CHURCHBRIDGE CAPITAL

Kmart Plaza Launceston
15 RACECOURSE CRESCENT, LAUNCESTON

DRAWING SCHEDULE:

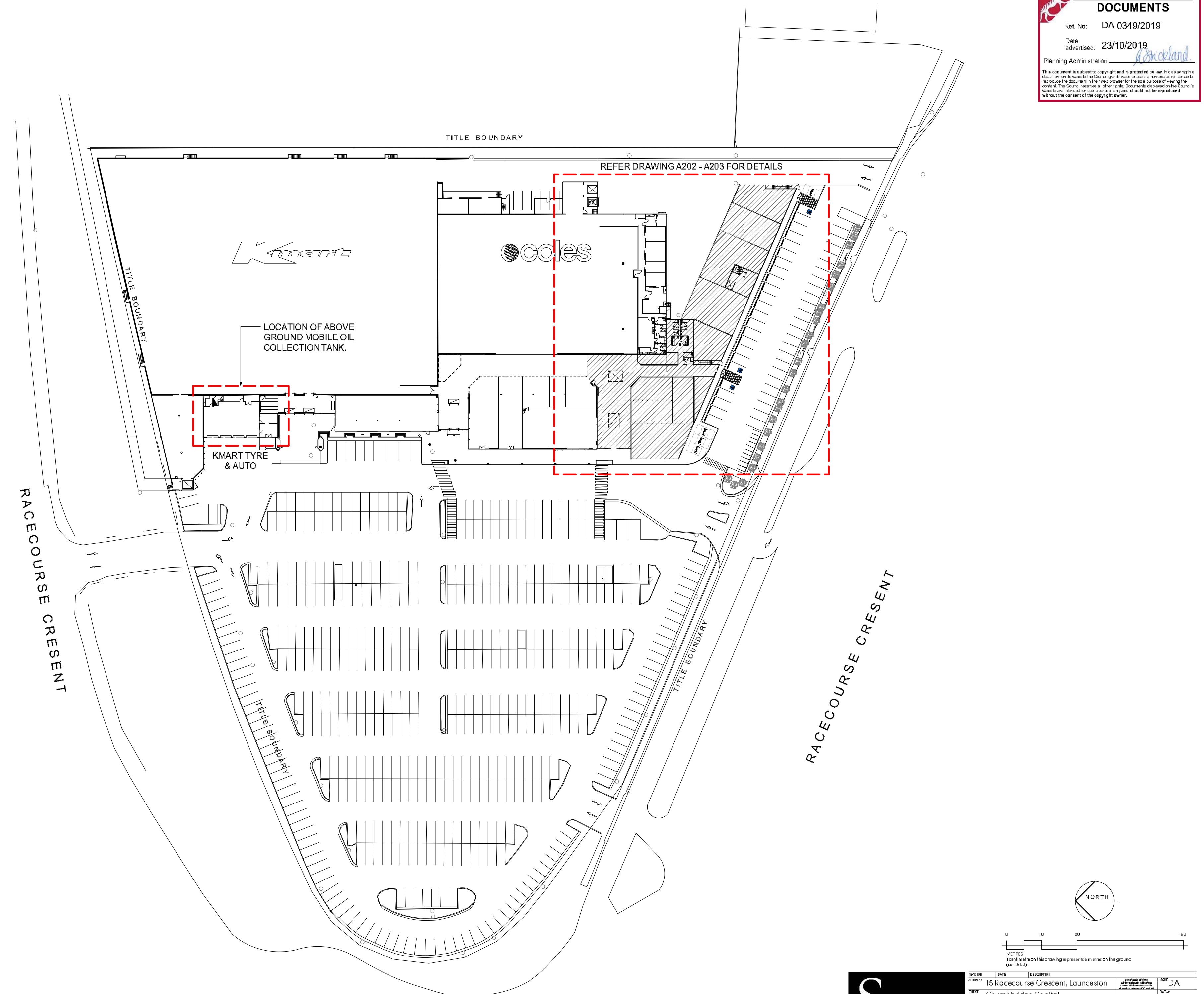
Sheet No:	Drawing:	Rev:	Revision Date:
A000	Cover		
A101	Site Plan		
A201	Existing & Demolition Plan		
A202	Proposed Floor Plan - Stage 1		
A203	Proposed Floor Plan - Stage 2		
A301	Existing Elevation		
A302	Proposed Elevation		
A801	Preliminary Stormwater		

LOCATION PLAN

FOR DEVELOPMENT APPLICATION ONLY

S. Chase. Wonder.

ADDRESS	15 Racecourse Crescent, Launceston	ISSUE	DA
CLIENT	Churchbridge Capital	DWG #	A000
DWG	Cover	SCALE@A1	NTS
		DRAWN	JS
		CHKD	PROJECT 005452

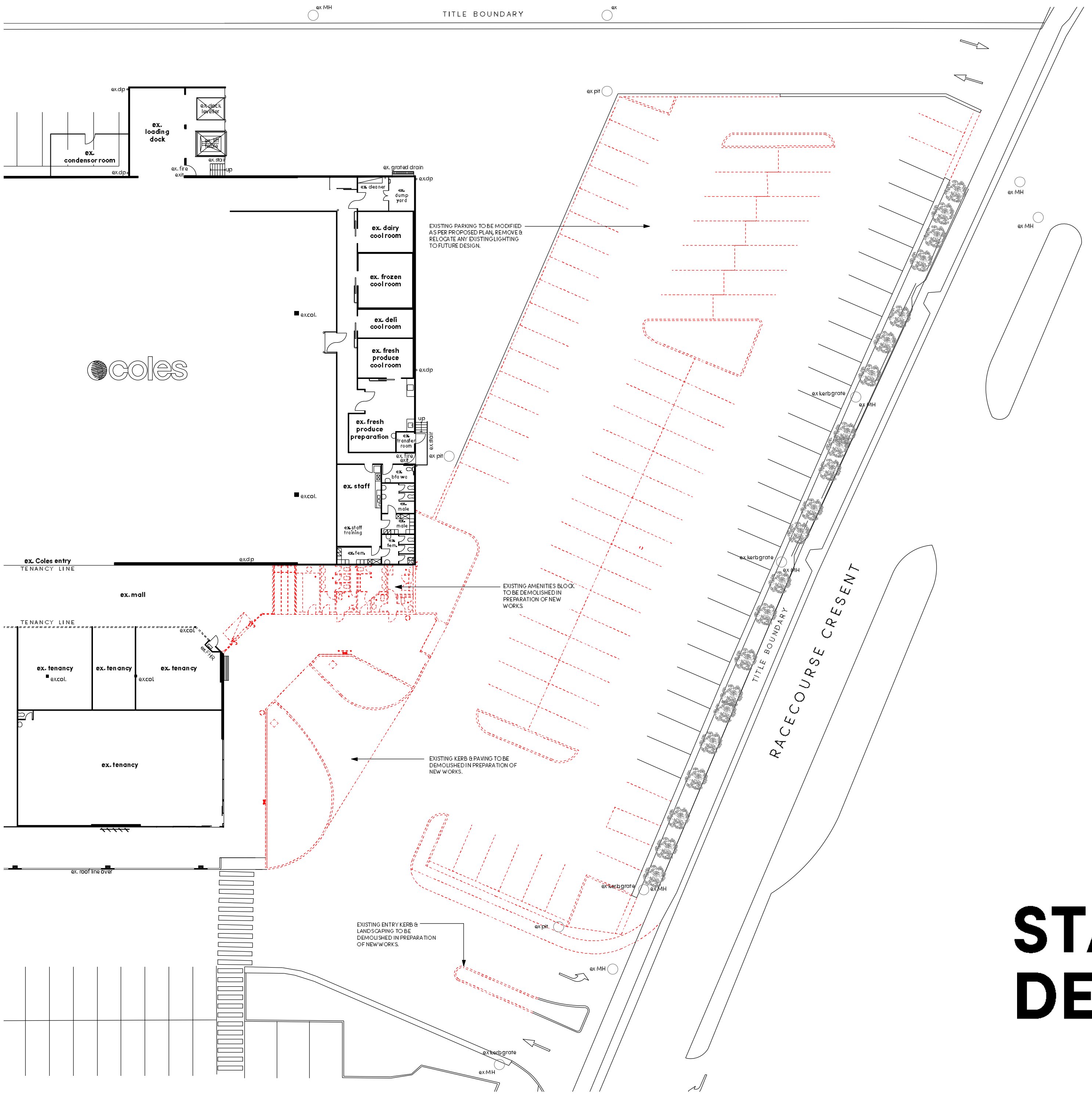


FOR DEVELOPMENT APPLICATION ONLY

S. Chase. Wonder.

REVISION	DATE	DESCRIPTION
ADDRESS	15 Racecourse Crescent, Launceston	ISSUE DA
CLIENT	Churchbridge Capital	DWG # A101
DWG	Site Plan	SCALE @ A3 1:500
		DRAWN JE
		CHKD
		PROJECT #

S. Group © Copyright 2016 | Level 1, 10-14 Paterson st. | Level 1, 90-92 Murray st. | 83 Langridge st, Collingwood, Melbourne
T: 03 6311 1403 E: info@sgroup.com.au sgroup.com.au



PLANNING EXHIBITED DOCUMENTS

Ref. No: DA 0349/2019

Date advertised: 23/10/2019

Planning Administration ____________

WALL LEGEND

MARK	DESCRIPTION
	EXISTING WALLS TO BE RETAINED.
	EXISTING WALLS TO BE DEMOLISHED.
ex.FHR	EXISTING FIRE HOSE REEL (FHR).
ex.FE	EXISTING WALL MOUNTED FIRE EXTINGUISHER.
× 20.123	EXISTING SPOT LEVEL.

DEMOLITION NOTES

GENERALLY DEMOLITION WORKS MUST BE CARRIED OUT IN ACCORDANCE WITH AS 2601-2001: DEMOLITION OF STRUCTURES & REGULATIONS 45, 46 & 47 OF THE BUILDING REGULATIONS (Tas.) 2016.

PROCEDURES & METHODS OF DEMOLITION MUST BE ADEQUATE TO PREVENT INJURY TO PERSONS & AVOID DAMAGE TO NEIGHBORING PROPERTIES.

