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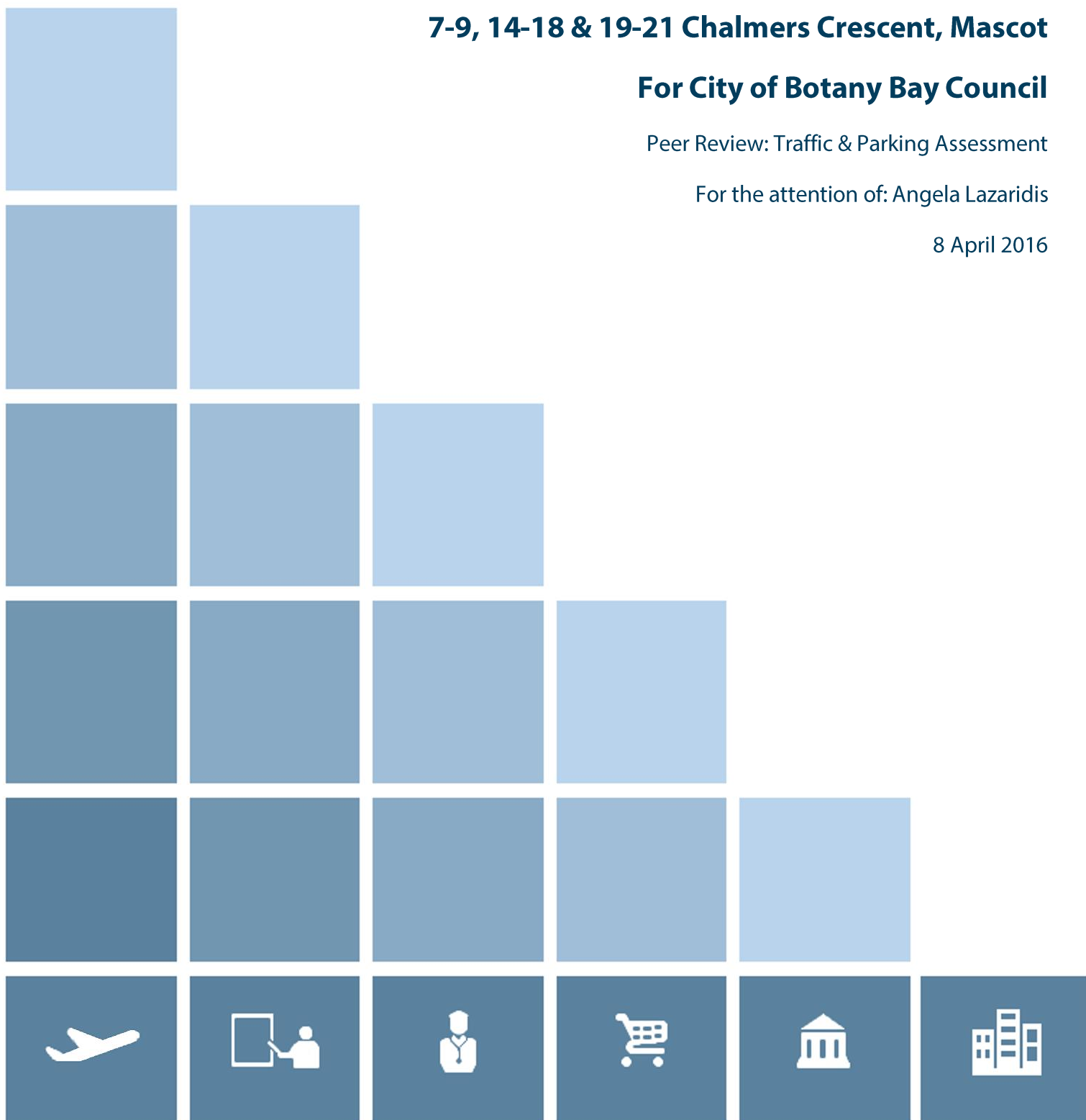
7-9, 14-18 & 19-21 Chalmers Crescent, Mascot

For City of Botany Bay Council

Peer Review: Traffic & Parking Assessment

For the attention of: Angela Lazaridis

8 April 2016



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1 Introduction

1.1 Introduction

Transport & Urban Planning Pty Ltd (TUP) has prepared and submitted a parking and traffic assessment to the City of Botany Bay Council (CBBC) to accompany the Masterplan Development Application (DA) relating to the proposed commercial development located at 7-9, 14-18 & 19-21 Chalmers Crescent, Mascot.

Parking and Traffic Consultants (PTC) has been engaged by CBBC to undertake a peer review of this parking and traffic assessment.

