

West Keira Retail Development

Section 75w Project Modification Traffic & Transport Report

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Prepared for

Hansen Yuncken Pty Ltd

Prepared by

AECOM Australia Pty Ltd

Level 11, 44 Market Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia

T +61 2 8295 3600 F +61 2 9262 5060 www.aecom.com

ABN 20 093 846 925

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Quality Information

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1.0 Introduction

AECOM has been appointed by Hansen and Yuncken to prepare a Traffic Report to address the traffic and transport impacts relating to the proposed modifications to the consent for Wollongong Central redevelopment.

The Wollongong Central redevelopment comprises two sites – West Keira and Wollongong Central (with the latter formerly referred to as “Crown Central”). The approved scheme involves the erection on the West Keira site of a new six-level retail centre including a single-level basement car park, three levels of retail use, two levels of above-ground parking, and the interconnection of this new centre via a tunnel and a bridge under/over Keira Street to Wollongong Central, which itself will be the subject of alterations and additions.

Approval of the Project was granted on 28 April 2008 by the then Minister for Planning to the concept plan and project application for the Wollongong Central redevelopment, as follows:-

- Concept Plan for Wollongong Central redevelopment (MP 06_0335); and
- Project Application for Wollongong Central redevelopment (MP06_0209).

Since the approval of the Project Application, and two modifications that followed, the proponent (GPT) has undertaken a design review with input being provided by urban design firm Civitas.

This is a third modification application (“Modification No. 3”) to modify the project approval only, seeking approval to refine the detailed design of the development. Various amendments are proposed for the West Keira building which will enhance the appearance of the building and aid in improving internal visitor circulation. Improvements will also be made to the Wollongong Central development to tie in with the changes to the West Keira building.

In brief, the proposed modifications relate to:-

- improved pedestrian access via a through-site link in a north-south direction;
- breaking up the internal retail levels into more legible north-south colonnades;
- realignment of the approved pedestrian bridge to minimise its appearance;
- improved ground floor streetscape and activation through vehicle access amendments, façade interest and inviting entry features;
- improved aboveground streetscape and activation through playful façade elements and activity, particularly from the repositioned first floor food court.
- redistribution of internal retail spaces;
- improved customer and service vehicle access from Richardson Lane.

The proposed alterations will primarily elevate the importance of pedestrian movement, enjoyment and activation all around the building. The urban design improvements provide more legibility and fine grain features to the proposal.

This modification application does not alter the essence of the approved Project. It will remain a new six-level retail centre on the West Keira site, including single-level basement car, three levels of retail space and two levels of above-ground car parking and interconnections with Wollongong Central via a tunnel and bridge across Keira Street, with alterations and additions to Wollongong Central itself. The approved Project will continue to occupy the same land after being modified in accordance with this application.

The main purpose of this report is to review and identify the likely traffic impacts associated with the proposed changes to the approved development. Where traffic impacts are identified, appropriate mitigation measures will be recommended.

2.0 Proposed Modifications

The following project modifications are proposed in relation to the approved Wollongong Central Redevelopment that may instigate potential traffic impacts:

- Changes to floor space at the retail centre proposed on the West Keira site as shown in **Table 2-1**;
- Proposed reduction of car parking spaces in relation to the reduction of floor areas;
- Proposed changes to the access to the basement level car park;
- Proposed changes to the access and internal layout of the loading dock;
- No requirement for the widening of the Keira Street pedestrian crossing outside Wollongong Central;
- Proposed additional pedestrian access to Market Street via the eastern side of Richardson Lane.

Table 2-1: Modifications to Gross Floor Areas (GFA)

	Gross Floor Area – GFA (m ²)	Gross Leasable Floor Area – GLFA (m ²)
2007 Transport Assessment	28,837	21,713
Modification No. 3	24,479	18,629
Difference	-4,358	-3,084

The impacts of the above changes will be discussed in detail in the following chapter of the report.

