

24 February 2011

Our Ref: 27485Let2

Your Ref: ULDA Information Request

Attention: Terry Woodfield

Brookfield
Level 1, Flare Building,
39 Hercules Street, Hamilton,
QLD, 4007

Dear Terry,

RE: INFORMATION REQUEST FOR FURTHER DETAILS NORTHSORE HAMILTON URBAN DEVELOPMENT AREA (UDA) DEVELOPMENT APPLICATION FOR MATERIAL CHANGE OF USE FOR MULTIPLE RESIDENTIAL (168 UNITS) AND SHOP AT 37B HARBOUR ROAD, HAMILTON.

This letter forms TTM's response to the traffic engineering issues noted in the Information Request issued by the ULDA dated 17 February 2012. The issues are addressed as followed:

Traffic, Transport & Servicing

1. *A copy of the Service Management Plan and Waste Management Plan referenced by TTM in the submitted application was requested; however the response only referenced the Waste Management Plan. A copy of the Service Management Plan is required to be submitted and should address the issues raised in the Information Request.*

As intimated in TTM's initial response to the ULDA the reference to the Service Management Plan alludes to the requirements set out in the Portside Wharf Community Management Statement. As a requirement of this statement the driving and parking of vehicles is limited to a maximum of 2 tonnes tare on principal common party.

The Waste Management Plan for Portside has also been amended to sufficiently address refuse collection for Building 2.

It is intended that the servicing requirements for Building 2 in terms of furniture deliveries, etc. will be facilitated via the service vehicle bay positioned between Buildings 2 and 4 as shown in Figure 1 below.

**PLANS AND DOCUMENTS
referred to in the ULDA
APPROVAL dated 25 / 5 / 2012**

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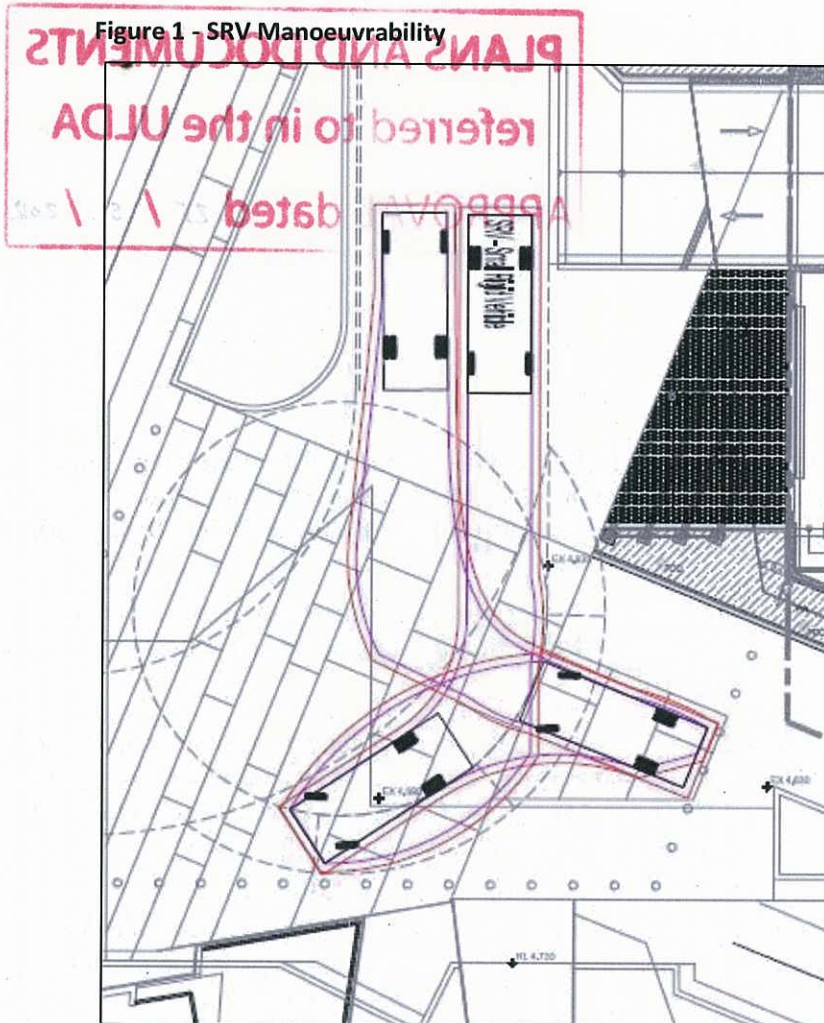
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As shown in Figure 1, SRV's enter the bay in a reverse gear and exit in a forward gear.