1.2 Reference Documentation

The scope of this review is comprised of the following documentation:

- Assessment of Transport and Traffic Impacts of Amended Proposed Commercial Masterplan Development Application for 7-9, 14-18 and 19-21 Chalmers Crescent Mascot – Revised Proposal. ('2014 Report')
 - *Transport and Urban Planning Pty Ltd, 25 June 2014.*
- Update for Revision L - Transport, Traffic and Parking Impacts - ('2015 Report')
 - *Transport and Urban Planning Pty Ltd, 11 September 2015*
- Update for Revision L - Transport, Traffic and Parking Impacts - ('2016 Report')
 - *Transport and Urban Planning Pty Ltd, 7 March 2016*

The assessment prepared by TUP makes reference to the latest set of architectural plans, prepared by architects Ancher Mortlock Woolley (provided in **Attachment 1**):

- DA-100, *Rev L*;
- DA-101, *Rev L*; and
- DA-102, *Rev L*.

It is noted that the traffic and parking assessment prepared by TUP makes reference to planning recommendations covered within the Mascot Town Centre Precinct Transport Management and Accessibility Plan (TMAP) prepared by SMEC Pty Ltd as a supporting policy for the Botany Bay LEP 2013 and DCP 2013.

1.3 Proposal

The subject proposal refers to a commercial development located at 7-9, 14-18 & 19-21 Chalmers Crescent, Mascot. Combined, the development has a total gross floor area of 37,805m², split amongst four (4) commercial buildings.

Site access for vehicles is proposed via six (6) driveways; four (4) dedicated to car park access; and two (2) dedicated to two loading areas, with each loading area proposed to accommodate up to two heavy rigid vehicles (HRV). All driveways are located off Chalmers Crescent.

Off-street parking is proposed over a three-level car park, with an indicated parking provision of (490) car spaces.

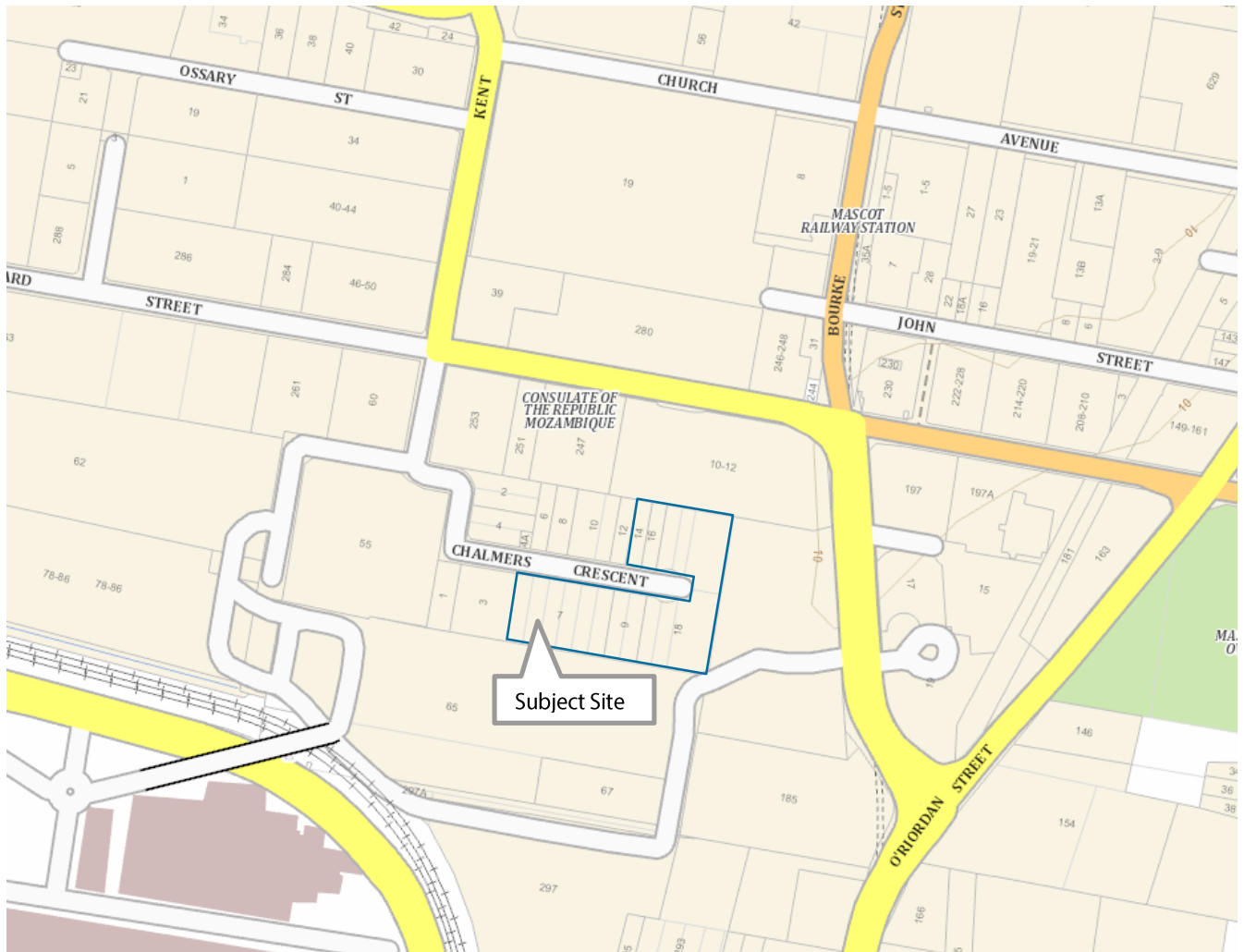


Figure 1- Site Location

2 Peer Review

This section contains a review of the key parking and traffic considerations made by Transport & Urban Planning.