3.0 Impact Assessment

3.1 Impacts on Car Parking

3.1.1 Parking Spaces

The proposed reduction in floor areas at West Keira will reduce the requirements for car parking space based on the parking rates (1 space per 28m² of GLFA) approved in the Transport Assessment prepared in 2007. This demand based rate was derived from parking surveys undertaken at Crown Central and Gateway in May 2006

Since the approval of the Project in 2008, a new consolidated Wollongong DCP has been adopted. The existing Wollongong DCP 2009 has the following car parking rates for the B3 Zone in the City Centre:-

- A rate for office premises of 1 space per 30m² GFA at the ground floor level and 1 per 50m² GFA above the ground level.
- A rate for retail or business premises of 1 space per 30m² GFA at the ground floor and 1 space per 50m² GFA above the ground level.

Since the adoption of the 2009 Wollongong DCP, Council is currently reviewing a number of sections of the DCP. The draft Chapter E3 of the DCP contains the following parking rates for the Wollongong City Centre:-

- A rate for office premises of 1 space per 60m² GFA.
- A rate for retail and business premises of 1 space per 60m² GFA.

Table 3-1 compares the parking requirements (based on different parking rates) to the current parking provision.

Table 3-1: Comparison of parking requirements (West Keira)

	Calculation Method	Parking Requirements	Parking Provision	Deficit(-)/ Surplus(+)
2007 Transport Assessment (approved)	1 space / 28m ² of GLFA	775	796	+21
Modification No. 3	1 space / 28m ² of GLFA	665	668	+3
Modification No. 3 using 2009 DCP Rates	1 space / 30m ² at ground floor of GFA 1 space / 50m ² at lower and upper ground floors of GFA	576	668	+92
Modification No. 3 using Draft 2011 DCP Rates	1 space / 60m ² of GFA	408	668	+260

The proposed parking provision of 668 spaces at West Keira will satisfy Council's latest parking DCP requirements. In addition, the demand based assessment which results in parking requirements of approximately 665 spaces, provides confidence that the modification proposals will accommodate all the forecast demand. This will minimise any potential for parking to spill over onto local streets.

3.1.2 Basement car park access

The proposed alterations to the access to the basement car park (and the loading dock) are shown in **Figure 3-1** and **Figure 3-2**.

The basement car park ramp is proposed to be relocated from the southern end of Richardson Street (controlled by a roundabout) to the western end of Richardson Lane. Traffic entering the basement car park will travel to the end of Richardson Street and turn right (without any opposing traffic) into Richardson Lane before turning left into the car park. Vehicles departing the basement will follow the same route back to Market Street.

This modified arrangement also negates the need for a roundabout at the southern end of Richardson Street as the predominant traffic demand for the basement car park will use Richardson Lane which will operate with priority over vehicles accessing the back of the commercial properties on Market Street and the West Keira service dock.

The proposed modifications to the layout of basement car park access will not have any impact on the operations of the car park of the proposed development at West Keira.