2. In relation to TTM's response dated 2 February 2012 to Item 2a of the Information request, the ULDA advises that the strategy "of providing no dedicated visitor parking..." is not supported for the following reasons.
 - a) "...high proportion of tandem parking spaces (which equates to 19% of the overall total car parking provision. Whilst it is acknowledged that the target market for the development is higher end occupants who would expect at least one resident's car parking space per apartment it is considered that not all residents who have been assigned tandem car parking spaces will own two vehicles. In these circumstances it is quite common for these residents with share parking spaces to allow their visitors to park in one of their designated spaces". This statement is inconsistent with the Development Scheme which requires a maximum of 1 space per unit (including visitor

spaces) not 2 spaces whether tandem or not. We also note that of the additional 66 parking spaces proposed 41 are tandem, thereby leaving 25 spaces free to be designated as visitor spaces. As you are aware, the purpose of designated visitor car parks is to allow visitors to ALL apartments within the development, not to just those apartments that have 2 spaces. If it is the case that only tenants with tandem car parking spaces will be able to facilitate visitors to the development, please provide a strategy of how 'other' vehicular visitors to the entire development will be accommodated.

- b) *"The proposed development is in close proximity to existing public transport provisions... a residential development of this nature in this location, is considered ideal opportunity for the ULDA to promote 'car less' communities from a travel demand management". Whilst the ULDA supports this argument as it is in line with the Development Scheme, the proposed Building 2 provides for 228 car parking spaces which exceeds the maximum Development Scheme requirements of 1 space per dwelling including visitor spaces. This statement by TTM does not align with the proposed request for car parking exceeding the Development Scheme requirements.*
- c) *"It is considered that there is scope for dual use of the shared retail car park by visitors to the apartments." The ULDA have asked for a plan identifying the breakup of car parking across the whole Portside development to gain an understanding of how all the basement parking is assigned to each Stage and use. Provide information identifying the location and number of all car parks across the developments, including retail car parking.*

As per the ULDA's request Cottee Park have prepared plans, included in Appendix A, identifying the allocation of car parking across the wider precinct. These plans identify that 1477 car parking spaces will be ultimately provided within the precinct to facilitate the car parking demands associated with the land-uses provided for Buildings 1-8 (it is noted that other sites within the precinct will have separate parking facilities not linked to the common basement associated with Building 1 – 8). Of these, 1007 spaces will be allocated as "private" residential parking and 470 shared "public" spaces to be utilised for retail, commercial and residential visitor parking.

This is consistent with the parking philosophy adopted when the original master plan was prepared and approved. This assertion is reinforced by the 'Development Scheme' which encourages co-location of uses and sharing of car parking spaces to maximise efficiency.

TTM provided supporting information for the Masterplan approval, which indicated that there were opportunities to rationalise the parking supply on the basis of shared and consolidated parking areas. Furthermore the operational characteristics associated with the types of uses either provided or proposed within the precinct allow the parking to be rationalised.

Similar to the methodology adopted to assess the parking supply as part of the original Masterplan approval, TTM's assessment of potential reductions in the parking supply at the precinct are summarised as follows:

Restaurant

It is understood that the restaurants currently attract, and will continue in the future following the release of additional apartments, a proportion of trade from the residential developments within the precinct. Given that 846 apartments will be provided between Buildings 1-8, it is not unreasonable to suggest that up to 25% of the trade generated by the restaurants will be walk in trade.

Furthermore it is considered that the Movenpick café and takeaway is complimentary to other uses provided within the precinct, e.g. the cinema and restaurants, and is likely to draw the majority of its customer base from individuals visiting other uses within the precinct.

Retail

It is considered that the food retail tenancies in particular (i.e. bakery) are ancillary to the residential and commercial components provided and as such will attract a proportion of internal trade. A 10% reduction factor is considered acceptable for the food retail component.

Cinema

It is considered a proportion of patrons at the cinema will link trips at the precinct whereby following a meal at one of the many of the restaurants provided they will visit the cinema. Furthermore it is considered that a proportion of trade generated by the cinema is walk in originating from the residential developments within the precinct. A 10% reduction factor is considered acceptable for the cinema, which is viewed as a conservative estimate.

