

Query No.	Discipline	Comment or Issue	Response	Response by
1	Geometry	Ramp design regarding speed control - with the level difference between vehicle path and top of raised tables only 50mm, ramps either side of table need to be designed so they are effective at reducing speed since a gentle gradient will not be effective at keeping speeds down. Recommendation to design the ramps so that vehicles are forced to slow down to 30km/h or less.	Review gradient of ramps and decide response to audit Sussex Street/Buckle Street East The ramps will be a combination of 100mm x 1500mm (1/15 grade) at the entry point to the shared surface environment and 50mm x 1500mm (1/30 grade) at the end. These combine with the surface treatment, tight radius alignment and street furniture to encourage low speed. The link is intended to provide a ceremonial route from Government House to the National War Memorial and to provide occasional daily use addressing one of the concerns over the use of Buckle Street east in the CPTED report. No change Buckle Street West The operation of this section of Buckle Street is yet to be determined, in that it may be restricted as a through route during peak hours. Even when open this will be distinguishable as a low speed environment through its narrow width, surface treatments and general environment. The ramps are typically 50mm x 1000mm (1/20 grade). No change Tory Street This will reconnect Tory and Tasman streets and afford access through the Park. The road is narrowed, raised and has different surface textures through the Park to encourage lower speeds. As detailed on the Park layout the ramps are 50mm x 2300mm (1/46 grade) at the entry points and 50mm x 1200mm (1/24grade) each side of the raised crossing point. Design entry ramps to 50mm x 1200mm (1/24 grade) at the entries and 50mm x 800mm (1/16 grade) adjacent the crossing. My suggestions in red, vertically no change but we narrow the widths to give the grade.	Dave and Ryan
2	Urban Design	Sussex St to Buckle St shared space - Option 1 safety concerns are bollards present a hazard to cyclists, street light being struck by vehicles Option 2 safety concerns are entering vehicles may track close to the inside of the corner and put pedestrians and cyclists at risk, after negotiating the corner drivers may enter the wider pedestrian zone rather than the designated vehicle area	Review all comments on shared space and decide course of action	WALA
3	Urban Design	Way finding signage for National War Memorial a. Provide way finding signage for motorists and other on Tory St and Tasman St to find their way via the Buckle St frontage road to the car parking at the rear of the war memorial b. Provide road marking (eg arrows) and additional signage to clearly direct motorists to turn left from the war memorial exit along Buckle Street frontage road to Taranaki St	WALA are producing way finding signage within Park. Ryan is producing a wider way finding signage plan for traffic signs as part of the Underpass design. Ryan is producing road marking and a one way sign as requested by b. in the Park 95% design package of signs and markings	WALA and Ryan
4	Traffic Services	No entry signage re one-way streets a. Install gated no entry signs on the one-way street exits at Tory and Tasman St b. Consider installing a No Entry sign on the frontage road as one of the measures to stop any vehicle that is exiting the car parking behind the war memorial from proceeding the wrong way along the frontage road	a. The 95% design package of signs Ryan is producing includes for these b. Not considered necessary, the road marking and one way sign is seen as sufficient, low speed environment	Ryan

5	Traffic Services	Speed limit signage for Buckle Street frontage road Speed limit signage is proposed for the Tory-Tasman link (30kph), Martin Square (20kph) and Buckle Street frontage road at Sussex St (20kph). Back to back signage will also be required at the Tasman St access to the frontage road to cover different speed limits	Typical RG-1 speed limit signage has been removed from the plans except for Martin Sq., and even this is debatable as to its requirement. It is envisaged WCC would provide speed limit signage appropriate to their wider desires for the Tory-Tasman St link. Design speed signage is provided below all speed hump signs.	Ryan
6	Geometry	No detail or protection has been shown for the end of the retaining wall on the curve from Sussex St to the Underpass	<p>Stage 2 & Stage 3 Slip Road As the retaining wall and barrier which extends from the end of the tunnel (against traffic flow) the wall folds back into the embankment slightly. This allows the barrier to continue this alignment curving back further into the earth embankment both vertically and horizontally. In terms of the slip road this is on the inside of a low speed curve. With respect to vehicles travelling from Sussex Street along the Buckle Street link these will be restricted in size (light vehicles only) within allow speed traffic calmed environment.</p> <p>Stage 3 - SH1 Over the bridge The concrete F barrier extends from the bridge parapets and on the south side terminates at approx. ch 506m just before the slip lane entry from Sussex Street. The end point has been determined to protect an errant vehicle from SH1 crossing the slip lane and hitting the southern slip lane barrier at the terminal point.</p> <p>The above arrangements have been developed in consultation with James Hughes, Mike Pilgrim and Roger Burra of NZTA.</p>	Dave
7	Urban Design	The pedestrian crossing point on Sussex St as shown on drawing MP-11-90112 is to have garden beds either side of the crossing, on the vehicular approach, the garden bed to the south of the crossing should be ground cover only so that pedestrians can see and clearly be seen by approaching drivers	WALA to update planting schedule to reflect low ground cover planting only for southern garden bed.	Nicole
8	Traffic Services	Interim pedestrian crossing at Sussex St/Buckle St It is understood there will be no access to the Buckle St frontage road from Sussex St until the Basin Reserve Bridge is completed. It is assumed pedestrians and cyclists will still be able to use the path between Tasman St and Sussex St. Any pedestrians or cyclists using this path and then wanting to cross Sussex St will be at significant risk if there is no controlled crossing or alternatively they are physically prevented from crossing a. For the interim period between completion of the Memorial Park and the Basin Bridge, provide a facility for the safe crossing of Sussex St at Buckle St b. Alternatively prevent pedestrians crossing Sussex St at Buckle St and install signage to direct pedestrians/cyclists to use the park to the north of the Underpass between Tasman and Sussex St and thus avoid needing to cross Sussex St	Provision has been made for recommendation a. to be undertaken within the Basin Bridge works.	Ryan
9	Traffic Services	Taranaki St/Buckle St frontage road intersection design a. Ensure consistency between sets of drawings for engineering and landscaping works b. Design the kerb of the Buckle St frontage road at Taranaki St to physically direct vehicles to the left in Taranaki St c. Install RG-12 turn left signs on Buckle St frontage road at Taranaki St d. Review the kerb radius at the Taranaki St/Buckle St underpass corner to ensure that all vehicles turning left from the Buckle St underpass can do so comfortably without the risk of trailing wheels mounting kerb e. Locate the raised table on the Buckle St frontage road so that a vehicle stopped at the limit line will not block the pedestrian path across the raised table	a. As engineering and landscape drawings have been developed at different times, engineering drawings on which previous audits have been based may now be outdated. Final plans across all disciplines will reflect consistent designs b. The central raised island on Taranaki St will be extended to prevent vehicles accessing Arthur St from the frontage road c. As above, an RG-12 sign will be shown on the central raised island on Taranaki St d. Ryan to review the kerb radius with vehicle tracking e. Ryan to review location of raised table	WALA and Ryan