When referring to the status of each reviewed item, we define the following terms as:

- **Compliant (C):** The item has been undertaken in accordance with the requirements of the relevant authority (RMS, Council, Australian Standards, etc), or in lieu of such requirements, has been undertaken in accordance with standard industry practice;
- **Able to Comply (AC):** An item that is 'able to comply' may not have addressed or met a particular requirement, but has the capacity to do so. These items may be resolved at a later stage in the DA process, and should not delay approval of the Masterplan;
- **Unaddressed (U):** An item that is 'unaddressed' requires additional information prior to approval of the Masterplan; and
- **Non-Compliant (NC):** A 'non-compliant item' does not meet the requirements of the relevant authority, or adhere to standard industry practice. Such items must be addressed prior to approval of the Masterplan.

2.1 Background Information & Data Gathering

No.	ITEM	STATUS	COMMENTS
2.1.1	Road Network Description	C	Description of surrounding road network and transport infrastructure is in line with RMS guidelines and as per the existing conditions.
2.1.2	Survey Timing & Coverage	C	Surveys have been undertaken at all key intersections surrounding the subject site, and have been carried out during typical commuter weekday AM and PM peak periods.
2.1.3	Adopted Planning Policies	C	The parking and traffic assessment relies upon many of the assumptions and targets presented by the TMAP. Council acknowledges this document as an important supporting policy. As such, and assumptions or targets adopted from the TMAP will in principal, be supported.

2.2 Traffic Impact Assessment

No.	ITEM	STATUS	COMMENTS
2.2.1	Future Traffic Generation	C	The assessment calculates potential traffic generation based on 'Office & Commercial' trip survey data from the RMS <i>Guide to Traffic Generating Developments (2002)</i> , which is now superseded by the RMS Technical Direction <i>TDT 2013/04</i> . TUP have adjusted the rates to consider restrained parking conditions however, and the use of 1 trip/100m ² GFA aligns more closely with the survey data collected for similar developments within the TDT 2013/04.

C = Compliant, AC = Able to Comply, U = Unaddressed, NC = Non-compliant

No.	ITEM	STATUS	COMMENTS
			The Technical Direction outlines surveyed traffic generation for developments of similar size, parking provision, and accessibility to public transport. The traffic generation rate adopted by TUP lies within the range of survey data for similar developments. ¹
2.2.2	Traffic Modelling Approach	C	<p>The traffic modelling assessment has been performed utilising SIDRA modelling software (version 6.0) for individual intersection assessment, and SCATES for corridor modelling.</p> <p>RMS Guidelines on Traffic Modelling (February 2013) lists SCATES as an acceptable corridor model (multi intersection model) similarly it lists SIDRA as an acceptable single-intersection model program.</p> <p>As such the adopted approach is deemed acceptable for modeling signalised junctions.</p>
2.2.3	Traffic Modelling Inputs	U	<p>Our assessment reviews the signalised traffic intersection of Coward Street and Kent Road using SIDRA Intersection 6.1. The analysis has been performed in isolation of other signals within the vicinity of the site. The assessed signalised intersection layout is based on the TCS layout 1699. We note the following:</p> <ul style="list-style-type: none"> The SIDRA input traffic volumes on the Kent Road south approach through-movement in the AM Peak does not correlate with the traffic inputs indicated in Figure 8 of the report. The TMAP road widening improvements in Figure 5 of the 2014 Report suggests the introduction of a pedestrian crossing on the eastern approach. The provision of a crossing may result in changes to the existing timing and phasing of the intersection and may counteract the anticipated improvements. <p>Recommendations:</p> <ul style="list-style-type: none"> Applicant to provide a copy of the raw survey data that outlines the heavy and light vehicle volumes, and pedestrian volumes used to generate the SIDRA and SCATES model. Council to confirm the introduction of the pedestrian crossing on the eastern approach of Coward Street as part of TMAP improvements.
2.2.4	Traffic Modelling Outputs	U	<p>A preliminary review of the Coward Street and Kent Road intersection using SIDRA Intersection 6.1 was also performed to assess the validity of the recommendations proposed. The findings from our SIDRA modelling are as follows:</p> <ul style="list-style-type: none"> The proposed 'No Stopping' extensions along Kent Road and Coward Street, without any further upgrades, improves the operation of some movements, whilst reducing others (southern approach reduces from LOS D to LOS F in the AM peak period). The average level of service however, remains at LOS D,

¹ Appendix D2 of TDT 2013/04 provides vehicle-based trips for similar office buildings, the results of which support this assumption.