Gymnasium

It is understood that the gymnasium currently attracts a significant proportion of its members from the existing residential developments within the precinct. It is considered that this will be more pronounced in the future following the release of additional apartments. Consequently it is not unreasonable to suggest that the customer base at the gymnasium will be entirely drawn from the residential developments within the wider site.

Function Centre

It is understood that the function centre is primarily utilised on weekends during the evening when the majority of retail uses with the exception of the supermarket are closed.

Apart from the potential parking reduction relative to the characteristics of each individual land-use within the precinct, there is also potential for a reduction relative to the different peak periods associated with each land-use. That is, several of the uses will generate peak parking demands during the day, whilst other uses will peak during the evening. Tables 1, 2 and 3 below identify the parking reductions as described above and the peak factor associated with each use.

The peak parking demand is expected to occur on a Saturday at lunchtime due to the retail, restaurants and residential visitor parking demands. It should be noted that this does not

reflect the findings of the practical peak parking demand exercise undertaken as part of the Masterplan approval, which identified that the peak parking demand would occur during the day as a result of the retail and office components.

The peak demand for the proposed uses for the wider precinct (inclusive of Buildings 1-8), excluding the resident parking requirement are summarised in the tables below.

It should be noted that the residential visitor parking requirements have been based on the results of extensive surveys undertaken by TTM at high density residential buildings around the city fringe.

The split in terms of GFA for the retail and commercial land-uses has been estimated based on information provided by Brookfield.

Table 1 - Practical Peak Parking Demand (Buildings 1-8) – Saturday Lunch

Use	Area / Qty	ULDA – Parking Rate	ULDA Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	846 apt	0.12 spaces per unit	101 spaces	101 spaces	1.0	101 spaces
Restaurants	4074m ²	1 space per 30m ²	136 spaces	102 spaces	1.0	102 spaces
Food Retail	1984m ²	1 space per 30m ²	66 spaces	60 spaces	1.0	60 spaces
Non-Food Retail	1085m ²	1 space per 30m ²	36 spaces	36 spaces	1.0	36 spaces
Office	8282m ²	1 space per 50m ²	165 spaces	165 spaces	0.1	17 space
Cinema	3194m ²	1 space per 30m ²	106 spaces	95 spaces	0.5	48 spaces
Gym	544m ²	1 space per 30m ²	18 spaces	N/A	0.0	0 spaces
Function Centre	834m ²	1 space per 30m ²	28 spaces	N/A	0.0	0 spaces
Sub Total – Public Parking						364 spaces
Resident						981 spaces
Total						1346 spaces

Table 2 - Practical Peak Parking Demand (Buildings 1-8) – Weekday Lunch

Use	Area / Qty	ULDA – Parking Rate	BCC Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	845 apt	0.12 spaces per unit	101 spaces	101 spaces	0.1	10 spaces
Restaurants	4074m ²	1 space per 30m ²	136 spaces	102 spaces	1.0	102 spaces
Food Retail	1984m ²	1 space per 30m ²	66 spaces	60 spaces	0.3	18 spaces
Non-Food Retail	1085m ²	1 space per 30m ²	36 spaces	36 spaces	0.3	11 spaces
Office	8282m ²	1 space per 50m ²	165 spaces	165 spaces	1.0	165 spaces
Cinema	3194m ²	1 space per 30m ²	106 spaces	95 spaces	0.5	48 spaces
Gym	544m ²	1 space per 30m ²	18 spaces	N/A	0.0	0 spaces
Function Centre	834m ²	1 space per 30m ²	28 spaces	N/A	0.0	0 spaces
Sub Total – Public Parking						354 spaces
Resident						981 spaces
Total						1335 spaces

Table 3 - Practical Peak Parking Demand (Buildings 1-8) – Weekday Afternoon (16:00-17:00, i.e. traditional retail peak)

