



PO Box 3737
Richmond 7050
Tasman District
M +64 (0) 21 243 1233
E+gary.clark@traffic-concepts.co.nz

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Ref: 0776

Ian Leary
SpencerHolmes Limited
PO Box 588
Wellington 6140

Dear Ian

Proposed Commercial Development – 61 Molesworth Street – Wellington City Transportation Impact Report

Following on from my discussions and site visit, I have completed my analysis and assessment of the traffic matters relating to the proposed development to provide a new office building at 61 Molesworth Street.

1. Introduction

This assessment considers the proposed office building against the Wellington City District Plan requirements and analyses the potential impacts of the development on the surrounding road network. The key matters that are considered include the parking and vehicle access arrangements for the development.

My analysis of the site and related traffic matters has included a site visit, assessment of the planning framework and an assessment of effects is provided below. This Transportation Impact Assessment (“TIA”) forms part of the resource consent application for the development outlined above. The TIA sets out and describes:

- The existing transport environment in the vicinity of the site
- Crash history
- The development proposal
- Assessment of the development against the provisions of the Wellington City District Plan, and

- An assessment of the proposed network effects including access assessment and parking.

The assessment provided below provides an analysis of the matters as set out above.

2. Site Description and Location

The development site is located at 61 Molesworth Street in Wellington City.

The site is located within the “Central Area” as described and set out in the Wellington City District Plan.

The site has recently been cleared of a building that was significantly damaged following the Kaikoura Earthquake. The earthquake damaged building was demolished very quickly as it had a significant lean and was possibly going to collapse.

The demolished building had been used as an office building which had a Molesworth Street frontage and also access to Collina Terrace to the north of the site. The building had access to parking via Collina Terrace and a loading dock from Molesworth Street.

Figure 1 shows the location of the site and the surrounding road network.

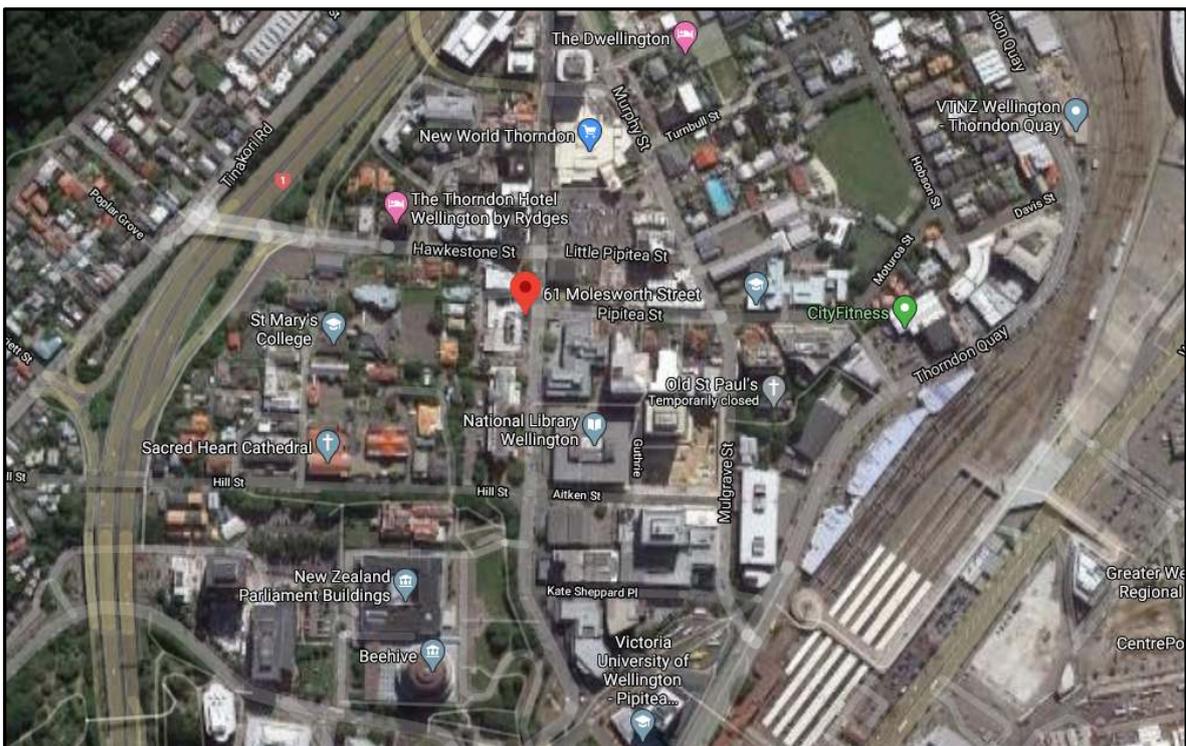


Figure 1: Site Location (Source: Google Maps)

As shown the site has excellent connections to the wider road network via the motorway to the north of the site, Mulgrave Street to the east and Thorndon Quay to the south. There is also the Lambton Interchange which provides access to trains and buses to the wider Wellington Region.

Molesworth Street is listed as a Collector Road in the Wellington District Plan and does not have a restricted road frontage. Mulgrave Street is listed as a Principal Road.

