

24 October 2018

Sydney Eastern City Planning Panel
c/o Planning Panels Secretariat
320 Pitt Street, Sydney NSW 2000

CC: Brian Olsen
Acting Director - Planning and Environmental Services
Burwood Council
Suite 1, Level 2, 1 – 17 Elsie Street
Burwood NSW 2134

Dear Chair and Panel Members,

2017SCL021 – BURWOOD - DA27/2017 – RECORD OF DEFERRAL ADDITIONAL INFORMATION

1. INTRODUCTION

We write on behalf of the Applicant (*City Park Properties Pty Ltd*) to provide further information regarding DA27/2017 (panel reference 2017SCL021), which seeks consent for the construction of a 23 storey mixed use development at 17 Deane Street, Burwood.

The matter was considered by the Panel at a public meeting, held at Burwood Council Chambers, on 14 June 2018. The Panel determined to defer the development application “...until the terms of a VPA are agreed and adopted by Council”.

The record of deferral notes: “...based on the information provided at the meeting, the Panel members were minded to accept the proposed hydraulic system, subject to the provision of some further information about its operation. The Panel would also like to hear further from the Council and the Applicant about the hotel parking shortfall”.

This letter has been prepared to address the Panel’s request for further information regarding the operation of the hydraulic car parking system and the hotel parking shortfall. It should be read in conjunction with the following supporting documentation attached:

- **Comparison of Hotel Parking Rates** (dated 9 July 2018) – prepared by Bitzios Consulting;
- **Traffic Impact Assessment** (dated 5 December 2017) – prepared by Bitzios Consulting; and
- **Draft Voluntary Planning Agreement (VPA) and explanatory note** (dated 2 August 2017).

Council’s Strategic Planner has advised that the draft VPA and explanatory note will be presented to the Council meeting scheduled for Tuesday 30 October 2018. It is understood that once the draft VPA is endorsed by Council, the Panel will hold a further public meeting to determine the matter.

2. HOTEL PARKING SHORTFALL

The proposed development adopts a car parking rate of 0.3 spaces per hotel room. A total of 35 spaces are provided for the hotel use, including 33 for guests and 2 for staff.

The reduced car parking rate was developed following a review of established hotels in comparable strategic centre locations, as well as detailed discussions with hotel providers. Our research and discussions confirmed that the likely occupants of the hotel will be business travellers visiting clients in Burwood or neighbouring centres, who are unlikely to travel to the site via private vehicle. It is therefore expected that a majority of occupants will use public transport to access the site and will not require car parking.

Bitzios Consulting have prepared a comparison of hotel parking rates and established hotels from other comparable local government areas, including Strathfield, Willoughby, North Sydney, Ryde, Parramatta and Hurstville (refer **Attachment A**). The comparison was prepared to provide further justification that the proposed car parking rate of 0.3 spaces per hotel room is reasonable given the site's proximity to the Burwood Train Station and bus interchange. A summary of the results is provided at Table 1.

Table 1 – Comparison of Hotel Parking rates

Local Government Area	Parking Rate	Required Spaces (based on 101 rooms)
Burwood	1 space per room + 2 spaces for employees	103
Strathfield	1 space per 3.5m ²	101
Willoughby	1 space per room + 1 space per 2 employees	103
North Sydney	1 space per 5 rooms	21
Ryde	1 space per 1.5 rooms	68
Parramatta	1 space per 5 rooms + 1 space per 3 employees	22
Hurstville	1 space per 5 rooms	21
<i>Proposed Development</i>	<i>0.3 spaces per room</i>	<i>30 required (35 provided)</i>

The comparison demonstrates:

- Despite similarities in the form and function of these centres there is a clear lack of consistency regarding the rate of parking required for hotel uses. Specifically:
 - Burwood, Strathfield and Willoughby DCPs adopt a rate of 1 space per room;
 - North Sydney, Parramatta and Hurstville DCPs adopt a rate of 1 space per 5 rooms; and
 - City of Ryde DCP adopts a rate of 1 space per 1.5 rooms.
- Willoughby Town Centre is not considered a strategic centre that is comparable with Burwood given it does not have a local train station, major shopping centre or major office and commercial spaces. The nearest train station and major shopping centre are both located over 1.5km away.
- The strategic centres examined, including Chatswood, St Leonards, Parramatta and Hurstville, all have similar characteristics as Burwood Town Centre and are deemed comparable in terms of having a train station, bus interchange, major shopping centre, major employment hub, and many pedestrian attractors and generators, all within proximity to established hotels.
- The established hotels within these strategic centres have predominantly paid parking onsite that must be pre-booked or operates on a “first come, first served” basis. Therefore, they do not have a parking rate of 1 space per room.
- Adopting an unbundled parking strategy encourages hotel guests to instead use nearby public transport, particularly given all abovementioned strategic centres have ticketed and very limited unrestricted on-street parking, as well as ticketed off-street carparks.