Use	Area / Qty	ULDA – Parking Rate	BCC Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	845 apt	0.12 spaces per unit	101 spaces	101 spaces	0.1	10 spaces
Restaurants	4074m ²	1 space per 30m ²	136 spaces	102 spaces	0.3	31 spaces
Food Retail	1984m ²	1 space per 30m ²	66 spaces	60 spaces	1.0	60 spaces
Non-Food Retail	1085m ²	1 space per 30m ²	36 spaces	36 spaces	1.0	36 spaces
Office	8282m ²	1 space per 50m ²	165 spaces	165 spaces	1.0	165 spaces
Cinema	3194m ²	1 space per 30m ²	106 spaces	95 spaces	0.5	48 spaces
Gym	544m ²	1 space per 30m ²	18 spaces	N/A	0.0	0 spaces
Function Centre	834m ²	1 space per 30m ²	28 spaces	N/A	0.0	0 spaces
Sub Total – Public Parking						350 spaces
Resident						981 spaces
Total						1331spaces

As result of the above it is considered that the parking provision of 1477 spaces across the precinct can facilitate the parking demands associated with the various existing and proposed land-uses between Buildings 1-8. Furthermore it has been demonstrated through the practical peak parking demand exercise that residential visitor parking can be facilitated at the shared parking areas.

For comparative purposes, the parking analysis prepared for the original master plan approval is included in Appendix B, although it should be noted that BCC parking rates different to the ULDA rates, which are considered more representative of the practical parking demands for this precinct.

3. *In relation to Item 2b of the Information Request, provide confirmation that the 1 proposed PWD space at space number 34 is in accordance with Australian Standards for disabled access. This space will need to be illustrated on the proposal plans and constructed as such.*

As noted in the initial response to the ULDA whilst no PWD spaces are currently shown on the development plans it considered that should the need arise, 1 PWD space can be provided adjacent to the lift lobby within the basement car park.

Notwithstanding this, it is considered that the number of PWD spaces within the shared parking areas is sufficient to cater for the various existing and proposed land-uses within the precinct. Inspection of the plans prepared by Cottey Parker included in Appendix A confirms that 16 spaces of the 470 spaces provided within the shared parking areas are allocated as PWD, which represents 3.4% of the total car parking supply within these areas.

4. *In regards to Issue 2c of the Information Request, the response provided by TTM which states that AS2890.3 does not specify bike parking rates, therefore the rates will be in accordance with AustRoads Part 14 – Bicycles is incorrect. Section 3.8 – End of Trip Facilities of the Northshore Hamilton Urban Development Area Development Scheme specifically sets out the requirement for the number of bicycle facilities for apartment developments. These rates are:*

- a) *Residents to have 1 secure space/ dwelling and;*
- b) *Visitors to have 1 secure space / 400m2.*

The reference to AS2890.3 within this section of the Development Scheme relates to “the layout, design and security of bicycle parking facilities”, as defined in section 1.1 – Scope of Australian Standard AS2890.3-1993).

As such, provide amended plans that illustrate bicycle parking facilities in accordance with rates specified in the Development Scheme, being 1 space /unit (currently 168 spaces) and 1 space/ 400m2 of GFA being in the order of 35 spaces. Also ensure that the layout, design and security of the facilities are in accordance with the AS2890.3.

Inspection of the updated development plans accompanying the response to the ULDA indicates that 168 bicycles can be stored within storage cages provided within the basement car park.

It is proposed that 35 bicycle spaces for visitors will be provided within the public realm.

5. *In regards to Issue 3 of the Information Request, the response provided by TTM only refers to the potential vehicle/ pedestrian conflict which will be addressed through bollards. The issue of concern however was the impacts the whole of Portside service/loading bay outside Building 4 will have on the Building 2 drop off zone and pedestrian entry along with the pedestrian spine. We would expect the response to be driven by TTM rather than TTM commenting on Lat 27 plans. Please provide amended analysis which addresses the impact of the potential conflict.*

Given the standard of apartments in this precinct, the turnover of tenants is expected to be minimal, hence the demand for furniture deliveries to Building 2 is expected to be infrequent. It is TTM's view that the estimated demand of 1 furniture truck per week is a reasonable expectation for Building 2.

The Portside Wharf Community Management Statement also provides the ability for the timing of tenants moving in / out of an apartment to be scheduled in a manner that does not conflict with peak traffic or pedestrian movements adjacent to the proposed loading area.

Given the restriction of vehicle size, the infrequency of deliveries and the ability to schedule the deliveries outside of peak periods, it is concluded that the proposed service vehicle area between Buildings 2 and 4 will operate in a safe and efficient manner without impacting on the vehicular and pedestrian safety and amenity within the surrounding public realm.

