











ROCKHAMPTON REGIONAL COUNCIL APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with **Development Permit No.: D/75-2018 Dated: 30 January 2019**



S Waste Management

Proposed Fast Food Drive Thru

At 812-818 Yaamba Road, Parkhurst - Parkhurst Town Centre

AHC Limited



ttm

About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

We have over 50 staff, with an unrivalled depth of experience. Our industry knowledge, technical expertise and commercial insight allow us to deliver an exceptional and reliable service.

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Revision Record

No.	Author	Reviewed/Approved	Description	Date
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2.	E. Atkins		Inclusion of swept path	18/09/2018
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4.				



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GLOSSARY OF TERMS

In this waste management plan unless the subject matter otherwise indicates, a term or abbreviation has the following meaning:

TERM	DEFINITION	
Baler	A device that compresses waste into a mold to form bales which may be self-supporting or retained in shape by wire ties and strapping. It is commonly used to bale cardboard and soft plastics (plastic film).	
Bin Storage Area	An enclosed area designated for storing on-site refuse bins or a refuse compactor within the property.	
Bin Tug	An electric tug is a battery-powered and pedestrian-operated machine used to move heavy loads on wheels. If the load itself does not have wheels, it would be placed on a wheeled platform often referred to as a trolley, bogie or skate.	
Bulk Bin	A galvanized or steel bin receptacle that is greater than 360L in capacity generally ranging from 1.0m ³ to 4.50m ³ used for the storage of refuse that is used for on-site refuse collection.	
Bulk MGB	A plastic (polypropylene) receptacle that is greater than 360L in capacity generally ranging from 0.66m ³ to 1.10m ³ used for the storage of refuse.	
Collection Point	The identified position where refuse bins are stored for collection and emptying. The collection point can also be the bin storage area for bulk bins.	
Compactor	A machine for compressing waste into disposable or reusable receptacles.	
Composter	A container/machine used for composting specific food scraps and/or organic materials.	
Green Waste	All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers.	
kg	Kilogram(s) related to refuse weight	
L	Litre(s) related to refuse volumes	
Liquid Waste	Non-hazardous liquid waste generated by commercial premises that should be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste).	
m2	Square Metre(s) related to refuse areas	
m3	Cubic capacity related to refuse areas or equipment	
Putrescible Waste	The component of the waste stream liable to become putrid and usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products.	
Recycling	All material suitable for re-manufacture or re-use eg glass bottles and jars – PET, HDPE and PVC plastics; aluminum aerosol and steel cans and lids; milk and juice cartons; soft drink, milk and shampoo containers; paper, cardboard, junk mail, newspapers and magazines.	
Refuse	Material generated and discarded from residential and commercial buildings including general waste, recyclables, green waste and bulky items.	
Refuse Bin	A receptacle (mobile garbage (wheelie) bin, bulk MGB or bulk bin) used for the storage of refuse.	
Refuse Compactor	A receptacle that provides for the mechanical compaction and temporary storage of refuse, to reduce bin numbers and collection frequency.	
Refuse Collection Vehicle	A vehicle that is specifically designed for collecting and emptying refuse bins and refuse	



TERM	DEFINITION	
(RCV)	compactors.	
Refuse Storage Room	An area identified for storing on-site mobile garbage bins or bulk bins within the property.	
Regulated Waste	Waste prescribed under legislation as regulated waste.	
Transfer (Manual Transfer)	Physical transfer of refuse material and associated bulk bins or trolleys without assistance.	
Steely Bin	660L Bulk Bin made of Galvanized Steel.	
Waste	Refuse material with the exclusion of recycling, green waste, hazardous waste special waste, liquid waste and restricted solid waste.	
Waste (General Waste)	Generally material free of any actual or apparent contamination (pathological/infectious, radioactive and/ or hazardous chemical). Reporting use is for material considered to be free of food waste.	
Collection Vehicles		
Rear-loading RCV	A truck specially designed to collect municipal solid waste and recycling, typically 240L wheelie bins to 1100L bulk bins from rear loading mechanism and haul the collected waste to a solid waste treatment facility.	
Front-loading RCV	A truck specially designed to collect municipal solid waste and recycling, typically 1500L-4000L bulk bins from a front-loading mechanism and haul the collected waste to a solid waste treatment facility.	



1. Executive Summary

The proposed fast food development at 812-818 Yaamba Road, Parkhurst, comprises of 261m² GFA. The proposed site will replace an existing car park which is built within the Parkhurst Town Centre. This document outlines the waste management design and operational requirements to ensure safe and efficient refuse collection occurs for the life of the development.