3. MECHANICAL CAR PARKING SYSTEM

A detailed explanation of the car parking system proposed was included in the Traffic Impact Assessment (dated 5 December 2017) provided at **Attachment B**.

A fully automated car picker system is proposed at 17 Deane Street, Burwood. The system has been developed by Hercules, who have been providing car parking systems nationally and internationally since 2004. The system proposed focuses on efficiency for fast parking and retrieving times. It features:

- 2 entry / exit rooms;
- 2 high speed wire rope traction lifts;
- 2 levels of parking located in basement level 2 and 3 providing a total of 84 parking spaces; and
- Each level has a shuttle and car picker making all levels independent.

System Operation and Reliability

The Hercules Car Parking System proposed for installation is a highspeed wire rope traction lift, which is similar in design to passenger rated lifts installed worldwide. The wire rope design leads to a smoother operation of the lift in comparison to hydraulic systems, as no physical or mechanical brakes are required to slow the system. A counter weight is used to reduce the energy required from the motor to operate the system, reducing the overall stress on the motor, energy output and cost of running the system whilst increasing the reliability and elongating the lifespan.

The motor selection is made with efficiency and reliability in mind. SEW Euro Drive motors are employed in the system, which have 96% efficiency and a life expectancy of 25 years. Failure of the motor, or the overall system, are very unlikely.

Hercules are equipped with fulltime expert technicians who are available on a call out basis, should any malfunctions occur. Their warehouse is stocked with replacement motors, sensors and other key components which are able to be installed on an existing system with a limited turnover time.

Maintenance is conducted half yearly, a process which takes between two and three hours. The building manager is liaised with prior to maintenance occurring to determine a suitable time to shut the system down for maintenance. During this time instructions are left at the control panels on how to contact the technician should a car be required to be parked or retrieved.

Automated System Examples

Hercules have installed fully automated systems at the following locations:

- **Darwin** – 96 cars fully automated;
- **Melbourne** – 32 spaces fully automated currently being installed in Box Hill;
- **Brisbane** – 40 spaces fully automated in Kangaroo Point;
- **Gold Coast** – 110 spaces fully automated in Broadbeach;
- **NSW** – fully automated systems in Woolloomooloo, Cronulla and Sydney (273 Sussex Street -20 spaces, 115 Bathurst St- Greenland tower -110 spaces, and 171 spaces at The Ribbon, Darling Harbour).

Example Demonstration 1: Woolloomooloo

The video at the below link is a fully automated box cycle system Hercules have competed in Woolloomooloo. This system highlights the user end and how the driver operates the system.

Woolloomooloo Box Cycle: [Woolloomooloo Fully Automated Box Cycle](#)

Example Demonstration 2: New Zealand

The link below is a fully automated car picker system Hercules have installed in New Zealand providing 167 spaces. This is very similar to what is proposed at 17 Deane Street. Large entry/exit rooms with built in turntables. This system has a shuttle (horizontal movements) and car picker per level ideal for high parking capacity and fast retrieval and storing times.

New Zealand: [Hercules Fully Automated Car Picker](#)

System Timing

The timing analysis for the parking system proposed shows a parking rate of 31 vehicles per hour and a retrieval rate of 36.4 vehicles per hour. As there are proposed to be two lifts in operation, the system will be capable of parking 62 vehicles per hour and retrieving 73 vehicles per hour.

The capacity of the proposed combined basement level 2 and level 3 is 84 spaces. It is therefore unlikely that demand will exceed the parking and retrieval rates of the system. In the unlikely event that the parking rate is exceeded, it is proposed to include two waiting bays in the proposed basement level 1 car park. The waiting bays are allocated as the parallel parking bays, opposite the residential lobby.

Usability

Hercules Parking Systems provide users with an easy to use interface. The system is entirely customisable to suit the needs of the development, management arrangements, type of user etc. The user experience at 17 Deane Street is summarised as follows.

Residential

- The Hercules Parking System assists users in the process of parking their vehicles by means of LCD screens and prompts.
- An LCD screen provides directions to users when parking their vehicle within the lift. The screen will provide directional advice (left, right, forward, back, stop) and will confirm when the vehicle is in the necessary position and the user can exit the vehicle and lift.
- Each resident will be provided a unique swipe card with an allocated parking space attached.
- Once the car is in the lift system and the user has exited the lift, they will swipe their card and select 'in' and the automated parking procedure will begin. The control panel will also be equipped with a touch screen key pad which users can enter their four (4) digit code into should they lose their swipe card.
- To retrieve the vehicle users will swipe their card, or enter their four (4) digit code, and select 'out' from the touch screen.
- CCTV footage of the mechanical stacker will be available which shows the operations of the parking system so users can see where their vehicle is.
- The system rotates the vehicle 180° prior to opening, allowing users to exit the lift in a forwards direction.

Hotel Staff and Guests

- Guests will submit their vehicle registration details either when booking with the hotel prior to arrival or at check in for hotel staff to enter into the parking system.
- The lift for hotel, child care and retail use can be fitted with a vehicle recognition sensor which will identify the vehicle specified by the guests prior to or at their check in.