The service area, as shown in Figure 1 above, has been designed to allow a Small Rigid Vehicle (2t) to park clear of the internal roadway whilst also allowing the passenger set down facility to continue to operate.

If you have any queries with regards to this matter please feel free to contact me on (07) 3327 9500.

Yours faithfully,



Andrew Riddles

Senior Engineer

Appendix A

PORTSIDE WEST CAR PARK MASTERPLAN

PORTSIDE WEST CARPARK MASTERPLAN SCHEDULE

PORTSIDE WEST CARPARK MASTERPLAN

LEVEL	Building 1	Building 2	Building 3	Building 4	Building 5	Building 6	Building 8	Share	PWD	TOTAL
BASMENT 02	78									78
BASMENT 01	52	228	17	19	68					687
GROUND LEVEL	0	0	0	0	0	0	115	303	9	687
LEVEL 1	0	0	0	0	0	0	0	138	6	144
LEVEL 2	0	0	0	0	0	0	0	0	0	124
LEVEL 3	0	0	0	0	0	0	0	0	0	58
TOTAL	130	228	17	188	124	205	115	441	15	1477

NOTE:

- CARPARK NUMBERS IN BUILDINGS 1, 3, 8 AND SHARE CARPARK, FROM DRAWINGS:
BS SD 1001 A, SD 1002A, SD 1003 D, SD 1004 D.
ARCHITECT HASSELL (17/11/05)
- CARPARK NUMBERS IN BUILDING 2, FROM DRAWING:
SK 03.00
ARCHITECT NOEL ROBINSON ARCHITECTS (13/12/11)



Building	Area (sqm)	Area (sqft)	Area (sqm)	Area (sqft)
Building 1	130	1407	130	1407
Building 2	228	2457	228	2457
Building 3	17	182	17	182
Building 4	19	204	19	204
Building 5	68	731	68	731
Building 6	205	2200	205	2200
Building 8	115	1240	115	1240
Share	441	4720	441	4720
PWD	15	161	15	161
TOTAL	1477	15732	1477	15732

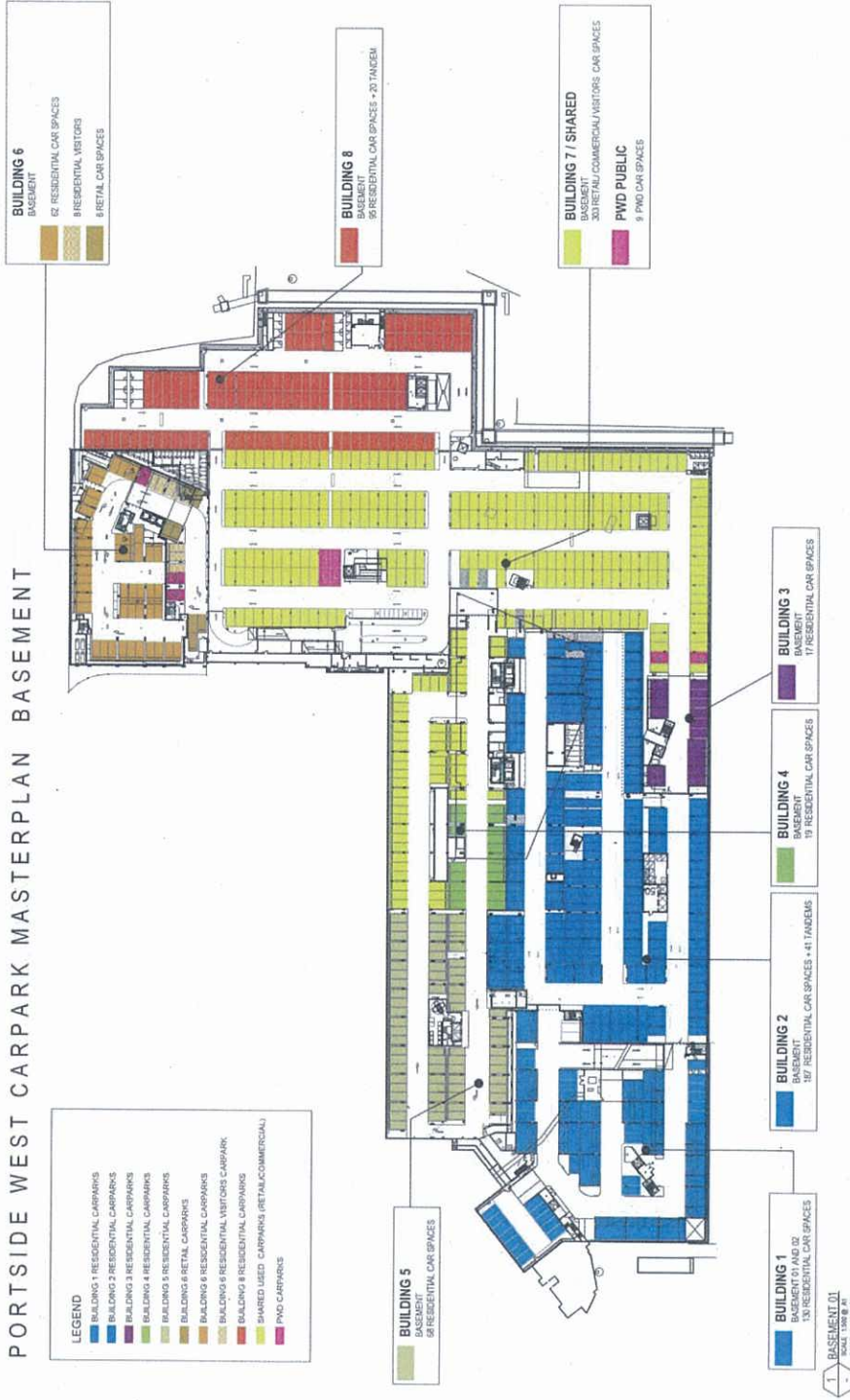
Client: Brookfield Residential Properties
Project Name and Location: PORTSIDE WEST CARPARK MASTERPLAN - HERCULES ST. BRISBANE
Drawing Title: PORTSIDE WEST CARPARK SCHEDULE
Drawing No: SD 1005