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No.	ITEM	STATUS	COMMENTS
			<ul style="list-style-type: none"> The proposed signal phasing alteration (2014 Report), with the extended 'No Stopping' conditions under the full development scenario, improves the level of service of the intersection from a D to C in the AM Peak, with the southern approach remaining at a LOS D. These results are similar to the outputs provided in the TUP report, In assessing the impact of the full development scenario with TMAP improvements, a LOS E in the AM Peak and D in the PM Peak is achieved compared with a reported LOS C/D. Since the TUP SIDRA model has not been provided for review is not possible to ascertain the potential discrepancy in the results. No validation of the SCATES has been undertaken by PTC, as this assessment purely focuses on the improvements in isolation of other intersections. It is noted however, the modelling of the intersection as part of a network could result in improvements to signal timing. It is acknowledged that the GFA of the current Proposal (Revision L) has been reduced by approximately 27%. This would see a reduction in potential traffic generation, however, to increase the robustness of the assessment, TUP has not updated the model with lower traffic volumes. <p>Recommendations:</p> <ul style="list-style-type: none"> Applicant to provide SIDRA files for further assessment, and a list of any assumptions made in the modelling; Council to consider implementation of proposed phasing changes.

2.3 Parking Provision Assessment

No.	ITEM	STATUS	COMMENTS
2.3.1	Car Parking Provision	AC	<p>A parking provision of (490) car spaces has been proposed. This marginally exceeds (473) spaces resulting from the rate of 1 space / 80m² GFA, as per recommendations for office-related parking stipulated within the TMAP based on the proposed 37,805m²GFA.</p> <p>It is noted that the TMAP seeks to constrain parking, thereby encouraging alternative modes of transport (i.e public transport, walking, cycling, car-pool, etc).</p> <p>Recommendation:</p> <p>Ensure the parking provision aligned with the parking rate outlined in the TMAP in the final DA submission.</p>
2.3.2	Small Car Parking	AC	<p>The Botany Bay DCP (2013) stipulates that small car parking may not exceed 5% of total car parking provisions. The proposal includes a total of (33) small car parking spaces, comprising 6.7% of the total parking provision. This requirement must be met prior to final stage DA approval.</p>

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No.	ITEM	STATUS	COMMENTS
			Recommendation: Ensure that 'small car' parking does not exceed 5% of total parking provisions in final DA design submission.
2.3.3	Bicycle Parking	U	<p>In accordance with the DCP, bicycle parking must be provided at a rate of 10% of the DCP parking provision rates (not applicable to TMAP rates). This amounts to a requirement to provide (95) secure bicycle parking spaces.</p> <p>Bicycle parking has not been discussed in the assessment, however, in keeping with the modal split goals of the TMAP, this is an important consideration. Further information is required to demonstrate that the above provision can be met.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> Request that the Architectural plans be updated to demonstrate that (95) bicycle spaces can be physically accommodated on-site in accordance with AS2890.3:2015.
2.3.4	Parking Impacts	U	<p>The proposal relies of the recommended parking provisions of the TMAP. It is noted that these provisions are lower than those stipulated in the DCP with the intention to constrain parking and encourage alternative travel modes. In light of this, we highlight the following:</p> <ul style="list-style-type: none"> All traffic modelling conducted in the assessment is based on the underlying assumption of extended 'No Stopping' controls along portions of Kent Street and Coward Street. These recommendations, should they be adopted, would result in the loss of approximately eleven (11) unrestricted, on-street parking spaces. No consideration has been given towards the impacts of this parking reduction. <p>Recommendation:</p> <ul style="list-style-type: none"> Council to ascertain whether any on-street parking surveys have been undertaken within the area, and determine whether this is an acceptable loss of parking, for the overall improvement of the intersection; Pursuant to the <u>subsequent</u> DA stage, Workplace Travel Plans and Transport Access Guides (TAG) should be provided in accordance with Part 3A.3.3 C4 of the DCP, for the purpose of demonstrating that staff will be adequately informed about, and encouraged to adopt alternative transport modes.
2.3.5	Service Bays	NC	<p>In accordance with the DCP and based on the proposed 37,805m²GFA, the development is required to provide a total of:</p> <ul style="list-style-type: none"> (6) courier vans; plus (2) SRV bays; plus (6) MRV bays. <p>The proposal indicates (5) courier vans, and (4) loading bays with dimensions capable of accommodating up to HRV vehicles.</p> <p>Recommendations:</p> <p>Council to determine acceptability of service bay shortfall.</p>

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2.4 Vehicular Access, Parking & Service Arrangements