Figure 3-1: Approved access to basement car park

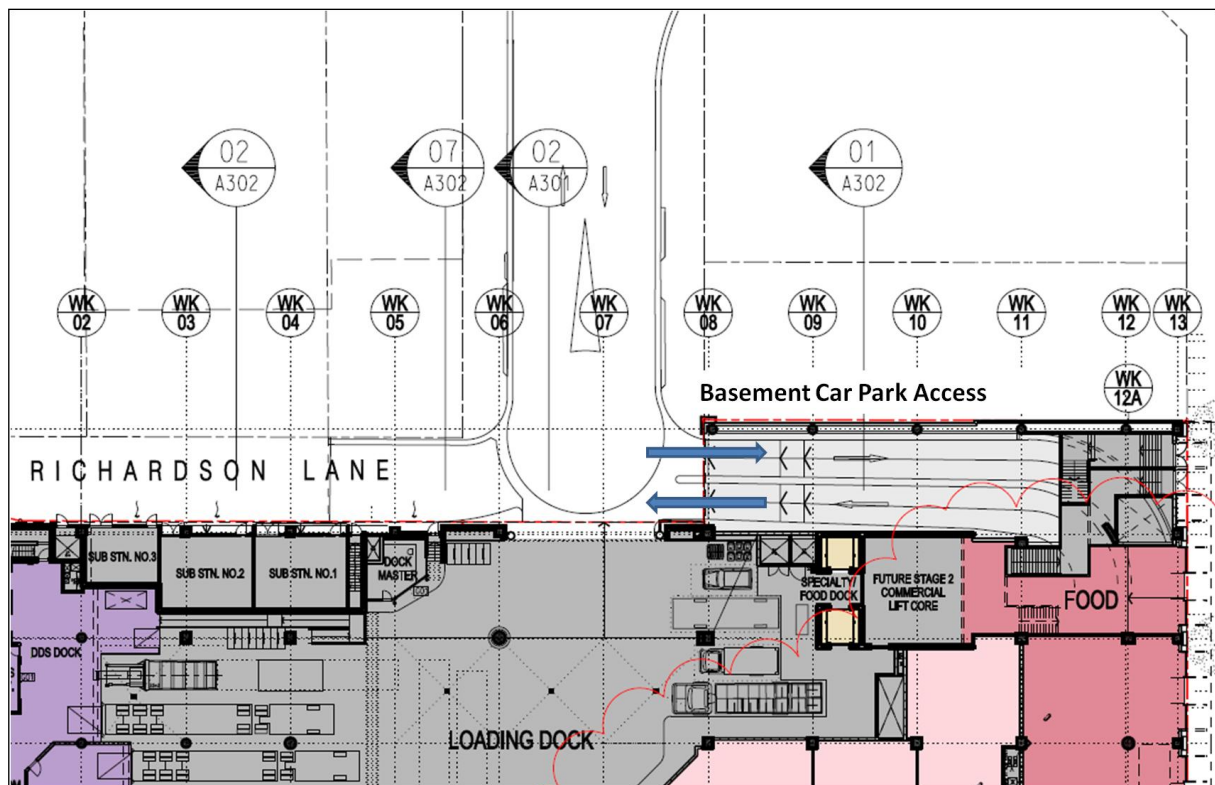
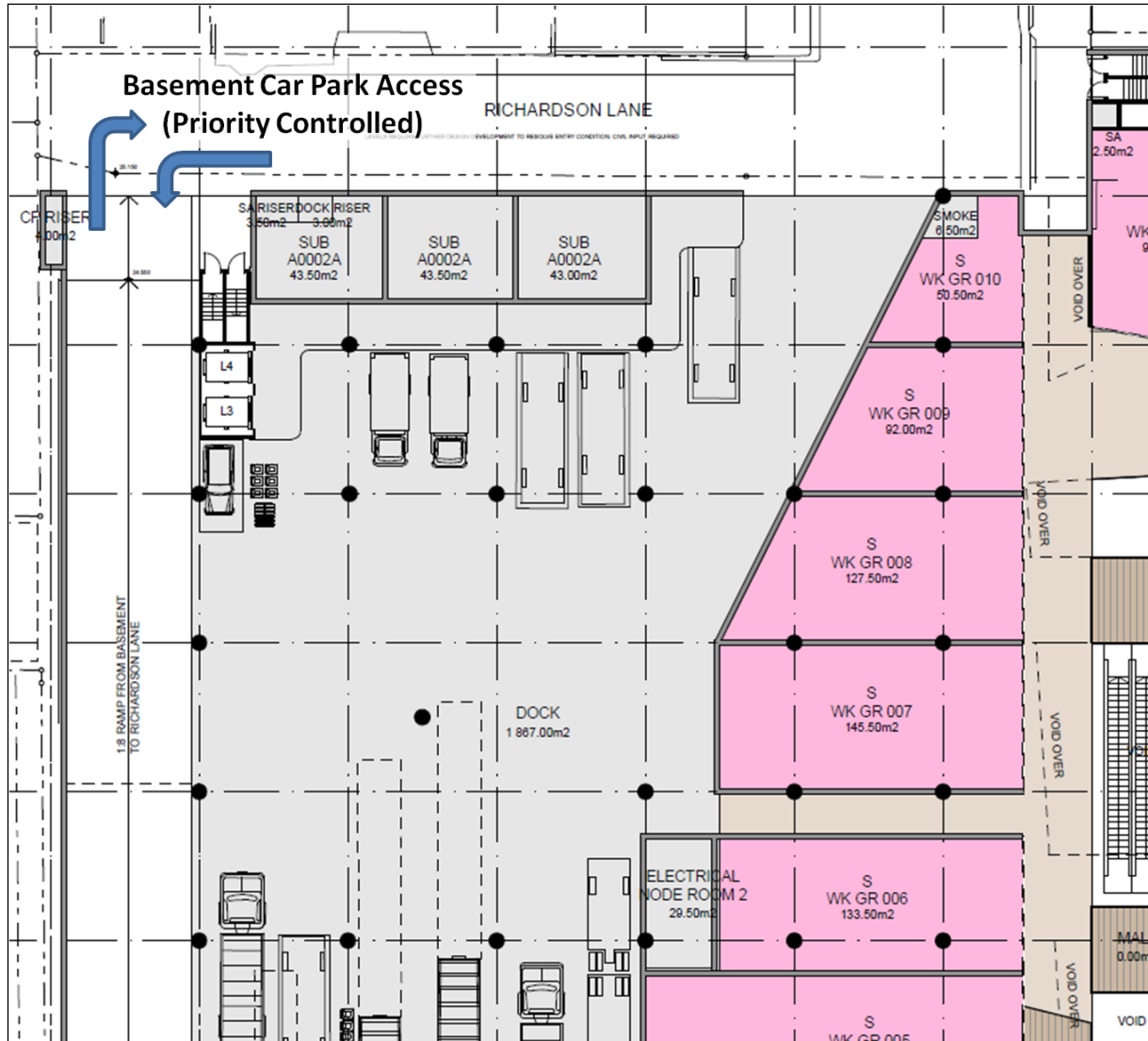