Issue	Issue No.	Issue Date	Issue Description
Issue	1	14/12/11	Initial Issue
Issue	2	14/12/11	Revised Issue
Issue	3	14/12/11	Revised Issue
Issue	4	14/12/11	Revised Issue
Issue	5	14/12/11	Revised Issue
Issue	6	14/12/11	Revised Issue
Issue	7	14/12/11	Revised Issue
Issue	8	14/12/11	Revised Issue
Issue	9	14/12/11	Revised Issue
Issue	10	14/12/11	Revised Issue

Author: Peter Robinson
Date: 14/12/11
Project Name: PORTSIDE WEST CARPARK MASTERPLAN
Drawing Title: PORTSIDE WEST CARPARK SCHEDULE
Drawing No: SD 1005
Issue: 1

COTTEE PARKER

PORTSIDE WEST CARPARK MASTERPLAN BASEMENT



- LEGEND**
- BUILDING 1 RESIDENTIAL CARPARKS
 - BUILDING 2 RESIDENTIAL CARPARKS
 - BUILDING 3 RESIDENTIAL CARPARKS
 - BUILDING 4 RESIDENTIAL CARPARKS
 - BUILDING 5 RESIDENTIAL CARPARKS
 - BUILDING 6 RETAIL CARPARKS
 - BUILDING 7 RESIDENTIAL CARPARKS
 - BUILDING 8 RESIDENTIAL CARPARKS
 - BUILDING 9 RESIDENTIAL VISITORS CARPARK
 - BUILDING 10 RESIDENTIAL CARPARKS
 - SHARED USED CARPARKS (RETAIL/COMMERCIAL)
 - PWD CARPARKS

- BUILDING 6**
BASEMENT
- 62 RESIDENTIAL CAR SPACES
 - 6 RESIDENTIAL VISITORS
 - 6 RETAIL CAR SPACES

- BUILDING 8**
BASEMENT
- 10 RESIDENTIAL CAR SPACES - 20 TANDEM

- BUILDING 7 / SHARED**
BASEMENT
- 200 RETAIL/COMMERCIAL VISITORS CAR SPACES
 - PWD PUBLIC
 - 8 PWD CAR SPACES

- BUILDING 3**
BASEMENT
- 17 RESIDENTIAL CAR SPACES

- BUILDING 4**
BASEMENT
- 19 RESIDENTIAL CAR SPACES

- BUILDING 2**
BASEMENT
- 187 RESIDENTIAL CAR SPACES - 41 TANDEM

- BUILDING 1**
BASEMENT 01 AND 02
- 130 RESIDENTIAL CAR SPACES

BASEMENT 01
SCALE: 1:10000 A3

Client: BROOKFIELD MULTIFLEX
Project Name and Location: PORTSIDE WEST CARPARK MASTERPLAN - RETAIL/ST. BRIDGEM
Drawing Title: PORTSIDE WEST SITE PLAN BASEMENT