ALL DEMOLISHED MATERIALS, RUBBISH & DEBRIS SHALL BE REMOVED FROM THE SITE ON COMPLETION OF DEMOLITION.

BEFORE REMOVING EXISTING WALLS SHOWN TO BE DEMOLISHED, BUILDER SHALL CONFIRM ON-SITE WHETHER THEY ARE LOADBEARING / BRACING OR NOT.

IF IT IS FOUND THAT THEY ARE LOADBEARING / BRACING, A STRUCTURAL ENGINEER MUST BE ENGAGED TO DETERMINE ANY BEAMS REQUIRED TO SUPPORT THESE EXISTING LOADS.

ALL REDUNDANT STORMWATER, SEWER AND WATER CONNECTIONS ASSOCIATED WITH THE DEMOLITION SHALL BE CUT & SEALED TO THE SATISFACTION OF COUNCIL'S SENIOR PLUMBING INSPECTOR.

THE REMOVAL OF EXISTING PLUMBING FIXTURES SHALL INCLUDE ALL ASSOCIATED WASTE & VENT PIPES, FLOOR DRAINS, WATER SERVICE PIPEWORK BRACKETS, SUPPORTS etc. & SEAL OFF EXISTING SERVICES. SEAL OFF & MAKE GOOD ALL FLOOR, WALL & ROOF PENETRATIONS.

GENERALLY, MAKE GOOD TO EXISTING FLOORS, WALLS & CEILINGS WHERE ALL DEMOLITION WORK OCCURS TO MATCH EXISTING AS & WHERE REQUIRED.

ASBESTOS NOTES

IMPORTANT:

IDENTIFY ASBESTOS OR ASBESTOS CONTAINING MATERIALS (ACM'S) AT THE SITE.

IF IN PLACE, REFER TO THE ASBESTOS REGISTER FOR DETAILS.

IF NOT IN PLACE, A THOROUGH INSPECTION IS TO BE UNDERTAKEN BY A SUITABLY 'COMPETENT' PERSON & RECORDED IN DETAIL IN AN ASBESTOS REGISTER.

ASBESTOS REMOVAL SHALL BE CARRIED OUT BY QUALIFIED PERSONNEL ONLY IN ACCORDANCE WITH RELEVANT STANDARDS / CODES OF PRACTICE (PREFERABLY 'CLASS A' ASBESTOS REMOVAL LICENCE HOLDERS ONLY), WITH A THOROUGH 'ASBESTOS MANAGEMENT PLAN' IN PLACE.

FURTHERMORE, IF MORE THAN 10 sqm. OF ASBESTOS IS TO BE REMOVED A VISUAL CLEARANCE CERTIFICATE FORM No: AR4 IS TO BE COMPLETED & SUBMITTED TO THE BUILDING SURVEYOR. RECORDS OF CORRECT DISPOSAL ARE TO BE SUBMITTED TO THE BUILDING SURVEYOR FOR ANY ASBESTOS REMOVED.

STAGE 2 DEMOLITION

NORTH

0 2 4 10 METRES

1 centimetre on this drawing represents 2 metres on the ground (i.e. 1:200).

FOR DEVELOPMENT APPLICATION ONLY

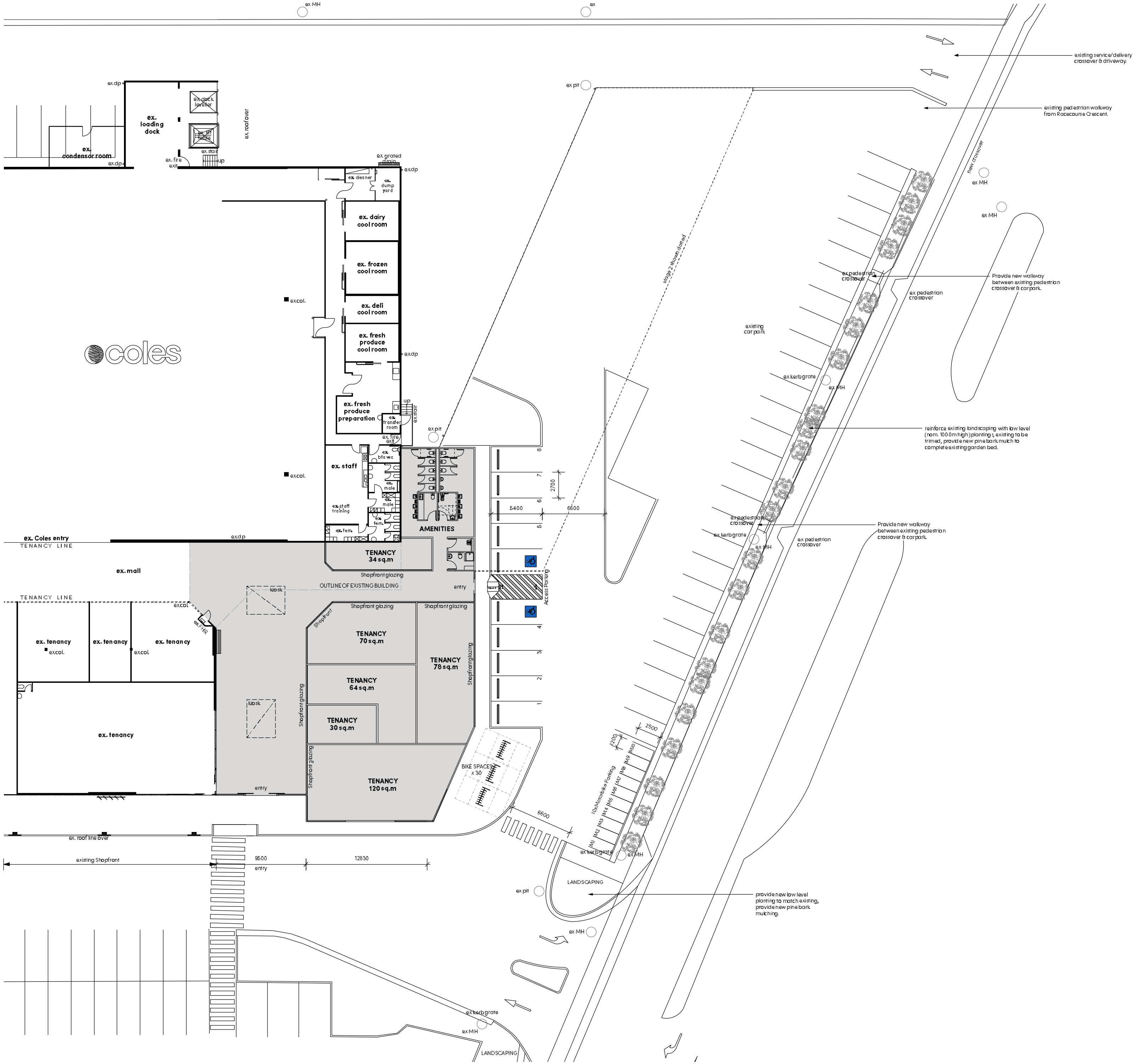
S. Chase. Wonder.

REVISION	DATE	DESCRIPTION		
ADDRESS	15 Racecourse Crescent, Launceston			ISSUE DA
CLIENT	Churchbridge Capital		SCALE @ A3 1:100	DWG # A201
DWG	Existing & Demolition Plan		DRAWN JE	
			CHKD	PROJECT # J005432

S. Group

Level 1, 10-14 Paterson st. | Level 1, 90-92 Murray st. | 83 Langridge st, Collingwood, Melbourne
T: 03 6311 1403 E: info@sgroup.com.au sgroup.com.au

Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019



STAGE 1

METRES 0 2 4 10
1 centimetre on this drawing represents 2 metres on the ground (i.e. 1:200).