No.	ITEM	STATUS	COMMENTS
2.4.1	Car Park Arrangement	AC	<p>Being still in the master planning stage, no formal assessment of the proposed car park has been undertaken in accordance with AS2890.1:2004. It is emphasised that, notwithstanding compliance, the car park design relies heavily on numerous no-through arrangements with blind aisles, some of which have no turning bays provided. As a result of the layout, circulation and traffic flow can be restricted, and wayfinding will be poor as a result. From experience, with a car park of this scale, such deficiencies could lead to considerable issues in management of the car park, including internal congestion, damage to property, and if severe enough, a loss in the usage of the car park.</p> <p>Recommendations:</p> <p>A complete review of the car park and access arrangements will be required for the assessment of any subsequent DA's. In addition to consideration of the requirements of AS2890.1:2004, AS2890.2:200, AS2890.3:2015 & AS2890.6:2009, it is strongly recommended to reconsider car park circulation, and the implementation of a parking guidance system (PGS) or allocation of parking whilst there is an opportunity to do so.</p>
2.4.2	Site Service Arrangement	NC	<p>Revision L Architectural drawings indicate that the site boundary encompasses the Chalmers Crescent cul-de-sac, and hence, all reverse manoeuvres associated with loading bay access are shown to occur within the property boundary.</p> <p>PTC is not aware of any agreed relocation of the property boundary, resulting in the ownership of a portion of the public road. Regardless, the location of the property boundary does not alleviate safety concerns resulting from the reverse movements of heavy vehicles into the service bays. These concerns being as follows;</p> <ul style="list-style-type: none"> • The movements will occur across the primary pedestrian thoroughfares. Some movements are required to cross both footpaths; • The movements simultaneously must either drive or reverse across the road centreline, and obstruct the entry/exit to the proposed roundabout. Moreover, there are potential sight distance issues resulting from the proposed central-island landscaping. • It is considered that the large scale of the site will lead to difficulties in avoiding conflicts between the scheduled activities of deliveries, and the comparatively sporadic activities of staff. <p>Recommendations:</p> <ul style="list-style-type: none"> • Council to confirm location of property boundary; • Recommended to design service bays to allow for forward ingress and egress for the design vehicle.
2.4.3	Bicycle Parking	AC	<p>Bicycle parking to comply with AS2890.3:2015. Refer to Section 2.3.3 for details.</p>

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3 Conclusion

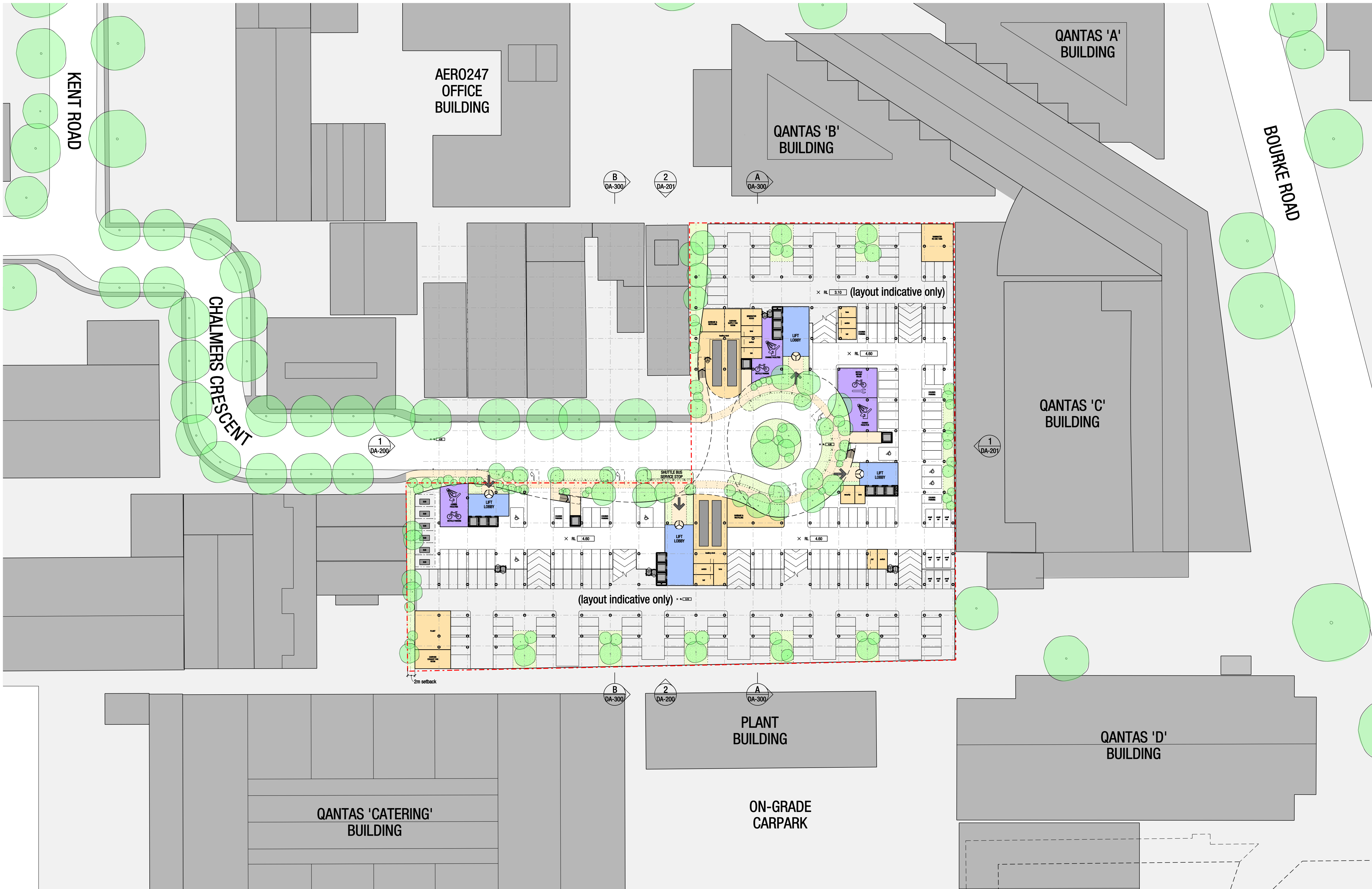
PTC has undertaken a peer review of the traffic and parking assessment (s) prepared by TUP for the proposed commercial development located at 7-9, 14-18 & 19-21 Chalmers Crescent, Mascot.