10	Traffic Services	<p>Tactile Ground Surface Indicators</p> <p>a. Ensure warning indicators at all pedestrian crossing points are correctly aligned with the crossing - i.e. crossing Buckle St underpass leg of intersection and raised table on Buckle St frontage road on the east side of Tasman St</p> <p>b. Install directional indicators for the signalised crossings at the north-east corner of Taranaki St/Buckle St</p>	Ryan to review and edit drawings where required	WALA and Ryan
11	Traffic Services	<p>Shared Path signage at Buckle St / Taranaki St</p> <p>Shared path signage should be on the south side of the frontage road at the Taranaki St intersection</p>	The 95% design package of signs Ryan is producing shows this	Ryan
12	Street Lighting	<p>Street Lighting at ramps and crossing points</p> <p>The lighting drawings generally show that lighting is to be applied to the critical areas where there can be pedestrian/cyclist and vehicle conflict, though no information has been provided on the level of lighting that will be achieved.</p> <p>However there are three areas where lighting does not appear to be provided or sufficient to provide appropriate illumination:</p> <ol style="list-style-type: none"> 1. The ramps at either end of the Tory-Tasman link shared zone where the initial ramps are to be located 2. The raised table/pedestrian crossing point on the east side of Tory St at the entrance to the two-way access to the relocated crèche building 3. The raised table on the Buckle St frontage road on the east side of Tasman St <p>The arrangement of the lights along the Tory-Tasman shared space link does not appear to be such that uniform illumination will be provided along this critical shared space</p>	<p>The lighting is designed to Category V3 and this design exceeds the required LTPs.</p> <p>Cd/m² 3.65 => 0.75</p> <p>Longitudinal uniformity 0.78 => 0.3</p> <p>Overall uniformity 0.68 => 0.33</p> <p>Point Horizontal illuminance required over the tables is 7.5 lux. The Iso lux lines show that we are exceeding this LTP, the illuminance over the table is 10 lux.</p> <p>The lighting is adequate for the new areas however the assimilation of new and existing lighting especially at North and South of Troy St has not been fully designed for. If those area are outside our scope of work then we don't need to mention anything further otherwise we may need to extend new lighting (HPS) to cover those sections. Confirmation is needed whether or not a further design needs to be carried out for these sections</p>	Brian Goldstein
13	Traffic Services	<p>Vehicle turn-around at relocated crèche building</p> <p>a. Provide sufficient area for delivery and rubbish collection vehicles to turn around in the area adjacent to the relocated crèche building</p> <p>b. Appropriately sign the turnaround area to stop vehicles parking in the area and restricting the ability of vehicles to be able to turn around</p>	Ryan to review tracking and advise WALA. Signs are not considered necessary	Ryan Dunn
14	Urban Design	<p>Parallel parking on two-way access</p> <p>The lengths of parallel parking on the two-way access from Tory St to the relocated crèche scale at 10m, 14m, 12m and 17m west to east. For vehicles to safely manoeuvre into parallel parking spaces a minimum of 6m per parking space should be allowed.</p>	Individual spaces should measure 6.1m length as per WCC standards. WALA to update design to incorporate desired number of spaces.	Nicole