Figure 3-2: Modified access to basement car park



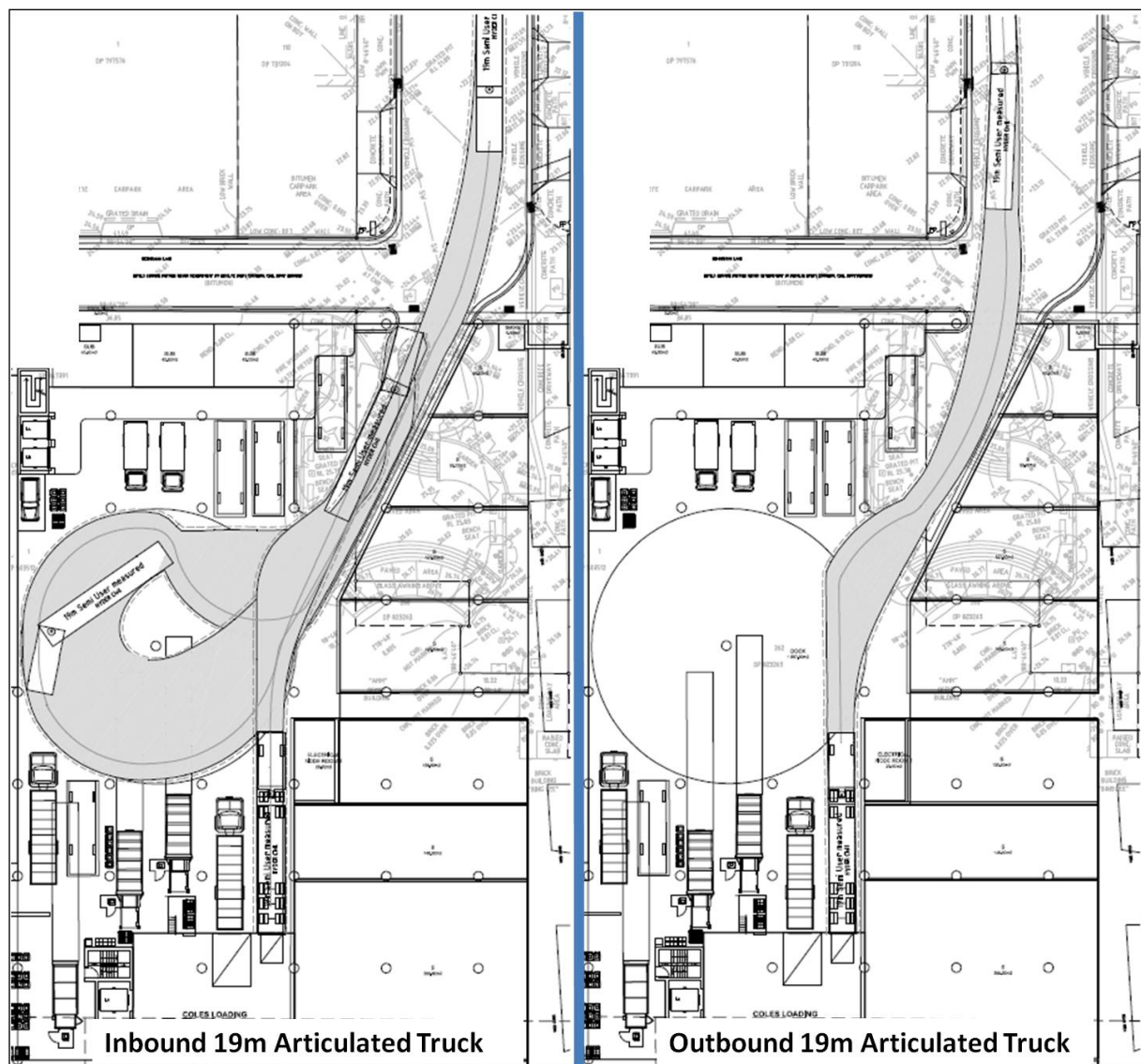
3.2 Impacts on Servicing and Deliveries

3.2.1 Loading dock internal layout

The loading dock has been designed to accommodate the turning movements of a 19m articulated truck with user defined turning performance based on site experience at Erina Fair (Gosford) and Rouse Hill shopping centres. The design of the dock enables all servicing vehicles to manoeuvre entirely on-site and enter and leave the site in a forward direction. This approach is consistent with the swept path analysis undertaken for the approved 2008 application.

A swept path analysis has been undertaken by Hyder Consulting using a template with the observed turning attributes to ensure that a 19m articulated truck can access the dedicated loading / unloading space without colliding with other parked vehicles. The swept path diagram for a 19m articulated truck within the loading dock is shown in **Figure 3-3**.

Figure 3-3: Swept path analysis for internal loading dock layout



Swept paths undertaken using user defined template supplied by Hyder Consulting.

3.2.2 Loading dock access

As discussed in Section 3.1.2, minor modifications are proposed regarding the location of the loading dock access. The proposed alterations to the access to the loading dock are shown in **Figure 3-4** and **Figure 3-5**.