- Users enter the lift and park their car in a similar manner to that outlined above, with an LCD screen confirming when the vehicle is parked correctly and the user is able to exit the vehicle and lift.
- The user will then walk to the lobby where they will be presented with a ticket or the touch screen will ask where the vehicle is to be parked.
- To retrieve the vehicle users will enter the lobby and present their ticket and the system will recognise where the vehicle is parked. If a ticket is not issued or has been lost the user will enter their personal information (room number, name, address etc.) to retrieve their vehicle.
- CCTV footage of the mechanical stacker will be available which shows the operations of the parking system so users can see where their vehicle is.
- The system rotates the vehicle 180° prior to opening, allowing users to exit the lift in a forwards direction.

Council Assessment

Council's assessment report identifies a number of reasons why the proposed mechanical car parking system is not supported. For completeness these reasons have been addressed below.

"Council does not support the use of the proposed mechanical car parking system. These types of automated systems are not supported based on the following reasons:

1. Potential for adverse impacts arising from slow operation causing vehicle queuing.

The timing analysis for the parking system proposed shows a parking rate of 31 vehicles per hour and a retrieval rate of 36.4 vehicles per hour. As there are proposed to be two lifts in operation, the system will be capable of parking 62 vehicles per hour and retrieving 73 vehicles per hour.

The capacity of the proposed combined basement level 2 and level 3 is 84 spaces. It is therefore unlikely that demand will exceed the parking and retrieval rates of the system. In the unlikely event that the parking rate is exceeded, it is proposed to include two waiting bays in the proposed basement level 1 car park. The waiting bays are allocated as the parallel parking bays, opposite the residential lobby.

2. Vehicle size constraints.

The system is capable of parking Large B99 percentile vehicles which have a length of 5.2 meters and 2.2 meters in width and B85 percentile vehicles with a length of 5 meters and 2.2 meters in width. All parking spaces have a height allowance of 2.3 meters and in combination with a large entry room the system can accommodate all DDA parking spaces.

3. Unreliability in cases of mechanical, hydraulic or electrical failure.

Redundancy has been factored into the design of the proposed automated parking system. While major breakdowns are unlikely, the system has been designed to work around any such event.

As there are two lifts proposed at 17 Deane Street, in the unlikely event that there is a failure with one of the lifts, the system can shut this lift down and the other lift will continue to operate as normal. Further, as the two levels of parking are independent of each other, should there be a failure on one of these levels the other can continue to operate as normal.

There are 3 main components in the parking system, the lift, shuttle and car picker. All moving components have independent control panels which a technician can operate in manual mode or use an override sensor to move vehicles around. The system is also linked online to the Hercules office where they are able to monitor and control the system remotely.

Hercules have provided a maintenance agreement, that involves 24/7 service and support of the parking system. Hercules service the systems regularly with preventive maintenance to reduce breakdowns, replacing wearable items before they fail.

4. *Potential for increased impact on on-street parking resulting from non-use due to user's lack of familiarity and/or confidence in the system.*

The automated car parking system is similar to an automated car wash. The user drives into the entrance room, they are provided feedback via a LED screen which indicates left, right, forward and stop. There are also mirrors installed directly in front of the driver to increase vision.

The user doesn't need to park the car perfectly within the boundaries, as once the user has turned off their vehicle and swiped their parking card the automated system features an auto-centring device. A conveyor is located under the tires of the vehicle, which will automatically centre the vehicle before it parks it into the system.

The user simply swipes their card or enters their 4 digit pin code and proceeds to their apartment as the automated system parks their vehicle. On retrieval the system rotates the vehicle 180 degrees, so the user does not need to reverse out of the system.

Further, included in the Hercules contract is induction for all new users. Hercules will train each user and thoroughly explain step by step on how to operate the system.

5. *Residential visitor parking spaces within a mechanical parking system are unable to be monitored for abuse by residents who may want to park their second or third additional vehicles within the development removing the ability for visitors to the site to park on-site. Additionally residents visitors are unable to identify if visitor parking spaces are available for use.*

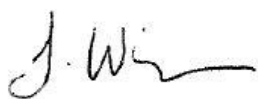
Hercules are able to design the system to meet any protocol required for the building. To ensure users do not abuse visitor parking, Hercules can install a Vehicle Recognition system which is the same system adopted in your local shopping centre car park.

A camera will identify the vehicle registration plate, which can be linked to a resident's apartment. This will document who is using the visitor space and if the space is abused penalties can be applied such as overstaying fines, or a temporary ban.

4. PLANNING PANEL MEETING

We trust this information is of assistance to the Panel and welcome the opportunity to answer any further questions you may have at the public meeting to be scheduled. Please do not hesitate to contact the undersigned on 02 8233 7621 should you require any further information.

Yours sincerely,

A handwritten signature in black ink, appearing to read "J. Wilson".

Samantha Wilson
Associate Director – Planning