffsHCC-GCOR-000017: Re: Traffic Workstream Actions/ Outcomes 22/05/19 - T Ruge response ACNXREF<JmkiyE3ngbE3fnSUMhoY4>
Attachments: Admin_public_5 spaces.JPG; Admin_internal_1_16 spaces.JPG; Admin_internal_2_5 spaces.JPG

From: Tim Ruge <auto-reply-mel@aconex.com>
Sent: Friday, 24 May 2019 11:39 AM
To: Thomas Lehmann <thomas.lehmann@asongroup.com.au>
Subject: CoffsHCC-GCOR-000017: Re: Traffic Workstream Actions/ Outcomes 22/05/19 - T Ruge response ACNXREF<JmkiyE3ngbE3fnSUMhoY4>

You have received a new **General Correspondence: CoffsHCC-GCOR-000017**

Project:	All Welcome
Type:	General Correspondence
Mail Number:	CoffsHCC-GCOR-000017
To:	**Mr Tom Lehmann, Ason Group**
	John Mulhaire, Ason Group
	Mr Alan Tan, Ason Group
	Mr Tim Crawshaw, BVN
	Mr Enzo Accadia, Coffs Harbour City Council
	Wendy Sharpe, Coffs Harbour City Council
	Ken Welham, Coffs Harbour City Council
	Ms Orla Conlon, Turner & Townsend Pty Limited
Cc:	Mr Matthew Blair, BVN
	Liam Croft, BVN
	Ms Kate Field, BVN
	Mr Glenn O'Grady, Coffs Harbour City Council
	Ms Sarah Parbery, Coffs Harbour City Council
	Mick Raby, Coffs Harbour City Council
	Sharon Smith, Coffs Harbour City Council
	Mr Simon Waterworth, GeoLINK
	Mr Liam Manning, Slattery Australia
	Mr Declan Regan, Slattery Australia
From:	T Ruge, Coffs Harbour City Council
Sent:	24/05/2019 11:39:16 AM AEST (GMT +10:00)
Status:	N/A
Subject:	**Re: Traffic Workstream Actions/ Outcomes 22/05/19 - T Ruge response**

Hi John/Orla,

This is a repeat of the email I sent yesterday outside of Aconex … just repeating it to make sure it's in the system.

John, One other question in regard to the Technical Note – can Ason expand on the makeup of the "overall parking demand of 421" on page 6 – eg how much of this is for staff numbers and how was the remainder derived from the traffic generation numbers.

Here's some info from me following Wednesday's meeting:

- Current bike space provision (in essence they are just bike racks as shown in attached examples):
    - Admin Building: external public bike spaces: 5
    - Admin Building: internal basement bike spaces: 24
    - Rigby Building: external public bike spaces: 8
    - Rigby Building: internal basement bike spaces: 21
- Loss of bike space provision: essentially all of the above will be lost except for the 5 rack spaces in the Admin basement section that is to be retained. That said, I imagine a few of the bike racks could be simply relocated to this retained basement – at a guess I'd say about 20 rack spaces could be achieved in the retained basement
- Approved DA's in immediate locality: just the approved Gowings DA at 63 Harbour Dr / 31 Vernon St is a multi-storey extension of the Coffs Central shopping centre. The development has not been fully developed as noted below for each component:
    - 28-space basement car park (office use) **[constructed / operating]**
    - Two levels of retail space **[constructed / operating]**
    - Two levels of office space **[constructed / operating]**
    - Six levels of four-star hotel space, including 80 rooms and a hotel dining room **[NOT UNDERTAKEN TO DATE ... indefinitely suspended as far as I am aware]**

      The DA does not include construction of any new parking spaces – it essentially justified that the hotel will not require any more on the basis that it will utilise the existing off-peak capacity in the Castle St car park as most hotel customers arriving by car will arrive and depart outside peak occupancy hours

      There's no other significant DA Approved future traffic generating developments within the surrounding Precinct area.

Cheers

Tim Ruge
Urban Engineer | Sustainable Places Group, Coffs Harbour City Council
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Regards,
The Aconex Team