Figure 3-4: Approved access to loading dock

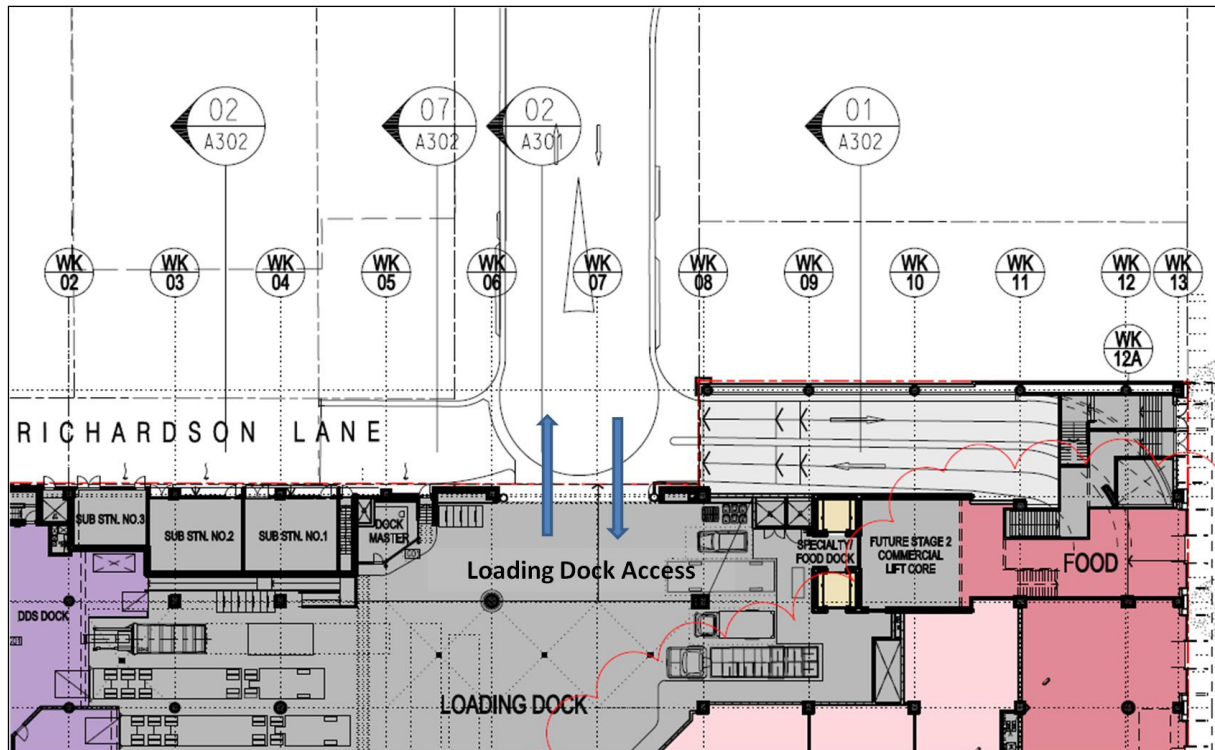
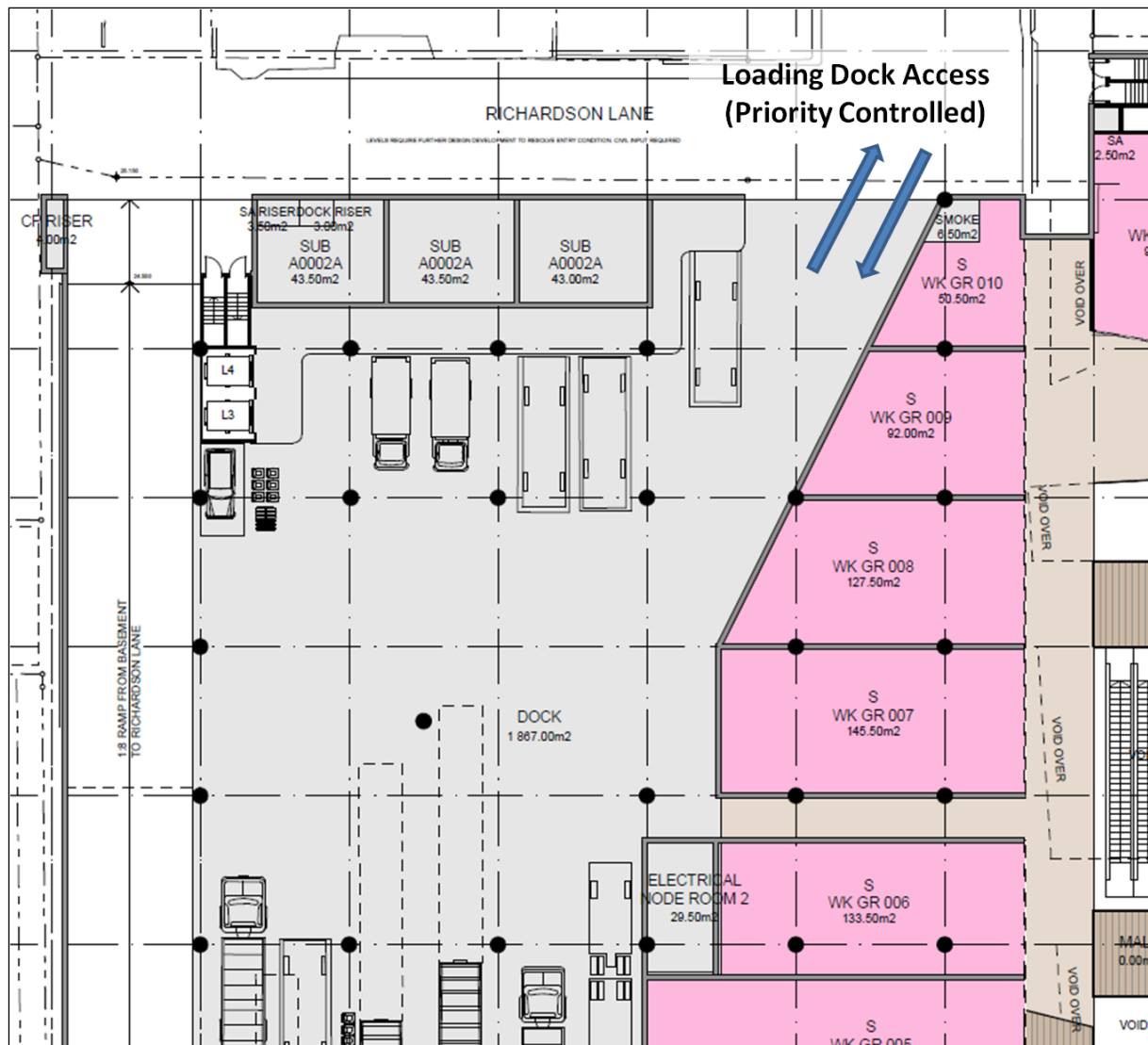