NORTH

PROPOSED GROUND FLOOR PLAN 1:200

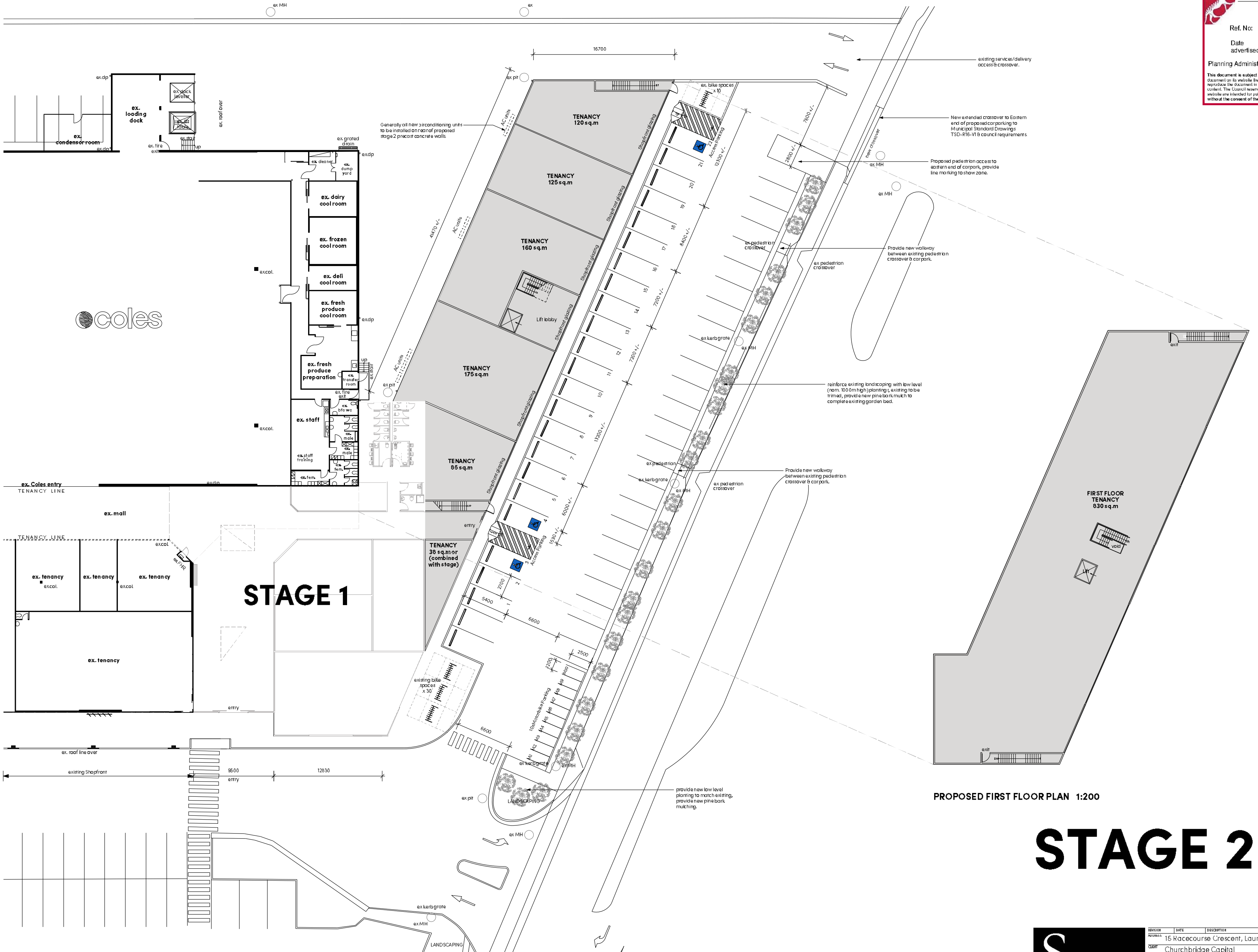
FOR DEVELOPMENT APPLICATION ONLY

ADDRESS	15 Racecourse Crescent, Launceston
CLIENT	Churchbridge Capital
DWG	Proposed Floor Plan - Stage 1
ISSUE	DA
DWG #	A202
SCALE	1:200
DRAWN	JF
PROJECT #	005432

S. Chase. Wonder.

S. Group
Level 1, 10-14 Paterson St
Level 1, 90-92 Murray St
183 Langridge St, Collingwood, Melbourne
T: 03 6311 1403 E: info@sgroup.com.au sgroup.com.au

Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019



PROPOSED GROUND FLOOR PLAN 1:200

PROPOSED FIRST FLOOR PLAN 1:200

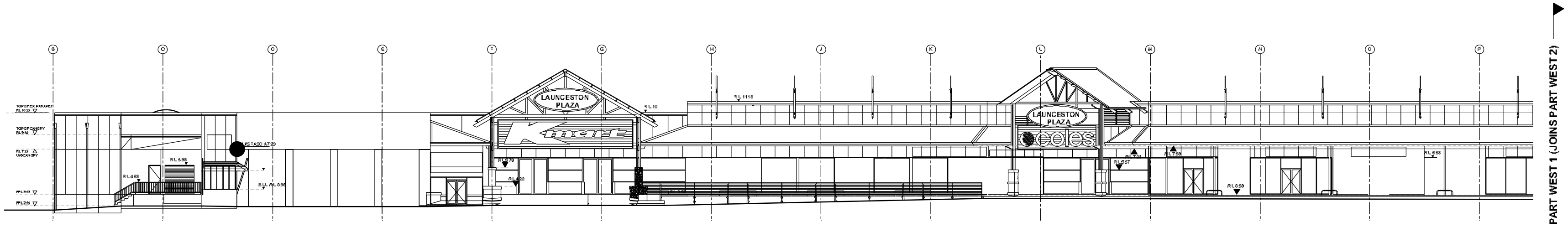
FOR DEVELOPMENT APPLICATION ONLY

ADDRESS	15 Racecourse Crescent, Launceston
CLIENT	Churchbridge Capital
DWG	Proposed Floor Plan – Stage 2
ISSUE	DA
DWG #	A203
SCALE	1:200
PROJECT	005432

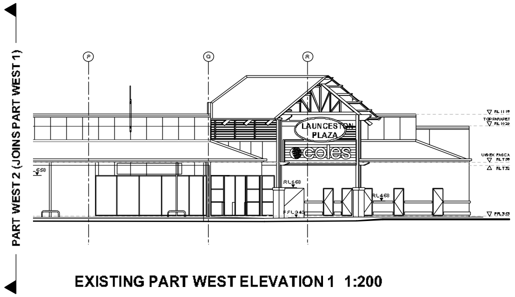
S. Chase. Wonder.

S. Group © Copyright 2016 | Level 1, 10-14 Paterson St | Level 1, 90-92 Murray St | 83 Langridge St, Collingwood, Melbourne | T: 03 6311 1403 | E: info@sgroup.com.au sgroup.com.au

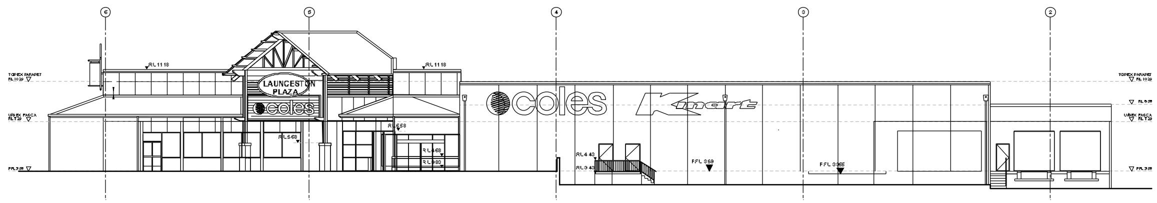
Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019



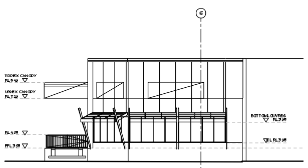
EXISTING PART WEST ELEVATION 1 1:200



EXISTING PART WEST ELEVATION 1 1:200

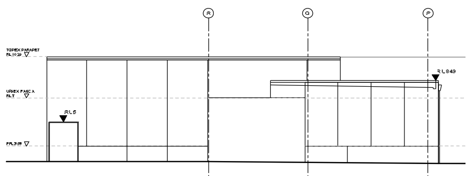


EXISTING SOUTH ELEVATION 1 1:200

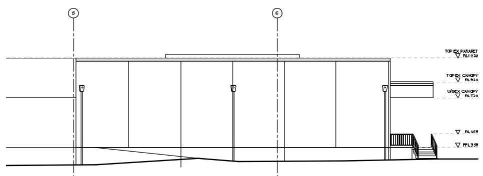


EXISTING SOUTH ELEVATION 1:200

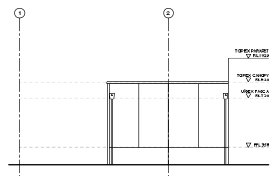
GARDEN CENTRE



EXISTING EAST ELEVATION 1:200



EXISTING NORTH ELEVATION 1:200



EXISTING NORTH ELEVATION 1:200

LOADING

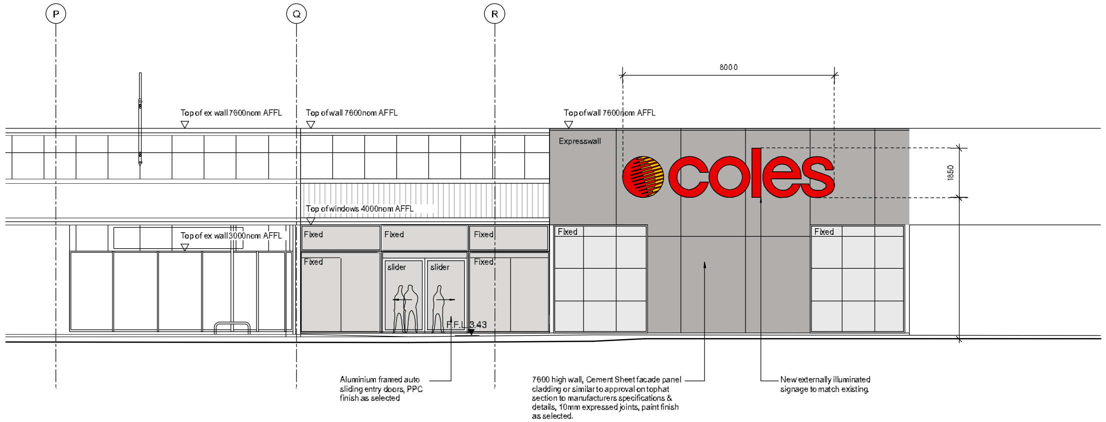
FOR DEVELOPMENT APPLICATION ONLY

S. Chase. Wonder.

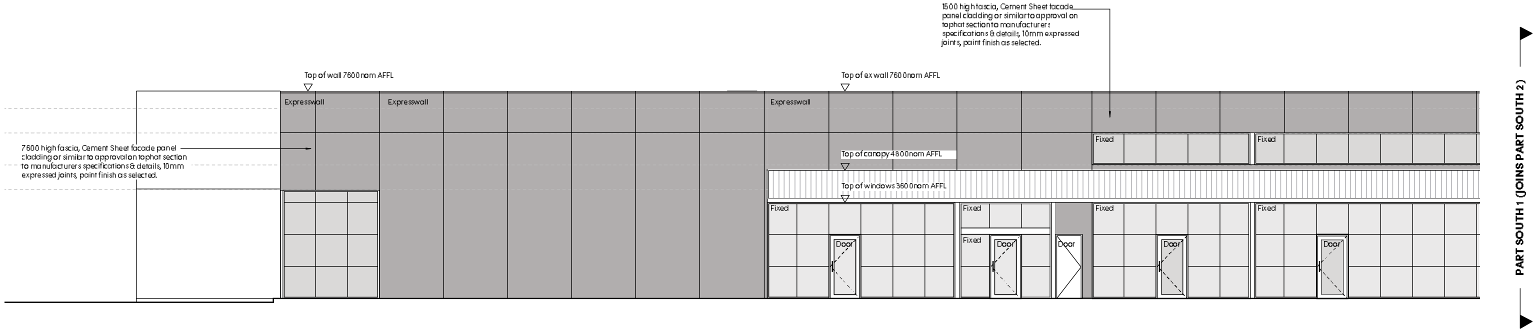
ADDRESS	15 Racecourse Crescent, Launceston
CLIENT	Churchbridge Capital
DWG	Existing Elevation
ISSUE	DA
DWG #	A301
SCALE	1:100

S. Group © Copyright 2016 · Level 1, 10-14 Paterson St · Level 1, 90-92 Murray St, T: 03 6311 1403 · E: info@sgroup.com.au sgroup.com.au