In relation to traffic, our assessment generally agrees with the methods and conclusions made by TUP. It is emphasised that the traffic assessment, reasonably so, relies on upgrades to the intersection of Coward Street and Kent Road. Therefore, a program should be established to ensure that any approved intersection upgrades are appropriately scheduled. Prior to any further action however, additional information is requested from the applicant to confirm the results of the traffic modelling for the Coward Street and Kent Road intersection proposed upgrades.

In the context of car parking, the current plans indicate that the proposal is able to comply with the car parking provision requirements of the DCP and relevant TMAP requirements. There is however, a noticeable shortfall in the provision of service bays. Furthermore, in adopting the TMAP restrained car parking rates, it must be demonstrated that sufficient bicycle parking can be provided on site in accordance with the DCP.

A high-level review of the proposed car park facility was undertaken to identify whether any key issues exist. It is acknowledged that the current arrangement is a concept design for the purpose of a masterplan, and that detailed design will occur at a later stage in the application process. Some key concerns have been raised of the current arrangement however, primarily associated with car park circulation and loading bay access. Whilst it is recommended to address both items as early as possible in the application stage, the former issue may be more easily addressed during the DA stage. The issue of loading dock access however is of immediate concern, and should be addressed for approval of the masterplan.

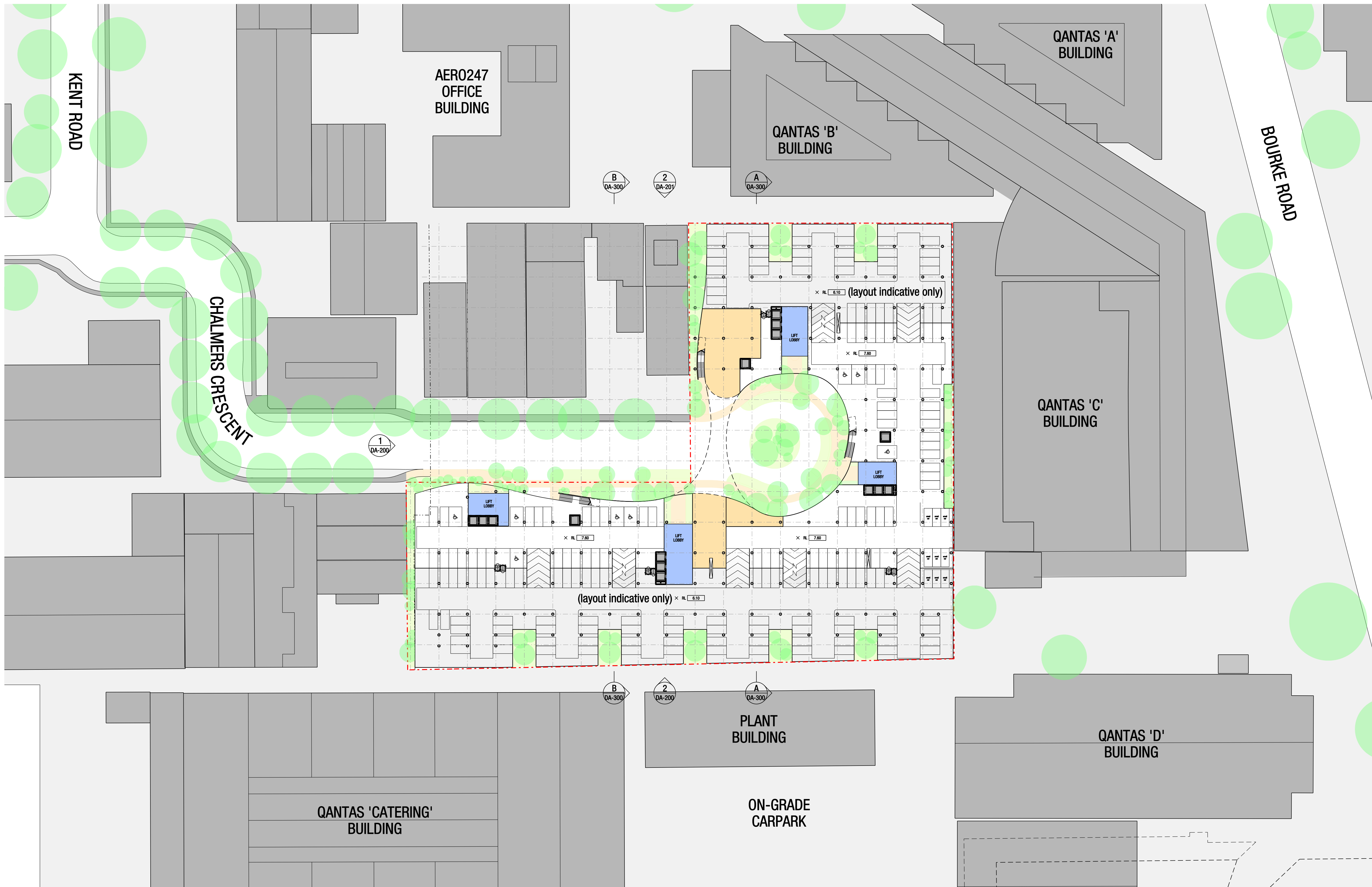
Attachment 1 Architectural Plans (Revision L)