Figure 3-5: Modified access to loading dock



The proposed access to the loading dock will form the third leg of a T-intersection with Richardson Street and Richardson Lane. Traffic leaving the loading dock will give-way to all traffic on Richardson Street and Richardson Lane. Using the same user defined turning template applied to the internal dock layout, a swept path analysis has been undertaken by Hyder Consulting to ensure that a 19m articulated truck can access the loading dock without the need to alter the existing intersection arrangement at Richardson Street / Richardson Lane. The swept path diagram is shown in **Figure 3-3**.

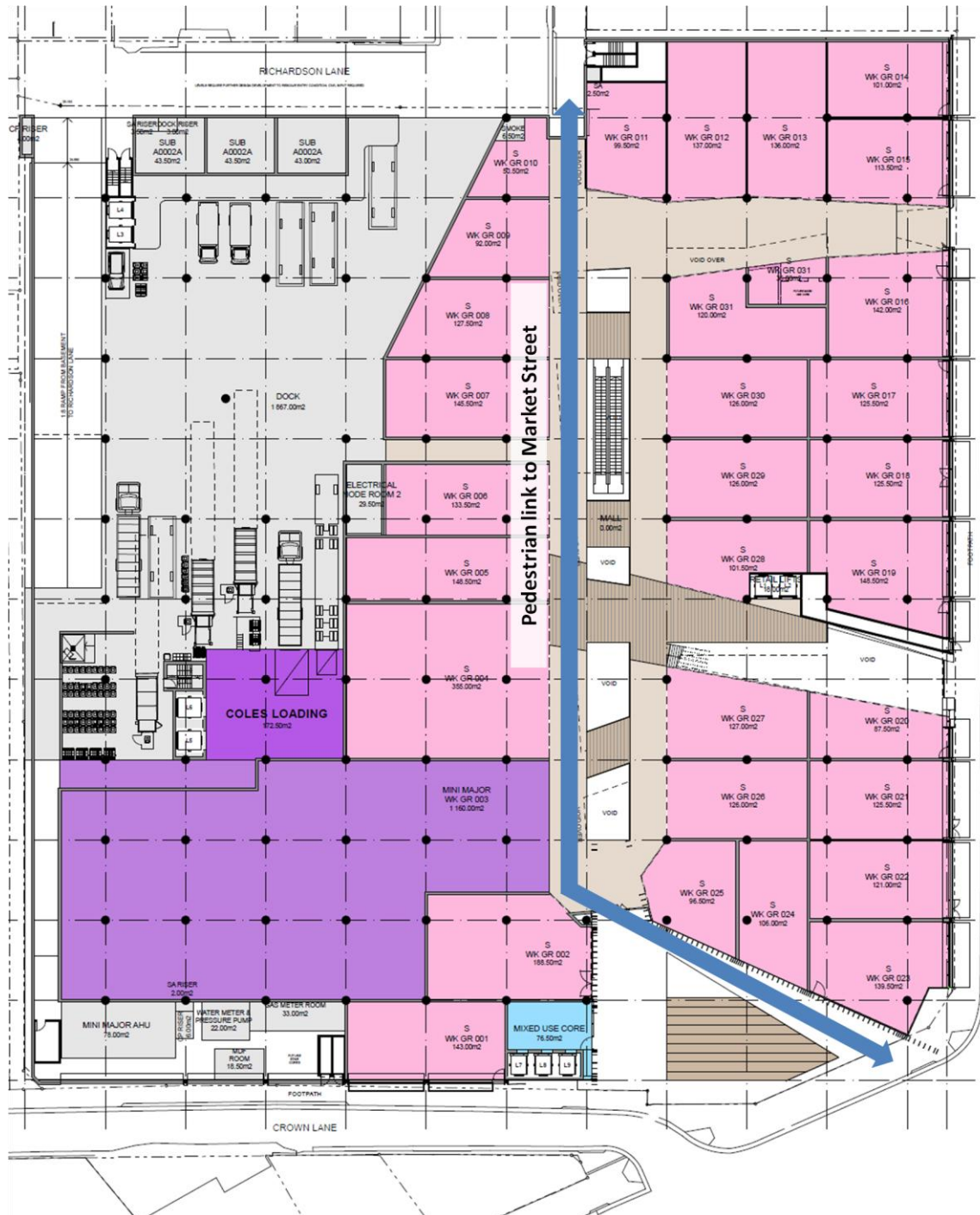
It should be noted that there are no changes to the proposed haulage routes that were documented in the Transport Assessment prepared in 2007.