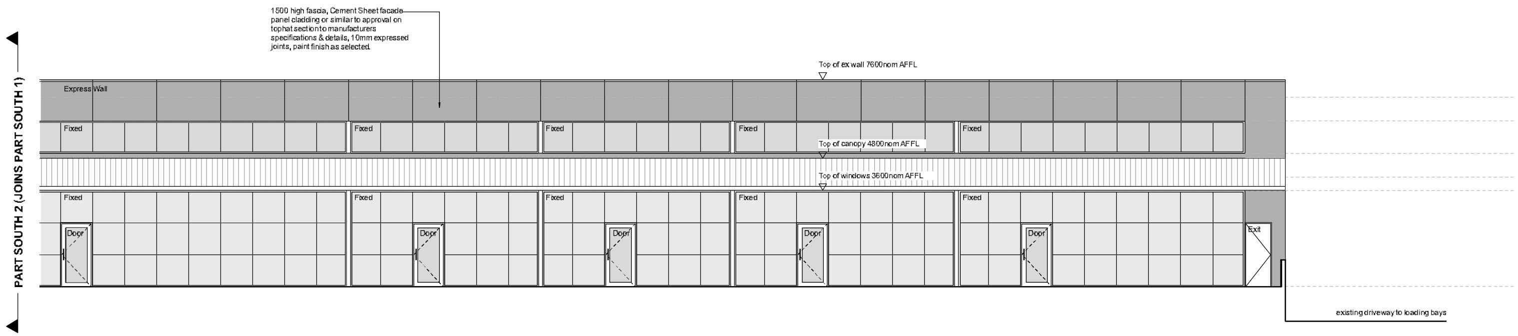
Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019



PROPOSED WEST ELEVATION



PROPOSED SOUTH ELEVATION 1:100



PROPOSED SOUTH ELEVATION 1:100

FOR DEVELOPMENT APPLICATION ONLY

S. Chase. Wonder.

Address	15 Racecourse Crescent, Launceston
Client	Churchbridge Capital
Dwg	Proposed Elevation
Issue	DA
Dwg #	A302
Scale	1:100
Project #	005432

S. Group © Copyright 2016 Level 1, 10-14 Paterson St | Level 1, 90-92 Murray St, T: 03 6311 1403 | 183 Langridge St, Collingwood, Melbourne E: info@sgroup.com.au sgroup.com.au

Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019

FOR DEVELOPMENT APPLICATION ONLY

S. Chase. Wonder.

REVISION	DATE	DESCRIPTION
ADDRESS	15 Racecourse Crescent, Launceston	ISSUE DA
CLIENT	Churchbridge Capital	SCALE @ A3 1:100 — DWG # A801
DWG	Preliminary Stormwater Services	DRAWN JF — CHKD — PROJECT # J005432

S. Group | Level 1, 10-14 Paterson st. | Level 1, 90-92 Murray st. | 83 Langridge st, Collingwood, Melbourne
T: 03 6311 1403 E: info@sgroup.com.au sgroup.com.au

Document Set ID: 4193948
Version: 1, Version Date: 04/12/2019

MIDSON traffic pty ltd

Churchbridge Capital Pty Ltd

Launceston K-Mart Redevelopment

October 2019

ENGINEERS AUSTRALIA

PROFESSIONAL ENGINEER OF THE YEAR INDIVIDUAL AWARDS TASMANIA WINNER 2016

MIDSON traffic pty ltd

Contents

MIDSON traffic pty ltd

Figure Index

Table Index

Appendices

1. Introduction

1.1 Background

Midson Traffic were engaged by Churchbridge Capital Pty Ltd to prepare a traffic impact assessment of a expansion of the K-Mart site in Launceston.

1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *A Framework for Undertaking Traffic Impact Assessments*, September 2007. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management,* Part 12: *Traffic Impacts of Developments*, 2009.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

The Road and Railway Assets Code of the Launceston Interim Planning Scheme, 2015, identifies that a TIA is required due to the traffic generation of the proposed development. This TIA addresses relevant clauses in E4.0 Road and Railway Assets Code and E6.0 Parking and Access Code of the Planning Scheme.

1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *A Framework for Undertaking Traffic Impact Assessments*, September 2007, as well as Council's requirements.

-
-
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

1.4 Project Scope

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the
- Provision of information on the proposed development with regards to traffic movements and
- Identification of the traffic generation potential of the proposal with respect to the surrounding
- Review of the parking requirements of the proposed development. Assessment of this parking
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.5 Subject Site

The subject site is located at the existing K-Mart shopping centre on land bound by Boland Street, Innes Street and Racecourse Road. The subject site and surrounding road network is shown in Figure 1.

MIDSON traffic pty ltd

Figure 1 Subject Site & Surrounding Road Network

Image Source: LIST Map, DPIPWE

1.6 Reference Resources

-
- Austroads, *Guide to Traffic Management,* Part 12: *Traffic Impacts of Developments*
-
- Department of State Growth, *A Framework for Undertaking Traffic Impact Assessments*
- Roads and Maritime Services NSW, *Guide to Traffic Generating Developments*
- Roads and Maritime Services NSW, *Updated Traffic Surveys,*
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1:2004)

2. Existing Conditions

2.1 Existing Site

The site is currently operating as a retail shopping centre and includes a discount department store (Kmart), a supermarket (Coles) and a number of specialty shops including an auto service outlet and garden centre. The retail and service net area is 10,069 m^2. The site contains a substantial supply of car parking with 3 accesses to nearby public roads together with a separately accessed loading dock facility.

2.2 Transport Network

For the purpose of this report, the transport network consists of Racecourse Crescent, Boland Street, and Innes Street. All frontage roads have a posted speed limit of 60-km/h.

2.2.1 Racecourse Crescent

Racecourse Crescent is split into two single lane one-way sections from just east of Cimitiere Street to Innes Street by a central median. On-street parking is permitted on both road sections. The road forms T-junctions with Cimitiere Street and Innes Street. Racecourse Crescent provides an indirect connection to Elphin Road and suburbs to the south east. Cimitiere Street provides a route to and from the city centre, East Tamar Highway and Tamar Street / Invermay Road.

Entry from the east to the site at the eastern access is via a right turn lane through the median. Vehicles can also enter from the Innes Street direction. All vehicles exiting must turn left. A right turn exit to the south from the site at the western access is via a lane through the median which directs traffic to the Innes Street holding line. Vehicles can also exit to the left. Entry can only be a left turn in (ie a right turn in from Racecourse Crescent is not possible at this access).

Racecourse Crescent from the site's access (looking southeast) is shown in Figure 2.

Figure 2 Racecourse Crescent

2.2.2 Boland Street

Boland Street provides a collector road link between Ravenswood and Waverly. Boland Street becomes Henry Street east of the Dowling Street intersection, and Esplanade east of the Tamar Street junction. Boland Street provides access to predominantly commercial properties along its length (including the K-Mart shopping centre).

Boland Street carries approximately 8,500 vehicles per day west of Innes Street and approximately 6,000 vehicles per day near the subject site. Boland Street connects with Innes Street at a three-leg roundabout.

Boland Street from the site's access is shown in Figure 3.

Figure 3 Boland Street

2.2.3 Innes Street

Innes Street is a relatively short two-lane two-way road that provides only a short frontage to the western end of the site and links Racecourse Crescent and Boland Street. It connects to Cimitiere Street to the south and facilitates circulatory movements to some of the car parks servicing nearby trade outlets.

2.2.4 Traffic Volumes

Council undertake regular vehicle counts in Boland Street west of Innes Street. Council traffic data suggests traffic flows have remained fairly constant over the five-year period for the 12 hour 7:00 AM to 7:00 PM at 4,200 vehicles westbound and 4,000 vehicles eastbound. In a very broad sense this equates to approximately 460 westbound / 440 eastbound vehicles per hour (vph) during the peak travel times and some 330 vph average in each direction during business hours.

A short duration traffic survey was undertaken for Racecourse Crescent at the eastern access during business hours, it suggested a flow of 320 vph in each direction would be an appropriate average hourly rate for the busier periods.

Virtually no bicyclists were observed during the survey period.

2.2.5 On-Site Parking Demands

On-site parking surveys were undertaken by Peter Freeman Traffic Solutions in April and June 2014. The existing on-site car parking areas are defined in Table 1. This provides a breakdown of the parking supply into the various sectors of the parking zone and provides details of specific parking allocated for access compliant, taxi, time restricted and loading zone.

The existing site also has a substantial loading bay facility at the eastern end of the main building which contains 3 separate loading bays to service the Kmart and Coles operations. This zone is accessed

separately to the public car parking area. Several car sized spaces are available in this area for smaller deliveries or for service vehicles. The loading bay area has 15-minute parking restrictions.

The data from a survey of vacant parking spaces taken over several hours on two Thursdays is contained in Table 2. The parking surveys indicate that the number of spaces not occupied ranges from 28% during the middle of the day to 44% by late afternoon. Note that the survey does have inaccuracies in that at any time a reasonable number of vehicles were in transit within the car park – each survey took approximately 5 minutes to complete and from the access data approximately 80 vehicles would have entered / exited the site during this time. The steady decrease in parked numbers also suggests parking demand was highest during the morning and midday. As would be expected, parkers favoured the spaces closer to the main entrance and it was evident these were much more heavily utilised.

Note that the centre management report that there is a reasonable number of non-customer vehicles being parked for long terms within the parking zone (typically furthest from the main building). Observation during the surveys confirms that this activity occurs. It is centre management's intention to arrange for random checking by parking attendants to enforce the existing 3-hour time limit to reduce noncustomer parking activity (typically commuter and customer parking for nearby businesses).