Waste and recyclables generated by the fast food outlet will be collected by a private contractor on-site via a loading area immediately adjacent to the proposed building.

TTM have referred to Rockhampton Regional Council's (RCC) "9.3.7 Waste Management Code" and have outlined the compliance checklist in **Table 1.1** below.

The purpose of the Code will be achieved through the following overall outcomes:

- Development provides for adequate on-site waste management to deal with the expected volume and nature of waste generated by the development;
- Waste facilities are screened from view from adjoining lots, streets and public spaces;
- Waste management is conducted in a safe and ecologically sustainable manner; and
- Waste facilities are located on-site in a manner which facilitates waste removal in a safe and efficient way.

Performance Outcomes	Acceptable Outcomes	Compliance
Design of waste storage areas		
PO1 For on-site waste collection, waste storage areas are located and designed so that: They are easily accessed and convenient to use:	AO1.1 Waste storage areas are designed and maintained in accordance with SC6.20 — Waste	Complies with Performance and Acceptable Outcome The refuse room provides storage space for the required number of bins and will be designed in line with Council's Waste Management Planning Scheme Policy.
 Sufficient space is provided for safe entry and exit and servicing by service vehicles without the need for manual handling; 	management planning scheme policy.	
 Sufficient height clearance is provided for the safe operation of both front and side bin lifting operations; 		
 They are clear of car parking bays, loading bays and similar areas; and 		
• They are clear of footpaths and pedestrian access.		
Kerbside waste servicing		
PO2 Kerbside collection of waste containers ensures the safety and amenity of road and footpath users.	 AO2.1 Waste bins are located on the footpath so that: bins are located one (1) metre apart from other bins and obstructions; 	N/A Waste will be collected on- site.
	 all bins are accommodated 	

Table 1.1: Planning for Waste Minimisation and Management- Compliance checklist



	 within the street frontage of the site; a clear pedestrian access way two (2) metres wide is retained; and bins are capable of being serviced by the collection vehicle travelling forward, without having to reverse the vehicle. 	
PO3 Waste storage minimises adverse impacts on adjoining properties.	 AO3.1 Waste storage areas are: integrated with the building design; or set back a minimum of two (2) metres from any boundary; and screened from neighbouring properties and the street by a fence of 1.8 metres minimum height; and not located directly adjoining dwelling units on the site and on neighbouring properties, and AO3.2 Waste bins are fitted with lids. 	Complies with Performance and Acceptable Outcome Waste storage areas are integrated within the building design and provided in a bin enclosure within the loading area, not located directly adjoining dwellings or neighboring properties. Bins will be fitted with lids.
 PO4 Waste storage areas: have a level area constructed of impermeable, durable materials so that they are easily cleaned; and have adequate clearance between and around waste storage bins to allow for manoeuvring and washing of bins. 	No acceptable outcome is nominated.	Complies with Performance Outcome Waste storage areas will be constructed of impermeable, durable material and will have adequate clearance between and around waste storage bins for manoeuvring and washing.
Water Management	I	
PO5 Waste storage areas are designed to separate stormwater and wash-down water.	 AO5.1 Wash-down water drains to either the reticulated sewerage system or an on-site sewerage facility if not in a sewer area. and AO5.2 Wash-down areas are: provided with a tap and water supply; and provided with a stormwater diversion valve and arrestor trap. 	Complies with Performance and Acceptable Outcome The refuse area adjacent to the loading dock will be provided with a tap and water supply for cleaning, solid floor grated to a floor waste (connected to a sewer) and designed in accordance with Council's Waste Policy.



2. Introduction

2.1. Background

TTM Consulting has been engaged by AHC Limited to prepare a refuse management report to assess the likely commercial refuse produced by the proposed fast food development located at 812-818 Yaamba Road, Parkhurst. The assessment and associated recommendations include:

- Identification of refuse streams produced within the development;
- Estimated volumes generated;
- Appropriate segregation methods for each refuse stream;
- Internal systems and equipment requirements;
- Refuse storage facilities design;
- Refuse collection room, area or loading bay designs;
- Refuse collection vehicle (RCV) access and manoeuvrability;
- Safety;
- Pollution prevention;
- Owner and tenant education;
- Waste minimisation; and
- Operational requirements.

Refuse Life Cycle



The report takes into consideration the associated workplace health and safety issues and cost implications of waste management processes and equipment to ensure safe and cost-effective solutions are in place for long term property management. Recommendations also ensure that noise and odour nuisances are mitigated and visual amenity is maintained and does not adversely affect the surrounding properties.



The recommendations for refuse collection relate to the operational phase of the development only and do not include additional requirements during or after demolition or construction phases, which requires its own separate plan.