3.3 Impacts on Walking, Cycling and Public Transport Modes

The revised concept plan will not require the widening of the pedestrian crossing at the intersection of Keira Street and Crown Street. In March 2010 the RTA upgraded the pedestrian facilities here to provide a scramble crossing, allowing pedestrians to cross in all directions when receiving the invitation to walk. This upgrade significantly enhances pedestrian accessibility in this location and provides the main surface level link across Keira Street.

The revised concept plan proposes opening of a new pedestrian route through the retail area on the ground floor of West Keira. A new pedestrian entrance on to Richardson Lane will provide a direct link between Keira Street and Market Street. **Figure 3-6** shows the location of the proposed pedestrian route.

Figure 3-6 Location of proposed pedestrian route to Richardson Street and Market Street



The proposed alterations will increase pedestrian accessibility and improve the overall level of amenity in the area, particularly between Keira and Market Streets.

3.4 Impacts on Traffic Generation

The proposed reduction in floor areas at West Keira will reduce the number of vehicular trips generated by the proposed development. Using the adopted trip generation rate in the 2007 Transport Assessment, the number of trips generated by the latest concept plan is shown in **Table 3-2**.

Table 3-2: Comparison of trip generation (West Keira)

	Adopted retail trip rate	Gross Leasable Floor Area – GLFA (m ²)	Trip Generation
2007 Transport Assessment	3.9 trips / 100m ² of GLFA	21,713	847
Modification No. 3	3.9 trips / 100m ² of GLFA	18,629	727
Differences	-	-3,084	-120 (-14%)

The comparison indicates that the proposed development at West Keira will generate 120 fewer trips than the original project due to the reduction of floor areas. As a result, it is expected that the traffic impacts of the retail development would be reduced compared to the current approved scheme.

4.0 Conclusion

Proposed modifications to the approved concept plan and their impacts to the surrounding traffic / transport networks are summarised below.

Table 4-1: Proposed modifications and impacts

Proposed modifications	Potential impacts (in addition to the current approved scheme)
Reduction in floor areas	Overall reduction in car parking spaces and trip generation.
Reduction in car parking spaces	No adverse impacts to the operation of the centre. Current parking provision of 668 spaces at West Keira will satisfy Council's latest parking DCP requirements.
Modifications to access of basement car park	No adverse impacts to the operation of the basement car park at West Keira.
Modifications to access of loading dock	No adverse impacts to the operations of the loading dock and basement car park at West Keira. Service vehicles will have improved visibility of opposing car park traffic.
Modifications to the internal layout of the loading dock	No adverse impacts to the operations of the loading dock, given that the dock is designed to be accessed by a 19m articulated truck with user defined turning performance.
No requirement for widening of Keira Street pedestrian crossing	No impact on traffic capacity at the Keira Street / Crown Street intersection as a result of the development.
Proposed additional pedestrian access to Market Street	Improvements to pedestrian movement, enjoyment and activation all around the building as well connectivity between Keira Street and Market Street.
Reduction in trip generation	Reduced pressure on the surrounding road network.

This report outlines how the proposed project modification will affect the traffic and transport impacts identified in the 2007 Traffic Impact Assessment (TIA). The reduction in retail floor space and removal of the requirement for widening of the Keira Street pedestrian crossing will result in improved operation of the road network when compared to the previous traffic assessment. The 2007 TIA represented a 'worst case' assessment and the mitigation measures proposed to accommodate generated traffic are sufficient to meet the needs of this modified proposal.