Table 1 Car Parking Supply

Kmart / Coles Launceston Existing car park supply						
Row	row entered from	car	access compliant	taxi	5 min	loading zone
Plaza frontage	west	3	4	5	2	2
A	east	29				
	west	35				
B	east	39				
	west	39				
C	east	36				
	west	35				
D	east	31				
	west	29				
E	east	27				
	west	25				
F	east	19				
	west	17				
G	east	7				
Perimeter north	east/south	70				
Perimeter south	north	30				
Coles-H	south	15				
Coles-I	north	18	3			
	south	23				
Coles-J	north	33				
Coles-K	east	6				
Sub-total		566	7	5	2	2
Over-all total		582				

Table 2 Car Parking Occupancy Survey

Kmart / Coles Launceston Existing car park vacancy survey (3/4/2014)					
Row	row entered from	1:30	2:30	3:30	4:30
Plaza frontage	west				
A	east	3	1	3	3
	west	1	3	7	8
B	east	5	6	7	8
	west	16	14	20	18
C	east	16	14	19	21
	west	18	18	15	18
D	east	14	21	20	18
	west	19	24	24	21
E	east	17	21	22	23
	west	13	12	17	19
F	east	11	15	16	17
	west	7	6	7	9
G	east	3	2	3	4
Perimeter	various	19	23	23	31
Coles H-K	various	31	23	31	32
Sub-total		193	203	234	250
Total supply		563	563	563	563
Percentage vacant		34%	36%	42%	44%

2.2.6 On-Street Parking Activity

On-street parking is not permitted along the Boland Street and Innes Street site frontages, and on the extensive verge zone between the road and the shopping centre boundary. Unrestricted parking is permitted along Racecourse Crescent eastbound lane from Innes Street past Cimitiere Street to the loading dock access. This parking was up to 50% utilised with some vehicles parked for long periods (ie did not move during the traffic survey period). Parking on the westbound lane side of Racecourse Crescent appeared to be by longer term parkers.

A number of nearby businesses have extensive on-site parking which are not directly coupled to the development site.

2.3 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

Crash data was obtained from the Department of State Growth for a 5+ year period for Boland Street between Innes Street and Dowling Street, Racecourse Crescent between Cimitiere Street and Innes Street, and Innes Street between Boland Street and Racecourse Crescent between 1st January 2014 and 31st May 2019.

The findings of the crash data is summarised as follows:

-
- Severity. Of these crashes, 4 involved minor injury, and 6 involved property damage only.
- Vulnerable road users. 1 crash involved a motorcycle. This crash was an overtaking manoeuvre
- Crash locations. Three crashes were reported at the existing access to the site on Boland Street. The balance of crashes were reported mid-block on Boland Street. This crash trend is consistent with the road safety performance of a road intersection in an urban environment with moderately
- Crash types. 5 crashes involved vehicles travelling in the same direction (ie. rear-end collisions); 2 crashes involved manoeuvring; 1 involved overtaking; 1 involved vehicles from adjacent approaches (intersection related); 1 involved rear-end.
-
- Severity. Of these crashes, 1 involved minor injury, and 10 involved property damage.
- Vulnerable road users. One crash involved a bicycle rear-end collision at the intersection of
- Crash locations. 5 crashes were reported at the Cimitiere Street junction. 1 crash was reported at the western access to the subject site, 1 crash was reported at the Innes Street junction, and
- Crash types. 5 crashes involved vehicles travelling in the same direction (ie. rear-end collisions); 2 crashes were vehicles travelling in adjacent directions (2 crashes); 2 crashes were vehicles travelling in opposing directions; and 2 crashes involved manoeuvring related crashes.
-

- Severity. 1 crash involved minor injury; 1 crash involved first aid at the scene; 8 crashes involved
- Vulnerable road users. 1 crash involved a motorcycle in September 2016 resulting in minor injury.
- Crash locations. 3 crashes were reported at the Racecourse Road intersection. The balance were
- Crash types. 4 crashes involved manoeuvring; 2 crashes involved vehicles leaving the carriageway; 2 crashes involved vehicles from adjacent approaches; 1 crash involved vehicles travelling in opposing directions.

The crash history is consistent with busy urban roads in a built-up area. There are no clear trends that indicate that there are any specific road safety deficiencies that may be exacerbated by the proposed development.

3. Proposed Development

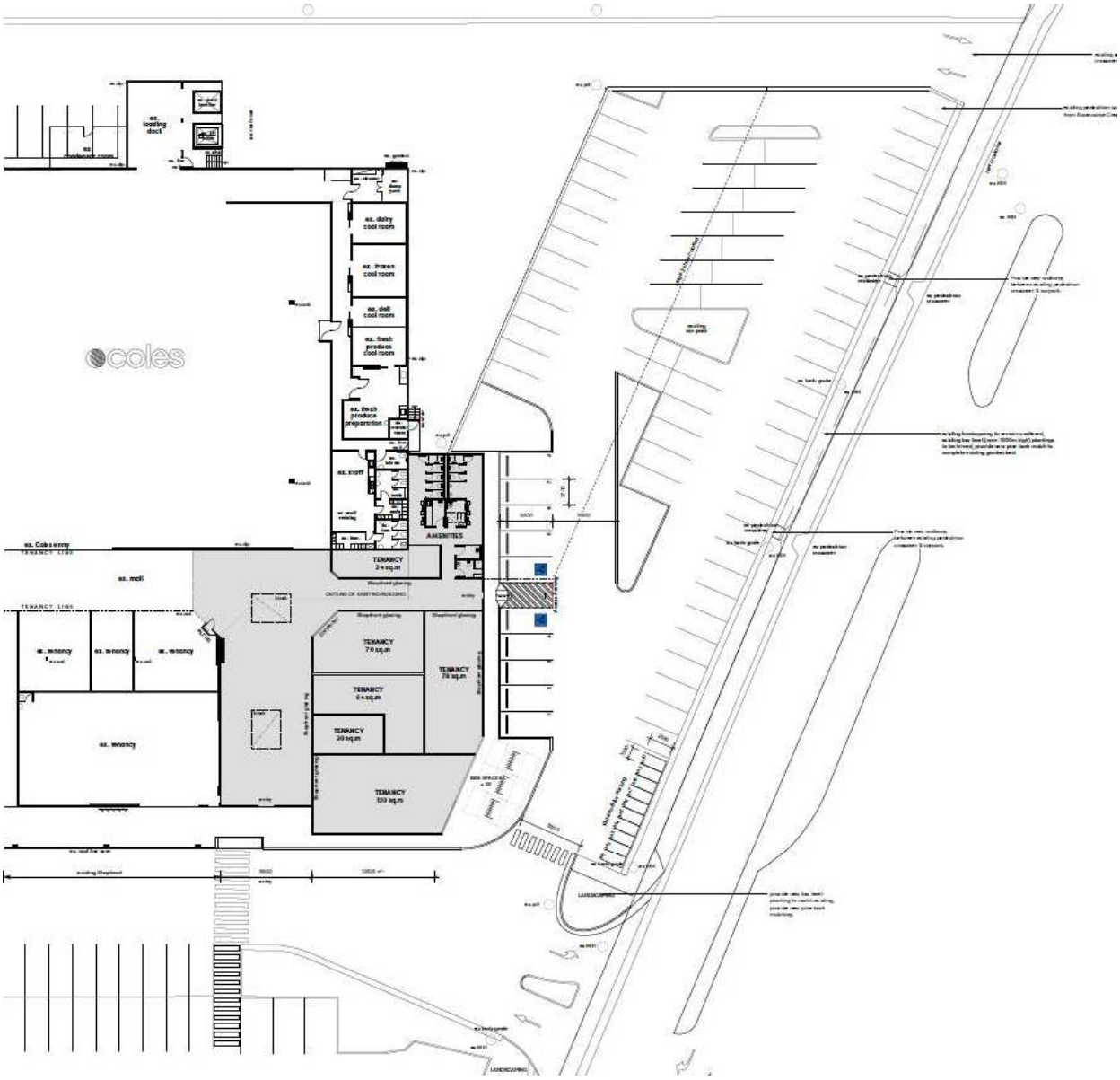
3.1 Development Proposal

The development proposal is to increase the number of specialty shops at the centre through an extension on the southern side of the existing building.

The extension is to occur over the current car park zone and will result in a loss of some parking supply from the existing and create a small new area. It will maintain the current access points to the public road system and the general traffic circulation will remain. An additional access will be created on the southeastern corner of the site that will be used for service vehicles only.

The proposed development is shown in Figure 4.

Figure 4 Proposed Development Plans



3.1.1 Floor Area Increases

- K-Mart
- Coles
- First floor tenancy (additional) 830 m
- Ground floor specialty shops (additional) 995 m
- TOTAL new floor area 1,825 m^2

3.1.2 Car Parking

The car parking within the site is reduced from 580 spaces to 529 spaces (51 space net space reduction).

The existing site layout is shown in Figure 5. Figure 5 also shows the footprint of the proposed extension of the site, including the parking spaces that are to be removed. The proposed shopping centre development is shown in Figure 6 (with new/ altered areas shown in red).