Information contained within the report is based on local government authority requirements related to Rockhampton Regional Council (RRC) and the associated waste services department. The recommendations provided are designed to comply with Council's documents:

- SC6.20 Waste management planning scheme policy; and
- 9.3.7 Waste management code.

2.2. RFI Response

This report includes a response to Item 3 of Council's Information Request, dated 26 July 2018, application reference D/75-2018.

3.0 Waste Management

3.1 Please provide a waste management report including, but not limited to, the amount of waste generated from the development, bin types, number of bins, detail drawings of bin collection location, collection method, bin wash-down area etc. Please also provide details on how the bins will be cleaned.

TTM Response:

A response to item 3 of Council's information request is provided within this waste management report. A summary of the response locations are as follows:

- Sections 3 and 4 provide the disposal and collection methods;
- Section 5 details the recommended operational requirements;
- Appendix A.1 details the amount of waste generated from the development, bin types, number of bins; and
- Appendix A.2 details the bin location and wash-down areas.

2.3. Site Location

The site is located at 812-818 Yaamba Road, Parkhurst, as shown in Figure 2.1 and Figure 2.2. The property description is Lot 102 on SP296885. The site is currently occupied by an existing shopping centre (Parkhurst Town Centre) and has road frontage to Yaamba and Boundary Roads.

Service vehicle access will utilise the existing shopping centre access arrangements.





Figure 2.1: Site location

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Figure 2.2: Site Overhead

2.4. Development Summary

The proposed fast food development comprises of 261m² GFA. The proposed site will replace an existing car park which is built within the Parkhurst Town Centre.

2.5. Development Refuse Profile

The proposed refuse profile is outlined below.

Table 2.1: Commercial Refuse Summary

Description	GFA (m²)	Generated Waste (L/week)	Generated Recycling (L/week)
Fast Food	261	2741	2741

Section 5 of the report summarises the operational requirements for the entire development. All calculations and equipment requirements are based on the tenancy schedules and associated waste generation rates as outlined in the detailed information in Appendix A.1. Site drawings can be found in Appendix A.2.



3. Fast Food Refuse

The waste streams for the commercial use may consist of the following:

Table 3.1: Generated Commercial Waste Streams

Frequently Generated Waste Streams			
General waste	General waste should be collected in a dedicated receptacle within the allotted space and bagged or wrapped prior to disposal. Operationally, general waste should be bagged and not exceed the dimensions of the waste receptacles.		
Commingled Recycling (glass, aluminium, steel, semi rigid plastics etc)	Recycling should be collected in a dedicated receptacle to ensure separation from the waste material and must not be bagged. Where applicable, other materials such as cardboard and plastics should be separated.		
Paper and Cardboard	Consideration may be given to the use of a baler for cardboard , plastic film LDPE or HDPE recyclables (see Appendix C.4). Segregation and baling of these materials will reduce total waste output and may lower the total cost of refuse removal. Typically, a decision on the use of this equipment would be made at the start of the operational phase following a review of the site final waste requirements and completion of appropriate risk assessments and operational procedures.		
Organic waste	An alternate refuse disposal method, such as composting for organic waste , may be used to reduce the total amount of general waste produced. Consideration may be given to the use of digesters , dehydrators or composters which are designed to recycle and reduce food waste. Digesters typically process the material into sludge while dehydrators remove liquid from food waste and both machines producing a solid fertiliser end product. See Appendix C.2 for further information.		
Waste cooking oil	Consideration should be given to the use of cooking oil collection (see Appendix C.3). All waste liquids / oils should be separated and stored in clearly labelled containers. Bunded areas or plastic pallets should be supplied for the storage of liquid waste/oils and stored in a level area and routinely inspected to ensure maintenance of their integrity. Each pallet should be capable of storing of at least one-third of its contents if there is a leak.		
Infrequently Generated Waste Streams			
Green waste	Green waste is not typically produced from a retail development other than from neighbouring building landscaped areas and is removed by a maintenance contractor.		
Hard waste/bulky goods	Hard waste may be coordinated with the management / staff and removed by the designated maintenance contractor.		
Hazardous waste (paints, batteries and cartridges) and E-waste	Where applicable, tenants usually make their own arrangements for the disposal of specialised / hazardous waste and e-waste such as recycling of toner cartridges and batteries (refer to Recyclingnearyou.com.au for disposal options). Facilities management/cleaners or contractors will organise and assist with disposal of hard, electronic, liquid waste and any paint/chemicals. Hazardous waste must be handled with due care, separated and securely stored for collection by a specialist waste contractor.		



