ISSUES WITH A HALF SIZE CAR PARK UNDER MANLY OVAL

I have considered the concept of a 400-space car park across two levels under Manly Oval, compared with the two-level, 760-space structure previously proposed.

I understand the latest proposal would see the car park located under the eastern half of the oval only and would be accessed by an entrance ramp in Raglan Street to collect cars heading west on Raglan St, and by an entrance ramp in Sydney Road, designed to collect cars travelling downhill (eastwards). There would also be a pair of exit ramps in Sydney Rd to allow cars to exit either uphill towards Fairlight shops, or eastwards towards Belgrave St.

I also understand this proposed car park would be in addition to a re-vamped Whistler St car park, which, instead of being sold, would be refurbished to approximately its current capacity.

COST ISSUES

There is no reason to expect that the construction cost of the car park <u>structure</u> itself would be any different, on a per space basis, than the figure advised by Rawlinson of \$52,800 per space (+/-\$2,000).¹ Total \$21M.

Unlike the 760-space proposal, where the western side would likely have been up against sandstone and required no retaining wall on that side, the new proposal will require the entire perimeter of the car park to be retained with a diaphragm wall or "cutter soil wall"; the previous estimate of costs for this wall was \$2M; the latest proposal, with its longer length of wall, could be \$3M.

The cost of the entry and exit ramps in Sydney Road will be unchanged from the earlier proposal (estimated at \$2M), but would need to take account of the proposed Raglan St ramp, admittedly much smaller than the Sydney Rd ramps, but, say, an extra \$0.5M.

The cost of 2 passenger lifts will need to be considered - allow \$200,000².

The stormwater drain across the eastern half of Manly Oval will still need to be relocated, as will the 33kV Ausgrid electricity feeder across Sydney Rd, the Telstra communications service also in Sydney Rd and a 150mm vitreous clay sewer along the full length of the west-bound exit ramp in Sydney Rd. The cost of these service relocations has been estimated by an experienced service relocations expert at about \$1M. I note there has been recent drainage works in Raglan St; I do not know the extent to which this would be impacted by the proposed Raglan St ramp, so there is some cost risk there.

Manly Oval and cricket pitch will also require replacement. The estimated extra-over cost, over and above the allowance in Rawlinson for simple landscaping to the roof, is \$0.3M, although this could be much higher with the use of "drop-in" wickets.

Total construction costs, as detailed above, could be about \$28M.

On top of that figure needs to be added allowances for Professional Fees and Contingency.

¹ Rawlinson 2013, Section 10.1.2.2

² Rawlinson 2011, p. 632

Rawlinson suggests a total allowance for Professional Fees, covering architectural, structural engineering, electrical engineering, mechanical and lift engineering, hydraulic engineering and quantity surveying, of between 10% and 11.5%³. This is equivalent to about \$3M.

Rawlinson's base cost includes an allowance of 2.5% for contingency. Council's previous estimate (W.T. Partnership) for the 760-space car park considered a figure of 6%, which KPMG advised was at the lower end of the typical range of 5% to 10%. Adopting the 6% figure would add a further 3.5% on top of the allowance already in the Rawlinson figures (= 6% - 2.5% already included), or \$1M

The following table summarises:

Base cost	\$21,000,000
Retaining wall	\$ 3,000,000
Ramps	\$ 2,500,000
Lifts	\$ 200,000
Services diversion	\$ 1,000,000
Oval reinstatement	\$ 300,000
Professional fees	\$ 3,000,000
Contingency	\$ 1,000,000
TOTAL	\$32,000,000

This is equivalent to \$80,000 per car space, compared to my earlier estimate of about \$66,000 per space for the original 760-space car park, a per-car increase of 20%.

Of course, this estimate excludes any costs associated with supplying temporary facilities at other grounds for the rugby club while the oval is out of commission.

REVENUE ISSUES

With the Whistler St car park to remain in an improved condition, it is highly likely that for most of the time, the Whistler St car park would be used preferentially to the oval car park, due to its closer proximity to The Corso and the shops and cafes in the CBD generally.

While a car park under the oval would be used on major event days, such as the Food and Wine Festival, or the Manly Jazz festival, and probably when the Manly Rugby Club is playing a home game (only about 10 times per year), this usage is quite incapable of establishing any form of regular patronage at all. As a result, revenue, rather than being a pro-rata of the anticipated revenue from a 760-space oval car park with <u>no</u> competing Whistler St car park, would more likely be very close to Nil.

A cost-benefit analysis would, I suspect, be most unfavourable.

Further, with any regular usage of the proposed oval car park not foreseeable for many years to come, and most probably totally dependent on the complete development and usage of all available property in the CBD, an NPV assessment would also be very telling.

And lastly, without any cash deriving from the sale of Whistler St, the entire economic case would appear to collapse. Further work required by those who understand these things.

QUALITATIVE

³ Rawlinson 2011, p827 - parking station, multi storey.

The same qualitative issues that applied to the original proposal will be just as relevant with this latest proposal: the unsightly ramps in Sydney Rd, the loss of parking spaces in Sydney Rd, the inability for pedestrians to cross Sydney Rd and the loss of the bus stops between Belgrave St and James Street, will be exacerbated by the presence of the entrance ramp in the extremely narrow Raglan St.

Add to these concerns the problem of constructing a 1st class sporting field half on top of an underground structure. The differing ground conditions under the eastern half of the oval compared to the conditions under the western half of the oval, due to different drainage conditions, soil types and soil depth will lead to quite different playing surfaces. A classic example of this phenomenon is to be found within the grounds of Sydney University, at St Andrews oval, which is half underlain by the Bosch car park, and which markedly different grass characteristics on one side compared with the other.

I trust this is of some assistance.

David Wunder Civil Engineer.