Figure 5 Existing Site with Development Footprint

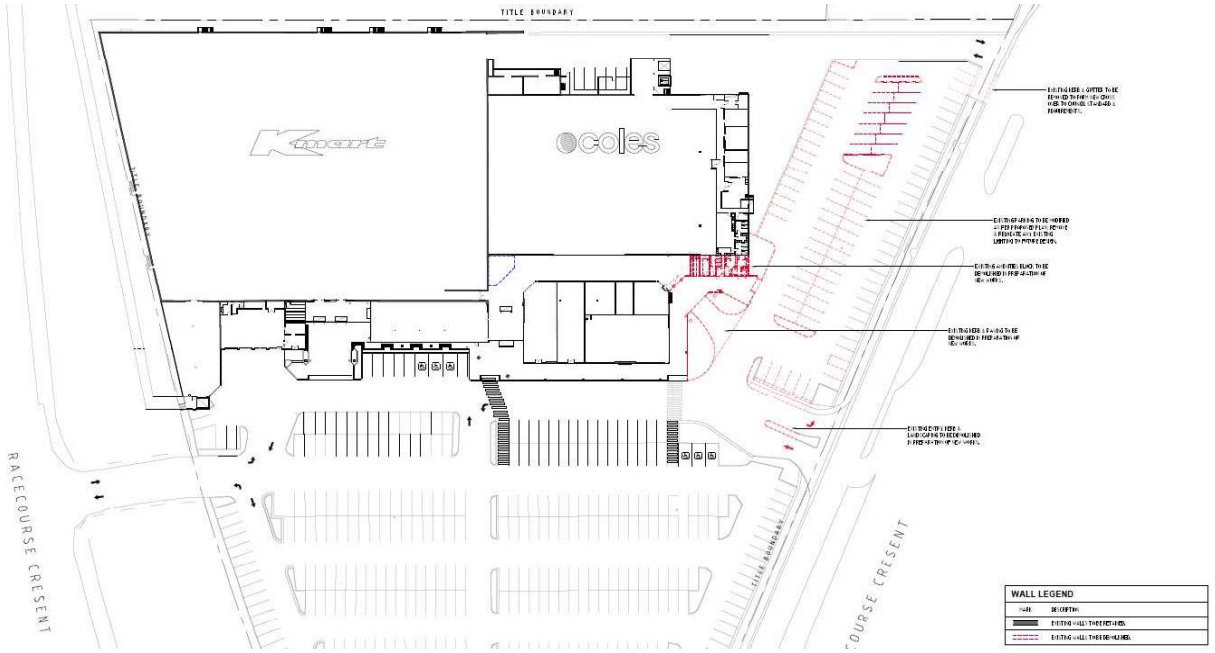
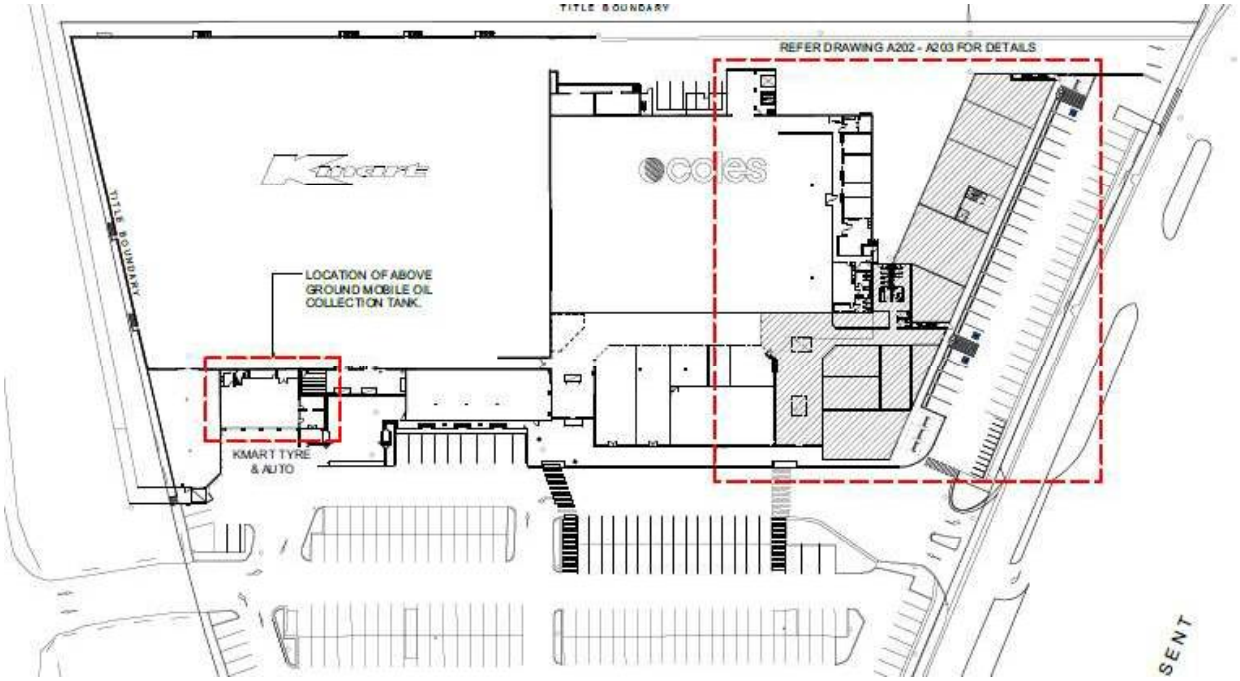


Figure 6 Proposed Development



3.1.3 Site Access

The proposed development retains all existing access on Boland Street and Racecourse Crescent.

A separate access is proposed for service vehicle access at the eastern end of the site on Racecourse Crescent. This access will enable service vehicles (including semi-trailers) to access the site in a separate driveway to public car park access.

A new car park access is proposed immediately adjacent to the service vehicle access on Racecourse Road.

4. Traffic Impacts

4.1 Traffic Generation

Traffic generation was estimated using two sources: traffic surveys of the existing site, and empirical data obtained from the RMS Guide. Each of these traffic generation components are discussed in the following sections.

4.1.1 Existing Site Traffic Generation

The site generates a large turnover of vehicles throughout the day. A limited survey was conducted by Peter Freeman Traffic Solutions on Thursday 3rd April 2014 (noting that Thursday is typically the busiest day for shopping centres according to the RMS Guide). The surveys were undertaken during school term during the afternoon. The parking survey results are provided in Appendix A.

The survey demonstrated that total flows approaching 1,000 vehicle movements to and from the car park occurred during the heaviest hour and showed a reasonably steady flow. The vehicle classification mix was predominately cars with some motorbikes. The survey was repeated on a subsequent Thursday to obtain an indication of traffic flows in Racecourse Crescent. The total trips at the access remained similar with a positive inflow but with a higher outflow. Several site investigations by Midson Traffic in 2017 and 2019 confirm that this level of traffic generation is still current and relevant.

The greatest traffic flow occurred via the Racecourse Crescent eastern access with, because of the median, most traffic to or from the east. The Racecourse Crescent western access carried the lowest number of vehicles and the Boland Street access carried flow levels in between the two.

The loading dock which is accessed from Racecourse Crescent at the eastern end of the site was not surveyed but observation indicates very low flows of articulated trucks and larger single unit delivery vans.

The traffic surveys conducted between 3:30pm and 4:30pm on 3rd April 2014 are summarised in Table 3.

Table 3 Existing Site Traffic Survey Data Summary

Access	Inward Trips	Outward Trips	Total Trips
Boland Street access	163 vph	174 vph	337 vph
Racecourse Crs east	268 vph	167 vph	435 vph
Racecourse Crs west	65 vph	116 vph	181 vph
TOTAL	**496 vph**	**457 vph**	**953 vph**

4.1.2 Traffic Generation of Proposed Development

The RMS Guide suggests for retail shopping centres that the highest daily traffic generation occurs on a Thursday.

The RMS Guide provides a formula based on the Gross Leasable Floor Area in square metres (GLFA) of the development to calculate the traffic generation. The RMS uses gross leasable floor area for this land use category, because it refers most specifically to the factor that generates/ attracts trips. GLFA means the sum of the areas on each floor of a building, in the case of a shopping centre, the area of each floor is taken to be the area within the internal faces of the walls, excluding stairs, amenities, lifts, corridors and other public areas but including all stock storage areas.

As a general guide, the RMS Guide recommends that about 75% of the gross floor area (GFA) is deemed gross leasable floor area (GLFA). The GLFA was adopted for the calculation of the traffic generation for the proposed development.

Equation 1 (from RMS Guide) calculates the traffic generation based on the peak trip generation on a Thursday afternoon between 4:30 and 5:30 pm. This is considered the busiest period of the week for a development of this nature.

Equation 1 Traffic Generation for a Shopping Centre

$$V(P) = 20A(S) + 51A(F) + 155A(SM) + 46A(SS) + 22A(OM)$$ (per 1,000 m^2)

Where:

V (P) = Peak Vehicle Trips

A (S) = Slow Trade GLFA, includes major department stores such as David Jones and Harvey Norman, furniture, electrical and whitegoods stores;

A (F) = Faster Trade GLFA, includes discount department stores such as K-Mart and Target;

A (SM) = Supermarket GLFA;

A (SS) = Speciality Shops, secondary retail GLFA, includes speciality shops and take-away stores;

A (OM) = Office, medical GLFA, includes medical centres and general business offices;

The RMS Guide recommends a daily traffic generation rate of 121 vehicles per day per 100m^2 of GLFA for shopping centres less than 10,000m^2. A lower rate of 78 vehicles per day per 100m2 of GLFA is recommended for shopping centres between 10,000 m^2 and 20,000 m^2. Note that the increase in floor area associated with the proposed development reduces the RMS Guide daily traffic generation rate based on GLFA. For this reason, both the existing and proposed daily traffic generation rates were assessed at the higher rate of 121 vehicles per 100m^2 of GLFA.

The traffic generation of the existing site and the proposed extension are provided in Table 4 and Table 5 respectively.

Table 4 Traffic Generation – Existing Use

Component	Class	GFA m²	GLFA m²	Peak Generation	Daily Generation (121 veh/h per 100m² GLFA)
K-Mart	A(F)	5,825 m²	4,369 m²	223 vph	
Coles	A(SM)	2,670 m²	2,003 m²	310 vph	
Specialty Stores	A(SS)	1,780 m²	1,335 m²	61 vph	
TOTAL		**10,275 m²**	**7,707 m²**	**594 vph**	**9,325 vpd**

Table 5 Traffic Generation – Proposed Development

Component	Class	GFA m²	GLFA m²	Peak Generation	Daily Generation
K-Mart	A(F)	5,825 m²	4,369 m²	223 vph	
Coles	A(SM)	2,670 m²	2,003 m²	310 vph	
First floor tenancy	A(S)	830 m²	623 m²	12 vph	
Specialty Stores (existing + proposed)	A(SS)	2,775 m²	2,081 m²	96 vph	
TOTAL		**12,100 m²**	**9,528 m²**	**641 vph**	**11,529 vpd**

It can be seen that the RMS traffic generation increase between the proposed development and the

-
-

4.1.3 Comparison of Traffic Generation Rates

The peak traffic generation of the existing site from surveys was 953 vehicles per hour during the afternoon peak period (consisting of inward and outward trips combined). It can be seen that the traffic generation of the existing site calculated by the RMS Guide is approximately 62% of the surveyed traffic generation from the site.

It is therefore likely that the increased traffic generation of the proposed development will be proportional to the increased total floor area. The peak traffic generation of the proposed shopping centre expansion is therefore likely to be in the order of 1,034 vehicles per hour. This is an increase of 81 vehicles per hour compared to the existing traffic generation of the site during peak times (equating to a relatively small average increase of 1.35 additional vehicles every minute).

4.2 Trip Distribution

The trip distribution of the shopping centre expansion was assumed to have the same trip distribution on the surrounding road network as the existing traffic generation. The Thursday afternoon peak traffic generation associated with the proposed development (including the existing traffic generation at the site) is summarised in Table 6.