3.1. Refuse Disposal, Transfer and Storage

The tenant will be responsible for storage of refuse produced during operating hours within their own tenancy area. Typically, tenants will use bins up to a max size of 60L that are placed within service/eating areas, kitchens or back of house (BOH), where space is available.

The refuse storage area is located adjacent to the loading area (see Appendix A.2). On completion of each day, or as required, nominated staff will transfer refuse to the refuse storage area and place waste and recycling into the respective 1500L bulk bins.



4. Refuse Collections

4.1. Refuse Vehicle Access and Loading

Access to the loading area is via the existing vehicle entry/exit ramp via the Boundary Road access as shown in Figure 2.1. Service vehicle swept paths typical of a refuse collection vehicle is shown in Appendix B.

RCV manoeuvring is provided for the service vehicle to enter and exit the site in a forward gear, while performing a single reversing manoeuvre on-site into the loading area.

Refer to the TTM Traffic Report for further detail.

4.2. Collections

All refuse will be collected by a private contractor.

All bins will be serviced by a front-lift refuse collection vehicle (RCV).

On the day of service, all full refuse bins will be collected from the refuse bin storage area in close proximity to the loading area, as shown in Appendix A.4.

Refuse bin quantities have been calculated on collection cycles of <u>two days per week</u> for waste and <u>two days</u> <u>per week</u> for recycling.

The tenant will liaise directly with a private contractor for disposal of other waste streams such as cardboard, paper, oils and organics.



5. Recommended Operational Requirements

5.1. On-going Management

All refuse equipment movements are to be managed by the building manager/caretaker, staff or cleaners at all times. The building manager/staff/cleaner duties include, but are not limited to the following:

- Disposal of waste and recycling materials;
- General maintenance and cleaning of the bins, refuse room and associated waste areas (frequency dependent on waste generation and is determined based upon building operation);
- Organising both garbage and recycled waste pick-ups as required;
- Organising and coordinating bulky goods collections;
- Ensuring site safety for residents, children, visitors, staff and contractors;
- Abiding by all relevant OH&S legislation, regulations, and guidelines;
- Assessing any manual handling risks and preparing a manual handling control plan for waste and bin transfers;
- Providing to staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities; and
- Continual monitoring of equipment uses and scheduling to ensure best operational outcomes.

<u>Note</u>: As waste volumes may vary according to the development occupants' attitudes to waste disposal and recycling, bin numbers and sizes may need to be altered to suit the building operation.

5.2. Waste Minimisation

Waste minimisation is an important part of any site operation. At a minimum, the following should be implemented.

5.2.1. Education

On-going education is important to ensure people continue to use the facilities as originally intended. All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.



5.2.2. Monitoring and Review

Regular monitoring and inspections of waste and related equipment and facilities from the development should be conducted by building management/designated staff for maintenance and sustainability, including but not limited to bin volumes, refuse storage areas and stormwater management.

Waste minimisation requires regular reviewing to ensure operational sustainability of refuse volumes and equipment and economic feasibility. It is recommended that refuse weights and movements are recorded and reviewed. An external review is usually conducted 12 to 18 months after the implementation of the plan.

5.2.3. Signage

All receptacles and bins should have adequate signage, with appropriate labelling, which is clear and easy to read. Standard signage is to be provided in and around waste collection and storage areas (see Appendix D).

5.3. Safety

Note that transferring refuse bins is considered a hazardous manual task and therefore contractors must ensure a full risk assessment of equipment, surfaces and related gradients is complete. The contractor must provide procedural documentation to appropriate personnel prior to delivery of equipment and occupancy of the development.

5.4. Operational Equipment Summary

Equipment required or suitable for use as part of the operational phase of the development is outlined below. Note that all collection receptacles and bins should be branded with the appropriate stickers.

Component	Description	Quantity	Notes	
	Recycling Bins	1	1500L bins See Appendix C.1	
	Waste Bins	2		
Fast Food	(Optional) Organics- Receptacles for use in centralised composting / worm farm or electronic composting bins.	Supplied as and if required See Appendix C.3		
	Digester or Dehydrator (optional)	1	See Appendix C.3	
	Baler (optional)	1	See Appendix C.4	

Table 5.1: Operations Equipment



5.5. Operational Equipment Suppliers Summary

Typical equipment suppliers for use as part of the operational phase of the development are outlined below and are not limited to the following:

Company Name	Equipment	Link
Elephants Foot Recycling Solutions	Chutes & Bin Rotation Equipment, Balers, Compactors, Bin Lifters, Weighing Systems	http://www.elephantsfoot.com.au/
Wastech	Chutes & Bin Rotation Equipment, Balers, Compactors	http://wastech.com.au/
Pakmor	Balers, Compactors, Bin Lifters, Weighing Systems, Shredders	http://pakmor.com.au/
Miltek	Balers and Compactors for waste and recycling i.e. Cardboard, Plastic, Polystyrene, Medical Waste	http://www.miltek.com.au/
Closed Loop Organics	Industrial and Domestic Composters	http://www.closedloop.com.au/domestic -composter
Absorbenviro	Containment, Absorbents, Drain Protection	http://www.absorbenviro.com.au/
Trade Environmental	Spill Response, Spill Containment, Storm water Management	http://www.tradeenviro.com.au/bunded- pallets/
Spill Station Australia	Spill Response and Containment Equipment	www.spillstation.com.au

Table 5.2: Typical Equipment Suppliers

5.6. Controls

5.6.1. Refuse Storage Area

The refuse storage area will have the following features in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area:

- Doors must be wide enough to allow for the easy removal of the largest container to be stored;
- The walls, floors and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning;
- Door frames are metal, hardwood or metal clad softwood, situated in an external wall;
- Door frames are rebated with a lock capable of being activated from within the room without a key at all times;
- The floors are to be graded to fall to a drainage point;
- Drainage points connected to sewer in accordance with trade waste requirements;
- A hose cock must be provided directly outside the rooms for cleaning bins and the room;
- Adequate artificial lighting;
- Permit unobstructed access for removal of the containers to the service point; and



• Will be attractively designed to minimise their visual impact on the surrounding areas.

5.6.2. Bin Collection / Servicing Point

The refuse storage area is immediately adjacent to the bin service point which is designed to ensure ease of access for the waste and recycling bins that require servicing. It will have the following features:

- Is a constructed hardstand area and bins can be manoeuvred for servicing without lifting the bin over raised surfaces (i.e. no steps or lips);
- Is located 5 metres from any door, window or fresh air intake within the development;
- Is screened to ensure bins are not visible from a public place, neighbouring properties, passing vehicles or pedestrian traffic external to the site;
- Of sufficient size to accommodate the bins;
- Will be fitted with bump rails to protect the walls/surrounds from bins causing damage;
- Positioned on a level pad and is not more than 5m from the loading/servicing zone;
- Has sufficient access and clearance for the waste and recycling collection vehicles to service the bins and does not have obstructed overhead space;
- Allows bins to be serviced safely while minimising the impediment to traffic flow during servicing as it is within the designated loading / carriageway area;
- Is clearly separated from car parking bays, footpaths and pedestrian access;
- Is clear of speed control devices;
- Does not block the entry and exit to the property; and
- Is positioned away from entrances to shops or residential premises.

5.6.3. Bin Wash

A bin wash will be provided within the refuse storage area and will have the following design elements:

- Constructed hardstand area with a solid concrete base;
- Graded to fall to a drainage point within the storage point;
- Drainage point connected to sewer in accordance with trade waste requirements;
- Provided with a hose cock for cleaning;
- Is in a purpose-built storage area which is used solely for the storage of waste; and
- Is not within five (5) metres of an opening to a food premises or food handling area.



5.6.4. Storm Water Prevention and Litter Reduction

Designated staff / cleaners are responsible for on-site storm water pollution and litter reduction. To limit the impact on the environment and site, the following measures should be taken into account:

- Providing adequate signage to promote litter control;
- Providing sufficient refuse bins in appropriate areas;
- Preventing unauthorised entry to waste areas;
- Monitoring waste and prevent waste overflow;
- Promoting best practices for waste minimisation; and
- Installing litter traps in car parks for any unwanted discharge.

5.6.5. Ventilation

Natural (unobstructed, permanent openings direct to external air no less than one-twentieth (1/20) of floor area) will be provided to refuse storage area.



Appendix A Detailed Calculations



A.1 Refuse Calculations

In the absence of waste generation rates from RCC, the generation rates used for the calculation of refuse produced uses rates recommended by the City of Gold Coast SC6.13 City Plan Policy – *Solid waste management*.

Waste volumes indicated do not include compaction. Recycling compaction is prohibited and therefore has not been applied. All are calculated based on a seven-day working week operation.