1 GROUND FLOOR PLAN - CARPARK
SCALE 1:1000 @ A3

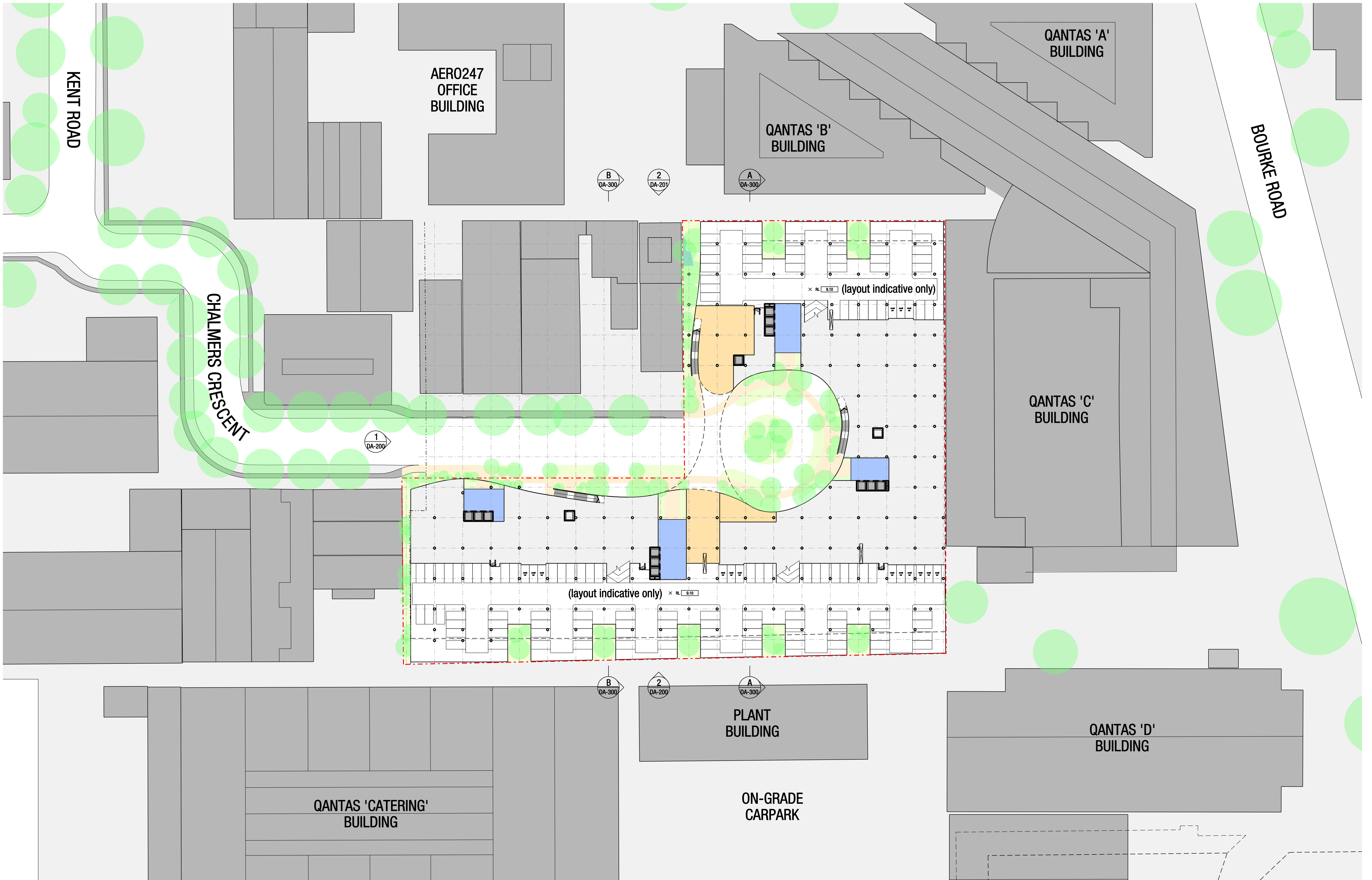
(refer to landscape architect's documentation for landscape information)