Schematic
PORTSIDE WEST CARPARK MASTERPLAN
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Client: Project Architect: PwJ Ltd	Scale: 1:10000 A3
Project Name and Location: PORTSIDE WEST CARPARK MASTERPLAN - RETAIL/ST. BRIDGEM	Drawn: SD 1001
Drawing Title: PORTSIDE WEST SITE PLAN BASEMENT	Checked: SD 1001
Author: PwJ Ltd	Approved: SD 1001
Date: 10/10/2018	Version: 1.0



Appendix B

PORTSIDE MASTERPLAN APPROVAL PARKING ANALYSIS

Table 8.2 Practical Peak Parking Demand (Total Portside Master Plan) - Saturday Lunch

Use	Area / Qty	BCC Parking Rate –	BCC Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	738 apt	0.25 space per unit	185 spaces	185 spaces	1.0	185 spaces
Hotel	200 rooms	1 space / room	200 spaces	150 spaces	0.25	36 spaces
Retail	5286m ²	3 spaces / 50m ²	317 spaces	254 spaces	0.75	191 spaces
Restaurant	4223m ²	1 space 8m ² if < 400m ² 30 spaces + 1 space / 20m ² if > 400m ²	367 spaces	276 spaces	1.0	276 spaces
Office	15,438m ²	1 space / 30m ²	515 spaces	309 spaces	0.1	31 spaces
Cinema	2130m ² / 780 seats	1 space / 10m ²	213 spaces	Na	0.1 / seat	78 spaces
Gym	514m ²	1 space / 10m ²	52 spaces	Na	0 spaces	0
Function Centre	758m ²	1 space / 15m ²	51 spaces	Na	0	0
Sub Total – Public Parking						797 spaces
Resident						1089 spaces
Total						1886 spaces

Table 8.3 Practical Peak Parking Demand (Total Portside Master Plan) - Weekday Lunch

Use	Area / Qty	BCC Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	738 apt	185 spaces	185 spaces	0.1	19 spaces
Hotel	200 rooms	200 spaces	150 spaces	0.25	36 spaces
Retail	5286m ²	317 spaces	254 spaces	0.3	76 spaces
Restaurant	4223m ²	367 spaces	276 spaces	1.0	276 spaces
Office	15,438m ²	515 spaces	309 spaces	1.0	309 spaces
Cinema	2130m ² / 780 seats	213 spaces	Na	0.1 / seat	78 spaces
Gym	514m ²	52 spaces	Na	0 spaces	0
Function Centre	758m ²	51 spaces	Na	0	0
Sub Total – Public Parking					794 spaces
Resident					1089 spaces
Total					1883 spaces

Table 8.4 Practical Peak Parking Demand (Total Portside Master Plan) - Weekday Afternoon (16:00-17:30 i.e. traditional retail peak)

Use	Area / Qty	BCC Req.	Reduced Req.	Peak Factor	Peak Parking Demand
Residential Visitor	738 apt	185 spaces	185 spaces	0.1	19 spaces
Hotel	200 rooms	200 spaces	150 spaces	0.25	36 spaces
Retail	5286m ²	317 spaces	254 spaces	1.0	254 spaces
Restaurant	4223m ²	367 spaces	276 spaces	0.3	83 spaces
Office	15,438m ²	515 spaces	309 spaces	1.0	309 spaces
Cinema	2130m ² / 780 seats	213 spaces	Na	0.1 / seat	78 spaces
Gym	514m ²	52 spaces	Na	0 spaces	0
Function Centre	758m ²	51 spaces	Na	0	0
Sub Total – Public Parking					779 spaces
Resident					1089 spaces
Total					1868 spaces

It is therefore recommended that approximately 1890 parking spaces be adopted as the parking provision for the overall Portside Wharf development.