Table A.1.Generation Rates

Туре	Waste	Recycling
Takeaway	150 Litres/100m²/day	150 Litres/100m²/day

Table A.2.Development Calculations

Description	GFA	Generated Waste (L/week)	Generated Recycling (L/week)
Office	261	2741	2741
Total	261	2741	2741
Refuse per day	-	392	392
Max refuse per collection	-	1566	1566
Collections and Equipment	Bin Size (L)	1500	1500
	Min Collections per Week	2	2
	No Bins Required	1-2	1-2
Refuse Areas	Raw Bin Space (m²) incl manoeuvring	6-11m ² (depending on bin qty)	
	Storage Area/ Room	12.7m ²	



A.2 Floor Plan



Source: BRD Group- drawing no 1027 - SD103, rev A, dated 04/07/18- Floor Plan – Seating GFA



Appendix B Refuse Vehicle Swept Paths









Appendix C Systems and Specifications



C.1 Collection Bins

Example System/Service	Waste stream	Example	Additional information
Café kitchen bins	Waste, recycling, food waste, paper/cardboard		Various options and sizes available. Tenant to supply depending on preference and space available.
1500L bins	Bins (general waste, paper/cardboard, mixed recycling)	VEOLA DOOTS BASE	Various dimensions depending on contractor– roughly 2040 x 1050
Public domain bin enclosures for outdoor eating area	Waste, recycling, (organics could also be incorporated)		Most fast food outlet franchises will use standardised bins available as part of the franchise fit out. However consideration should be given to the incorporation of a recycling bin and potentially an organics bin if an organics service is viable.
Cardboard and soft plastics baler (vertical baler)	Cardboard and soft plastic film		Traditionally used for cardboard however this will now also bale soft plastic film/wrap. Depending on the volume of soft plastic wrap generated by the site, it may be beneficial to have two balers, one for each stream (if a soft plastic collection service is available in the area).



C.2 Commercial Digesters, Dehydrators or Composters





C.3 Waste Oil





C.4 Cardboard and Plastic Baler



WIDE FILLING OPENING

Technical specifications

The 85 W VD has a vertical door opening. This is the right choice of baler where space is limited and you at the same time have a need for high capacity.

The wide filling opening is carachteristic to this baler. It makes it easy to insert bulky waste like dry soft plastic or large pieces of cardboard.







 Compact your waste and eject the finished bale. 2 Remove and store the bale until collection. 3 With a vertical door opening you have an ergonomical working posture 4 Strap rolls are placed in front, making them easy to replace

- Vertical door opening Perfect for where space is limited
- Front access to strap rolls Fast and easy to replace
- Two-hand bale ejection Automatic and safe operation

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©¢\$ ₹ (€

Press force (t)	5
Power supply	1+2201/ 504+ 104
Mater (b)()	MESOV SUTE TOA
Noise level (dB)	65-68
Cycle time (sec)	33
Dimensions WxDxH (mm)	1370 x 1050 x 2610
Weight (kg)	615
Filling opening WxH (mm)	1000 x 500
Filling height (mm)	915
Chamber height (mm)	1305
Stroke (mm)	750
Bale size WxDxH (mm)	1000 x 700 x 800
Bale weight cardboard (kg)	80-110
Bale weight plastic (kg)	90-130





Appendix D Refuse Signage



D.1 Refuse Signage Resource

Free signage is available from the QLD Government site using the link below.

http://www.ehp.qld.gov.au/waste/recycling/awareness_raising_materials_for_public_place_recycling.html

Example bin or wall signage



Printable Refuse Signs



Source: http://www.sulo.com.au/products/office-recycling/waste-watcher/waste-watcher-sign-frames/



Example Public Place Signage



Example Oil Storage







D.2 Example Safety Signage

Safety Signs are required for refuse discharge and storage rooms / areas and must comply with Australian standards "AS 1319 Safety signs for the occupational environment". Additional state or local government requirements may also apply. Following are examples of typical signs used around a waste storage area. It should be noted however that an assessment must be completed by a qualified fire and safety consultant, prior to occupancy, to determine the correct signage to be used.

Fire Management



Refuse Room Management







Figure 5.1 Swept path accessing loading area



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14 December 2018 Our Ref: 18GCT0203

ROCKHAMPTON REGIONAL COUNCIL APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with **Development Permit No.: D/75-2018 Dated: 30 January 2019**

Attention: Rod Macleod

Your Ref: D/75-2018

AHC Limited PO Box 8180 GCMC QLD 9726

Dear Rod, RE: Parkhurst Town Centre, Rockhampton – Fast Food

TTM has been engaged by AHC Limited to undertake a car parking assessment for the proposed fast food development at the Parkhurst Town Centre, Rockhampton. It is understood that this report is to accompany a response to Further Information request made by Rockhampton Regional Council (ref: D/75-2018).

The aim of this assessment is to review the overall car parking capacity of the Parkhurst Town Centre, with respect to the approval package, Council's parking rates, as constructed development plans and proposed development plans. TTM has been engaged to respond to Council's email dated 1 November 2018.