Table 6 Peak Trip Distribution at Accesses

Access	Left In	Right In	Total In	Left Out	Right Out	Total Out
Boland Street access	68	108	**177**	127	63	**189**
Racecourse Crs new east access	10	87	**97**	60	10	**70**
Racecourse Crs mid access	24	174	**198**	121	0	**121**
Racecourse Crs west access	65	0	**65**	63	53	**116**
TOTAL			**In: 537 vph**			**Out: 497 vph**

4.3 Access Impacts

The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater

The existing traffic volume of the site is 9,325 vehicles per day. 20% of this existing volume is 1,865 vehicles per day (being the greater of 20% of the existing volume and 40 vehicles per day). The traffic generation of the proposed extension of the site is 1,302 vehicles per day which is less than 20% of the existing volume. Therefore the Acceptable Solution A3 of Clause 4.5.1 of the Planning Scheme is met.

4.4 Racecourse Crescent Main Access

The main access to the site on Racecourse Crescent is proposed to be retained. Modifications will be made to accommodate the modified parking area along the southern boundary of the site. This will result in reduced storage within the site for right turning vehicles.

- It is unlikely that there will be significant delays associated with right turning traffic at this location. Delays at this location will be due to parking manoeuvring, pedestrians using the new zebra

- During times when a vehicle is propped to turn right into the new car parking area, there is sufficient width for vehicles entering from Racecourse Crescent to manoeuvre past.

4.5 New Access Investigations

No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less".

In this case a new access is proposed adjacent to the commercial access towards the eastern end of Racecourse Road. This will increase the existing accesses on Racecourse Road from 3 to 4. The Acceptable Solution A2 of Clause E4.6.2 of the Planning Scheme is therefore not met.

"For roads in an area subject to a speed limit of 60km/h or less, accesses and junctions must be safe and not unreasonably impact on the efficiency of the road, having regard to:

(a) the nature and frequency of the traffic generated by the use;

(b) the nature of the road;

(c) the speed limit and traffic flow of the road;

(d) any alternative access to a road;

(e) the need for the access or junction;

(f) any traffic impact assessment; and

(g) any written advice received from the road authority".

The following is relevant with respect to the development proposal:

a. The development is an expansion of a large retail and commercial site. The total traffic generation on Racecourse Crescent will be 667 vehicles per hour during peak periods (consisting of 360 vehicles per hour inward and 307 vehicles per hour outward). This amount of traffic on one access would not be appropriate.

b. Racecourse Crescent is a minor collector road with a divided carriageway adjacent to the subject site.

c. The default urban speed limit of 50-km/h applies to Racecourse Crescent.

d. Alternative access to the site is available in Boland Street. Boland Street already provides a primary access to the site. Intensifying access on Boland Street is not considered desirable due to the higher through traffic function of the road.

e. The proposed new access will improve vehicle circulation within the car park and reduce reliance on the existing main access on Racecourse Crescent.

f. This report documents the findings of a traffic impact assessment.

g. Council (as road authority) have requested that the new access be assessed against the requirements of the Road and Railway Assets Code of the Planning Scheme.

Based on the above findings, the development meets the requirements of Performance Criteria P2 of Clause E4.6.2 of the Planning Scheme.

4.6 Sight Distance Requirements

E4.6.4 of the Road and Railway Assets Code requires safe intersection sight distance on the frontage road as set out in Table 7.

It can be seen that the required Planning Scheme SISD is met for all access junctions. The Acceptable Solution A1 of Clause E4.6.4 of the Planning Scheme is therefore met for all road junctions to the site.

Table 7 Sight Distances

Sight distance to accesses					
Frontage Road	Access movement description	Approach direction (from)	Sight distance (metres)	Estimated approach speed[1] (km/hour)	Planning Scheme requirement (metres)[2]
Boland Street	exit	east	>120	60	105
	right turn entry	east	>120	60	
Racecourse Crescent western[3]	exit	west	70 – 80	50	80
Racecourse Crescent eastern	exit	west	120	50	80
	right turn entry	west	105	50	
Racecourse Crescent new eastern access	exit	east	>120	50	80
	Right turn entry	west	>120	50	
Loading bay	exit	east	>120	50	80
		Plaza exit	103	15	23
		Cimitiere Street	35	15	
	right turn entry	west	>120	50	80
		Cimitiere Street	35	15	23
Kmart Auto	exit	access	35	10	15
	right turn entry	loading bay	30	10	

Notes

1. Estimated speed at maximum sight distance

2. Low speed distance derived from Austroads formula, reaction time 2.0s, results typically greater than LCC requirements

3. Travel speed reduced due to left turn and roundabout, sight view can be greater but is semi restricted through trees, over grass

4.7 Pedestrian Impacts

Pedestrian movements in the car park is likely to increase by a maximum of 24% in accordance with the increased parking demand to in excess of 1,550 movements (1,250 movements existing) per hour during the busiest period.

The number of pedestrians walking to or from vehicles at any time would be in the order of 30 persons (20 existing) on average but could fluctuate markedly from time to time.

A new pedestrian zebra crossing is proposed within the car park adjacent to the Racecourse Crescent main access. This will assist pedestrians to access the site from Racecourse Crescent safely.

It is not anticipated that cycling will provide a significant transport mode for customers. The typical multiple purchases that occur at supermarket / discount store centres are not easily transported on a bicycle.

4.8 Road Safety Impacts

No significant adverse road safety impacts are foreseen for the proposed shopping centre expansion. This

- The predicted future peak traffic generation of 1,034 vehicle trips per hour (inward and outward trips combined) is spread amongst three main accesses to the site. Observations of the existing
- Access to the site is via existing accesses which have been in use for many years (noting slight modifications of accesses in Racecourse Crescent). Trips into and out of the site will therefore not be considered unusual or unexpected for passing motorists. The site is also located in a dominantly
- Traffic volumes in the surrounding road network have changed little in the past five years. Little traffic growth would therefore be expected in future years, thus ensuring that the capacity of the
- There are no identified road safety deficiencies in the surrounding road network that might be
- The proposed development separates loading bay access from the car park access on Racecourse Road. This improves road safety through separation of commercial and customer traffic.

5. Parking Assessment

5.1 Parking Provision

The proposal will reconfigure a section of the existing car park that currently contains 97 car parking spaces (including 3 disabled spaces). The revised car parking layout will result in 46 car parking spaces (including 3 disabled spaces) and two car sized loading bay spaces. The revised layout will also include 10 motorcycle spaces and 40 bicycle racks.

This is a net reduction of 51 spaces from the existing parking supply of 580 spaces.

-
- 12 Taxi spaces
-
-
- 2 Loading zones

5.2 Planning Scheme Parking Requirements

The Parking and Sustainable Transport Code sets out the Planning Scheme parking requirements for a

> *The number of car parking spaces must:*
>
> *(a) not be less than 90% of the requirements of Table E6.1 (except for dwellings in the General Residential Zone); or*
>
> *(b) not be less than 100% of the requirements of Table E6.1 for dwellings in the General Residential Zone; or*
>
> *(c) not exceed the requirements of Table E6.1 by more than 2 spaces or 5% whichever is the greater, except for dwellings in the General Residential Zone; or*
>
> *(d) be in accordance with an acceptable solution contained within a parking precinct plan.*

The parking requirements of Table E6.1 of the Planning Scheme requires a total of 1 space per 30m^2 or gross floor area for 'general retail or hire'. The Planning Scheme parking requirements are provided in Table 8.

Table 8 Planning Scheme Parking Requirements (Whole Site)

Component	Area
K Mart	5,825 m^2
Coles Supermarket	2,670 m^2
Specialty Shops (existing)	1,780 m^2
Specialty Shops (proposed)	995 m^2
First Floor Tenancy	830 m^2
TOTAL Proposed Area	12,100 m^2
Total car parking required	**404 spaces**

It can be seen that the Planning Scheme requires a total of 404 parking spaces for the site as a whole. A total of 519 are proposed. This exceeds the Planning Scheme requirement by more than 5% and therefore

The number of car parking spaces for other than residential uses, must be provided to meet the reasonable needs of the use, having regard to:

(a) the availability of off-road public car parking spaces within reasonable walking distance;

(b) the ability of multiple users to share spaces because of:

(i) variations in car parking demand over time; or

(ii) efficiencies gained by consolidation of car parking spaces;

(c) the availability and frequency of public transport within reasonable walking distance of the site;

(d) any site constraints such as existing buildings, slope, drainage, vegetation and landscaping;

(e) the availability, accessibility and safety of on-road parking, having regard to the nature of the roads, traffic management and other uses in the vicinity;

(f) an assessment of the actual car parking demand determined in light of the nature of the use and development;

(g) the effect on streetscape; and

(h) the recommendations of any traffic impact assessment prepared for the proposal

In this case, the proposed development exceeds the Planning Scheme requirements, therefore the availability of nearby on-street parking and various other factors are not particularly relevant. It is noted that the proposed development reduces the available parking supply from existing conditions brings the development closer to the Planning Scheme requirements for the site.

Parking demand surveys indicate that there is sufficient spare capacity in the car park to accommodate the additional demands associated with the proposed shopping centre expansion.

On this basis, the proposed parking supply is considered to meet the Performance Criteria, P1.1 of E6.5.1.

5.3 Bicycle Parking Requirements

5.3.1 Number of Bicycle Spaces

the number of bicycle parking spaces must be provided on either the site or within 50m of the site in accordance with the requirements of Table E6.1". For 'general retail and hire' use, the bicycle parking requirement is 1 space per 100m^2 of gross floor area.

The proposed development involves the increase in 'retail' gross floor area of 2,565 m^2. This requires a total provision of 26 bicycle spaces. A total of 40 bicycle spaces are proposed and therefore the Acceptable Solution A1 or E6.5.2 is met.

5.3.2 Location and Design of Bicycle Spaces

Bicycle parking and storage facilities for uses that require 5 or more bicycle spaces by Table E6.1 must:

(a) be accessible from a road, cycle path, bicycle lane, shared path or access way;

(b) be located within 50m from the main entrance;

(c) be visible from the main entrance or otherwise signed; and

(d) be available and adequately lit during the times they will be used, in accordance with Table 2.3 of AS/NZS 1158.3.1: 2005 Lighting for roads and public spaces - Pedestrian area (Category P) lighting - Performance and design requirements.