revision	date	description	by	verification	initial	signature	date	note	architect	project	drawing	scale	drawn by	project no	drawing no	revision
L	08 SEP 2015	DA ISSUE UPDATE	BMD	checked by	BMD		02.04.15	Do not scale from drawings. All discrepancies to be brought to the attention of the Architect. This drawing is intellectual property and copyright of the author, and must not be related, copied or used without the express authority of Conrad Gargett Riddel Anchor Mortlock Woolley Pty. Ltd.		Suite C3.18, Level 3, 22-36 Mountain Street, Ultimo NSW 2007, Australia T + 61 2 9280 2445 F + 61 2 9280 2446 E info@conradgargettriddel.com.au Nominated Architects: Dale Swan Cert. No. 3316, Phil Baggott Cert. No. 6174	GROUND FLOOR AND LOWER GROUND FLOOR PLAN - CARPARK	1:500@A1, 1:1000@A3	SW	1204	DA-100	L
				approved by	DS		02.03.15			client F.Mayer (Imports) Pty Ltd on behalf of Mayer Properties Ltd, J Ingster, D&V Saya, H Glaser						



1 LEVEL 1 FLOOR PLAN - CARPARK
SCALE 1:1000 @ A3

revision	date	description	by	verification	initial	signature	date	note	architect	project	drawing	scale	drawn by	project no	drawing no	revision
L	08 SEP 2015	DA ISSUE UPDATE	BMD	checked by approved by	BMD DS		02.04.15 02.03.15	Do not scale from drawings. All discrepancies to be brought to the attention of the Architect. This drawing is intellectual property and copyright of the author, and must not be related, copied or used without the express authority of Conrad Gargett Riddel Anchor Mortlock Woolley Pty. Ltd.	CONRAD GARGETT RIDDEL ANCHOR MORTLOCK WOOLLEY Salle C3.18, Level 3, 22-36 Mountain Street, Ultimo NSW 2007, Australia T + 61 2 9280 2445 F + 61 2 9280 2446 E info@conradgargettriddel.com.au Nominated Architects, Phil Balgert, Cert. No. 3316, Phil Balgert Cert. No. 6174	COMMERCIAL MASTERPLAN DA 7-9, 14-18, & 19-21 CHALMERS CRESCENT, MASCOT client F.Mayer (Imports) Pty Ltd on behalf of Mayer Properties Ltd, J Ingster, D&V Saya, H Glaser	LEVEL 1 AND UPPER GROUND FLOOR PLAN - CARPARK	1:500@A1, 1:1000@A3	SW	1204	DA-101	L



1 LEVEL 1a FLOOR PLAN - CARPARK
SCALE 1:1000 @ A3

revision	date	description	by	verification	initial	signature	date	note	architect	client	project	drawing	scale	0	5	10	25m	drawing no	revision
L	08 SEP 2015	DA ISSUE UPDATE	BMD	checked by	BMD	<i>Edie Swan</i>	02.04.15	Do not scale from drawings. All discrepancies to be brought to the attention of the Architect. This drawing is intellectual property and copyright of the author, and must not be retained, copied or used without the express authority of Conrad Gargett Riddel Anchor Mortlock Woolley Pty. Ltd.	CONRAD GARGETT RIDDEL ANCHOR MORTLOCK WOOLLEY	Suite C3.18, Level 3, 22-36 Mountain Street, Ultimo NSW 2007, Australia T + 61 2 9280 2445 F + 61 2 9280 2446 E info@conradgargettriddel.com.au Nominated Architects, Data Swan, Cert. No. 3316, Phil Balgert Cert. No. 6174	COMMERCIAL MASTERPLAN DA 7-9, 14-18, & 19-21 CHALMERS CRESCENT, MASCOT client: F.Mayer (Imports) Pty Ltd on behalf of Mayer Properties Ltd, J Ingster, D&V Saya, H Glaser	LEVEL 1a FLOOR PLAN - CARPARK	1:500@A1, 1:1000@A3	SW			1204	DA-102	L