Item 1 – Traffic Flow Through Car Park

It is envisaged that a food and drink outlet will result in a higher traffic flow within the existing car park area. Further details must be provided demonstrating that the proposed development will not cause queuing and congestion issues within the existing car parking area fronting the shopping centre entrance. This area is already quite busy during peak periods and Council is concerned this will get much worse. Consideration should also be given to the fact that the Shopping Centre is not operating at 100% capacity with a number of tenancies currently remaining vacant. The Preference would to be separate the shopping centre traffic and the proposed development traffic.

<u>Response</u>

The Yaamba Road / Site Access intersection provides the closest access to approximately 310 parking spaces and the Boundary Road / Site Access intersection provide access to approximately 140 car parking spaces. An aerial of the Yaamba Road / Site Access intersection is shown in Figure **1**.

AS2890.1 outlines the minimum queuing lengths at car parks with control points in Table 3.3. Based on the approximate car parking capacity of 310 spaces, a peak hourly in-flow of traffic up to 75% of capacity

(generally casual, short-staying, and mixed patronage), we calculated the minimum queuing length to be 6.1 car lengths for the Yaamba Road / Site Access intersection. This equates to a queue length of 36.6m, when assuming a vehicle length of 6.0m.

TTM estimates that there is approximately 37m (ie 6 vehicles) of clear queuing length between the first conflict point and the property boundary ie when motorists have the option of turning across the pedestrian crossing into the car park. TTM notes that there is an 18m (ie 3 vehicle) long short right turn lane to access the service station. There is approximately 90m (ie 15 vehicles) of clear queuing between the circulation aisle and the property boundary.

As discussed in TTM's response to Item 3, there is a suitable queuing provision of 10 vehicles for the drivethrough facility.

The available on-site queuing is in excess of the AS2890.1 requirements. Therefore, TTM expect the queuing to be suitable.



Figure 1: Yaamba Road / Site Access Intersection

Item 2 – B99 Swept Path

Please provide swept paths / turning movements for a B99 demonstrating the vehicle path that is to be used to access and exit the food and drink outlet from Yaamba Road and Boundary Road.

Response

TTM has conducted a swept path assessment demonstrating a B99 vehicle accessing the food and drink outlet from Yaamba Road and Boundary Road, as shown in Figure 2, Figure 3 and enclosed.



Figure 2: B99 Access from Yaamba Road



Figure 3: B99 Access from Boundary Road

Item 3 – Drive-Through Queuing

The on-site queuing for ten (10) vehicles is proposed for the drive through facility, which does comply with the Planning Scheme requirements. However, the existing parking area has been blocked due to the queuing lane.

Response

The design of the drive-through facility has been amended. The 10 vehicle drive-through queuing provision would no longer block existing parking areas, as shown in Figure 4 and enclosed.



Figure 4: 10 Vehicle Drive-Through Queuing Provision

Item 5 – Car Parking Supply

The existing car parking supply calculations included in the response show a total of 452 parking spaces available within the shopping complex (including the service station). This includes the provision of 10 tandem spaces located in the carpark nearest to Boundary Road and 13 motorcycle spaces. For the purposes of calculating the current parking supply, motorcycle parking will not be included as contributing to the overall supply. In addition, Council are unaware of any approvals incorporating the 10 Tandem spaces and these will not be considered accepted unless the applicant can demonstrate otherwise.

Please update your response to item 1.1 of the Information Request accordingly, considering any shortfall in parking spaces and the impacts they may have. It is noted that any shortfall will not comply with AO5.1.2 of the Access, Parking and Transport Code.

For the purpose of calculating the car parking requirements, I have included an outline of my observations below:

- Decision Notice D/358-2010 and further Court Order stipulates that 426 parking spaces must be provided for the shopping centre complex.
- Since the MCU approval, the service station has been subject to an ROL application to exclude it from the same parcel of land. The service station incorporates eight (8) parking spaces and therefore, these parking spaces will be removed from the overall total effectively leaving 418 parking spaces required for the shopping centre complex.
- The service station parking spaces will now be excluded from all calculations relating to the shopping centre complex.
- Currently, the shopping centre complex has a total supply of 429 parking spaces. This has been calculated using Nearmaps and ground truthing.
- As shown on Site Plan 1027-SD102 Rev B, the proposed Food and Drink Outlet will remove 48 parking spaces and replace them with a total of 17 resulting in 31 parking spaces being removed from the overall total provided.
- 429 parking spaces take the 31 removed spaces leaves a total of 398 parking spaces proposed for the shopping centre complex.
- The proposed development as it stands will result in a shortfall of 20 parking spaces and 4.78% of the overall parking supply.