In this case, 20 additional bicycle parking spaces are proposed. The spaces will be located adjacent to Racecourse Crescent eastern access between the car parking and the building, as well as adjacent to the new building structure. These spaces will therefore be accessible from all road access locations and are well lit. The bicycle parking facilities therefore comply with the Acceptable Solution A1 of E6.6.6.

Acceptable Solution A2 of E6.6.6 of the Planning Scheme requires the following:

Bicycle parking spaces must:

(a) have minimum dimensions of:

(i) 1.7m in length; and

(ii) 1.2m in height; and

(iii) 0.7m in width at the handlebars;

(b) have unobstructed access with a width of at least 2m and a gradient of no more 5% from a road, cycle path, bicycle lane, shared path or access way; and

(c) include a rail or hoop to lock a bicycle to that meets AS 2890.3 1993 Parking facilities - Bicycle parking facilities.

All bicycle parking spaces conform to the requirements of Acceptable Solution A2 of Clause E6.6.6 of the Planning Scheme.

5.4 Taxi Parking Requirements

Except for dwellings in the General Residential zone, uses that require greater than 50 car spaces by Table E6.1 must provide one parking space for a taxi on site, with one additional taxi parking space provided for each additional 50 car parking spaces required.

When considering the floor area of the site as a whole, the taxi parking requirement is 12 spaces. This taxi parking provision is proposed on-site, and therefore the Acceptable Solution, A1 of E6.5.3 is met.

5.5 Motorcycle Parking Requirements

Except for dwellings in the General Residential zone, uses that require greater than 20 car parking spaces by Table E6.1 must provide one motorcycle parking space on site with one additional motorcycle parking space on site for each additional 20 car parking spaces required.

When considering the floor area of the site as a whole, the motorcycle parking requirement is 19 spaces. Motorcycle parking provision for 10 spaces is proposed on-site, and therefore the Acceptable Solution, A1 of E6.5.4 is not met.

"Motorcycle parking spaces must be provided to meet the reasonable needs of the use, having regard to:

(a) the nature of the proposed use and development;

(b) the availability and accessibility of motorcycle parking spaces on the road or in the vicinity; and

(c) any site constraints such as existing buildings, slope, drainage, vegetation and landscaping.

The following is relevant with respect to the development proposal:

a. The development is an extension of an existing shopping centre. The demand for motorcycles is generally lower than cars due to the reduced ability for carry goods.
b. There are no dedicated motorcycle parking spaces provided in the nearby vicinity (noting that motorcycles can park legally within a car parking space). The car park provides a large over-supply of car parking spaces when assessed against the Planning Scheme requirements. Motorcycles can legally park within car spaces.
c. No specific site constraints are applicable to the development proposal.

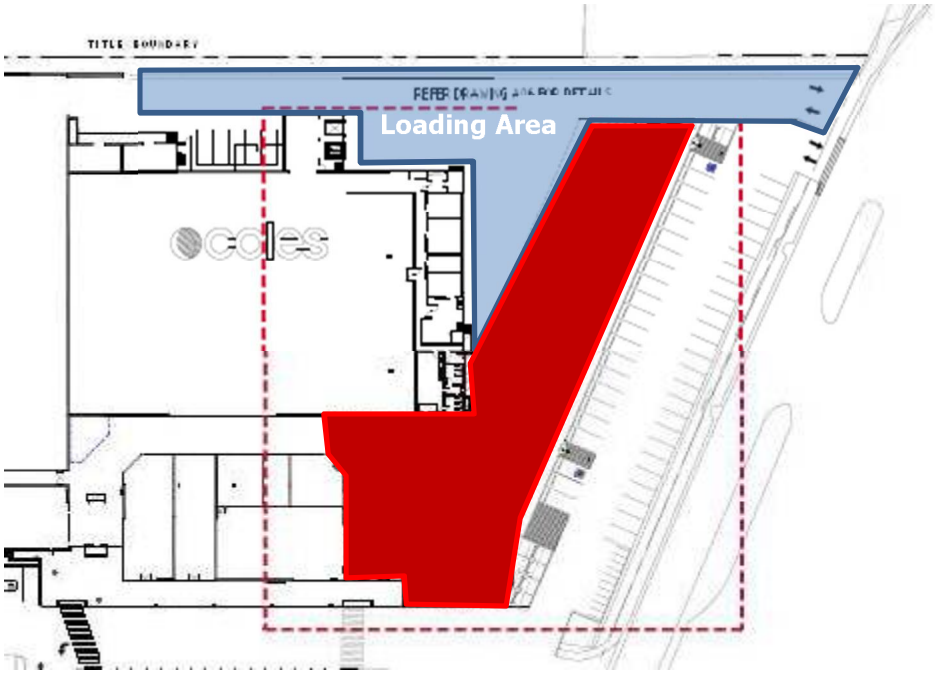
Based on the above assessment the development complies with the requirements of Performance Criteria P1 of Clause E6.5.4 of the Planning Scheme.

5.6 Loading Bay Requirements

The area and dimensions of loading bays and access way areas must be designed in accordance with AS2890.2 – 2002, Parking Facilities, Part 2: Parking facilities - Off-street commercial vehicle facilities, for the type of vehicles likely to use the site.

In this case, a loading bay area is located on the eastern boundary of the site. The loading bay area is approximately 270 m^2. This area is shown in Figure 7. A new entry/ exit has been designed to separate the customer car park from loading activities. The area for loading, unloading and manoeuvring is sufficiently large enough for a semi-trailer to manoeuvre so that all movements into and out of the site are in a forward motion.

Figure 7 Loading Bay Area



AS2890.2 requires that the service area is dependent on a combination of:

(a) The maximum size of vehicle likely to use the facility.
(b) The frequency with which vehicles of different classification use the facility; and
(c) Whether the public road from which the facility is accessed is a major or minor road.

- Swept paths of a semi-trailer (design vehicle) were tested through the site, to/ from Racecourse
- The frequency of access to the site will be several times per day by vehicles of differing sizes. Access by a semi-trailer will be relatively infrequent, with low likelihood of multiple arrivals of this
- Access into the site is via a major road. This access (which is in its exiting location for the current site) has been assessed to be appropriate in following sections of AS2890.2

AS2890.2 requires that the use of the service area for regular use of a major road (Racecourse Crescent) must be as follows:

(a) A service area unobstructed by other vehicles or on-site activities shall be provided.

(b) All manoeuvring associated with parking, loading and unloading shall be able to be confined to the service area.
(c) Both entry and exit at the property boundary shall be in the forward direction.
(d) Circulation roadways shall be provided to connect the access driveway with the service area.
(e) Wherever practicable, separate entry and exit access driveways should be provided.

In this case, the following is applicable:

(a) The service area and access driveway has been tested to enable the swept path of a semi-trailer.
(b) All manoeuvring associated with parking, loading and unloading are confined to the service area within the site.
(c) Entry and exit at Racecourse Crescent is in a forward direction.
(d) The loading area includes a large space for manoeuvring.
(e) Separate entry and exit is not possible for this site, however the loading access has been separated from customer car parking access to improve road safety.

The proposed access arrangements therefore comply with 3.2.3 of AS2890.2. Acceptable Solution A1 or E6.6.4 is met.

5.7 On Street Car Parking

The proposal provides a large amount of on-site car parking which has been demonstrated to meet the likely demands associated with the existing site and proposed extension without impacting on nearby on-street car parking.

The proposed eastern access in Racecourse Crescent will require the removal of 2 on-street car parking spaces.

6. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed shopping centre expansion development at the K-Mart/ Coles site bounded by Boland Street/ Racecourse Crescent and Innes Street in Launceston. The development provides an increase in shop floor area at the site.

- The traffic generated by the proposed development will not have any significant adverse impacts
- There is adequate sight distance at the proposed site accesses on Boland Street and Racecourse Crescent in accordance with Austroads and Planning Scheme recommendations for the prevailing
- The proposed development reduces the existing parking supply from 580 to 529 spaces. The Planning Scheme requires 404 spaces. The proposed development therefore represents an over-supply of spaces greater than 5%. On the basis that the proposed development reduces the parking supply more in line with the Planning Scheme requirements, and based on surveys, the proposed parking provision is considered appropriate, thus meeting the requirements of
- A new access is proposed at the eastern end of the site on Racecourse Crescent. This access meets the requirements of Performance Criteria P2 of Clause E4.6.2 of the Planning Scheme and the sight distance requirements of Acceptable Solution A1 of Clause E4.6.4 of the Planning
- The proposed eastern access in Racecourse Crescent will require the removal of 2 on-street car parking spaces

Based on the findings of this report the proposed development is supported on traffic grounds.

Appendix A

Traffic Movement Survey Data

MIDSON traffic pty ltd

Kmart / Coles Existing Car Park Movements (3/4/2014)								
Period / access	**Entry**			**Exit**			**Trips**	
	left turn	right turn	entry total	left turn	right turn	exit total	total	net flow
13:30 - 14:30								
Boland Street	52	107	159	137	69	206	365	-47
Racecourse Crescent east	7	258	265	146		146	411	119
Racecourse Crescent west	61		61	48	83	131	192	-70
Hourly total	120	365	485	331	152	483	968	2
Period / access	**Entry**			**Exit**			**Trips**	
	left turn	right turn	total	left turn	right turn	total	total	net flow
15:30 - 16:30								
Boland Street	63	100	163	116	58	174	337	-11
Racecourse Crescent east	27	241	268	167		167	435	101
Racecourse Crescent west	65		65	58	58	116	181	-51
Hourly total	155	341	496	341	116	457	953	39

Kmart / Coles Existing Car Park Movements (5/6/2014)								
Period / access	**Entry**			**Exit**	**net flow**	**Racecourse Crescent**		
	left turn	right turn	entry total	left turn		north	south	total
12:00 - 13:00								
Racecourse Crescent east	23	224	247	178	69			
Racecourse Crescent						161	100	261
Racecourse Crescent just south of Cimitiere Street						316	324	640

Midson Traffic Pty Ltd ABN: 26 133 583 025

25 Hinman Drive
Kingston TAS 7050

admin@midsontraffic.com.au www.midsontraffic.com.au

Document Status

Revision	Author	Review	Date
0	Keith Midson	Zara Kacic-Midson	25 June 2019
1	Keith Midson	Zara Kacic-Midson	2 October 2019