Response

The Decision Notice D/358-2010 stipulates that 426 spaces must be provided for the shopping centre complex.

The service station formed part of the original approval and incorporates 8 parking spaces. However, the service station has since been subject to an ROL application. Therefore, the service station parking spaces have been removed from the required parking capacity when calculating the required parking spaces for the shopping centre complex, resulting in 418 parking spaces required.

Council outlines that the shopping centre currently has a total parking supply of 429 parking spaces.

The Site Plan 1027-SD102 Rev E indicates that the proposed Food and Drink Outlet would remove 48 spaces and replace them with 17 spaces, resulting in 31 parking spaces being removed from the overall provision. This would result in a parking supply of 398 parking spaces across the shopping centre site.

TTM's review of the shopping centre complex car park indicates that there are existing spaces that are unaccounted for, tandem spaces, motorcycle spaces and opportunities for additional parking spaces to be provided.

Unmarked Bays

There are currently 3 unmarked spaces, which do not form part of the counted parking spaces outlined above, as shown in Figure 5. Therefore, linemarking these spaces would increase the car parking capacity by 3 parking spaces.



Figure 5: Unmarked Car Parking Spaces

Tandem Bays

A total of 10 tandem spaces currently form part of the shopping centre complex's parking area.

TTM understands that these spaces didn't form part of the development application plans. However, they have been included on the As Constructed plans (0619-CD101E) and formed part of the On-Defects Notice (dated: 16 February 2016) and Off-Defects Notice (dated: 23 February 2017). TTM's review of these plans indicate that it is clear that the intent of these spaces was to be used as tandem bays (ie as there is a line separating the two spaces). Therefore, Council would have been aware of the intent of use for these spaces.

TTM consider that it would not be reasonable for visitors to use these tandem bays. However, it would be reasonable to dedicate these tandem bays to tenancies to be utilised as staff spaces. Therefore, to include these tandem bays as part of the car parking capacity, it is recommended that these tandem bays be dedicated and appropriately signed / linemarked as staff bays.

Motorcycle Bays

The shopping centre complex car parking area currently includes 15 motorcycle parking spaces. Council's Planning Scheme does not provide consideration for motorcycle parking spaces to be considered as part of the parking supply.

TTM considers that the presence of motorcycle parking spaces would increase the car parking capacity; as, when motorcycles are parked in motorcycle spaces, they are not being parking in regular car parking spaces and would make available car parking spaces for cars. Thereby, effectively increasing the car parking capacity. TTM considers that a 1 to 1 comparison between motorcycle and car parking spaces would not be appropriate, however, it is considered that rate of 2 motorcycle spaces being equivalent to 1 car space is reasonable. This is due to the following:

- This comparison rate is outlined in the Gold Coast City Plan 9.4.13 Transport Code
- Generally, 2 motorcycles would fit within 1 regular car parking space

As there are 15 motorcycle spaces, TTM consider that this provision would effectively increase the car parking capacity by 7.5 car parking spaces.

Opportunity for Additional Parking

TTM understands that there are opportunities to gain car parking spaces within the existing layout.

A bus stop was designed and constructed with the intent to cater for future bus routes through the site. TTM understand that there is now to be no future bus route through the site and the current bus stop is currently being used as a taxi rank.

TTM recommend that the bus stop be converted to a permanent taxi rank that could cater for 4 taxis and the existing 4 taxi bays could be converted to 4 regular car parking spaces, as shown in Figure 6. This would increase the car parking capacity by 4 spaces.

There is scope to input 6 parallel staff parking spaces within the service area, as shown in Figure 6.



Figure 6: Additional Parking

Total Available Car Parking

TTM has concluded that the following parking capacity is available for the proposed development:

- 398 parking spaces
- 3 unmarked bays
- 10 tandem spaces (ie 20 total spaces)
- 15 motorcycle spaces (which equates to 7.5 car parking spaces)
- 10 additional parking spaces (6 parallel bays and 4 taxi bays)

Based on TTM's review of the Parkhurst Shopping Centre car parking area there would be 428 car parking spaces across the shopping centre complex. This car parking provision is in excess of the requirements

outlined in the Decision Notice D/358-2010 (426 spaces). Therefore, TTM consider that the proposed car parking provision is suitable to cater for the proposed development.

Conclusions

Based on the assessment discussed in this letter, TTM considers the proposed car parking supply to be suitable to cater for demand of the development.

Yours sincerely,

Blacker

Brendan Baker

Consultant

TTM Consulting Pty Ltd

TELL

Ilona Blackburn (RPEQ 16879) Principal Consultant TTM Consulting Pty Ltd

Enclosed: TTM Swept Path Assessment





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