Figure 2 shows the site and adjacent road network.

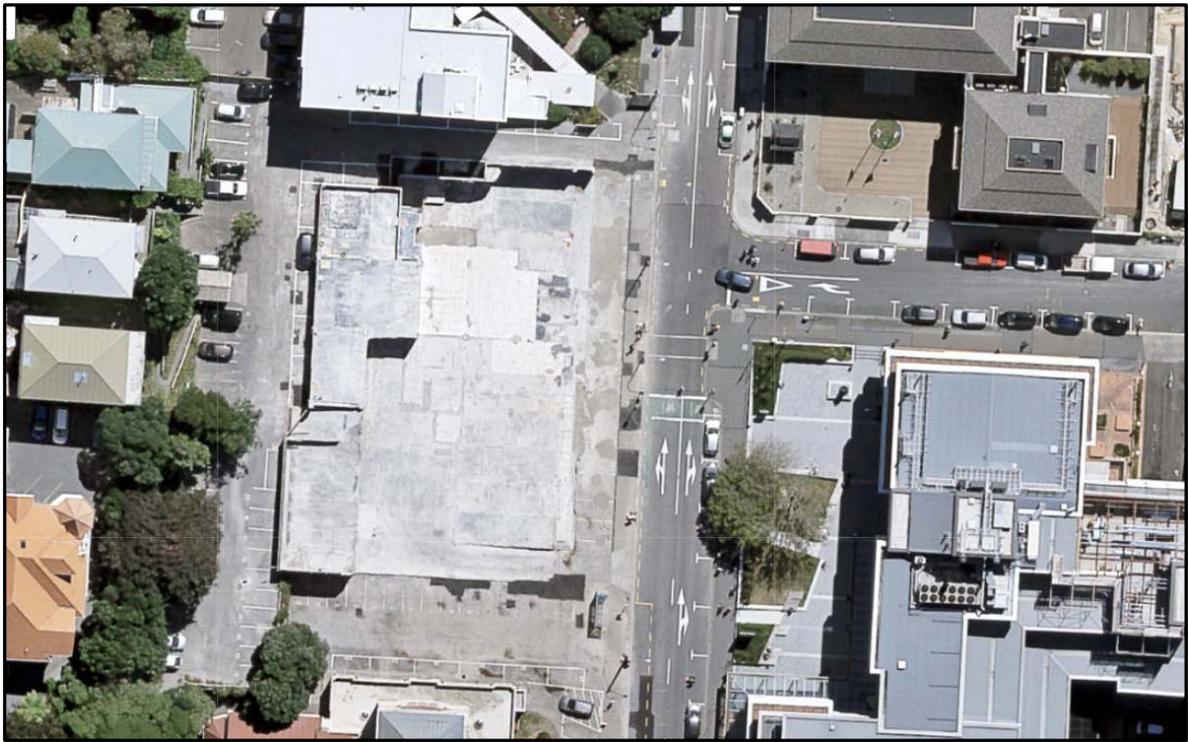


Figure 2: Site Layout (Source: Wellington Webmap)

As shown the site is mostly cleared with Molesworth Street along the front of the site being one way (two lanes) to the north. Molesworth street on the south side of Pipitea Street has traffic signals to provide a crossing facility for Pipitea Street. This also allows vehicles exiting Pipitea Street to exit when the pedestrian crossing has been activated.

There is a bus stop just south of the site with wide footpaths provided along both sides of the road. Parking is provided on the opposite side of the road with broken yellow lines along the frontage of the development site.

The existing vehicle crossing on Molesworth Street for the loading dock can be seen in the aerial photograph to the south of the site. Also shown on the image is the access and car parking at the rear of the development site which is accessed via Collina Terrace.

Collina Terrace is a narrow road with a traffic lane width of around 3.5 metres. Cars are able to park along both sides. Collina Terrace provides for one-way traffic with some vehicles needing to wait at either end when there is another car using the access.

3. Crash History

A detailed search of the NZTA crash database was carried out for the five-year period from 2015 to 2019, along with the part year of 2020.

The search area included all crashes within 50 metres of the development site on Molesworth Street and Pipitea Street.

There have been two reported minor injury and four non-injury crashes within 50 metres of the development site.

Table 1 sets out the individual crashes and their crash descriptions.

| Road | Location | Date | Collision Date Reference | Accident Description | Severity |
|-------------------|--|------------|--------------------------|--|--------------|
| Molesworth Street | 50 metres south of Pipitea Street. | 06/05/2016 | 201637754 | Motorist reversing into parallel park hit vehicle waiting behind them. | Non-injury |
| | 38 metres south of Pipitea Street. | 30/07/2017 | 201747697 | Motorist heading north on Molesworth Street changed lanes and hit car that was in the left lane following behind them. | Non-injury |
| | At the intersection of Pipitea Street. | 29/06/2016 | 201641149 | Motorist heading north on Molesworth Street turned right from the left-hand lane and hit car following behind in the right-hand lane. | Non-injury |
| | At the intersection of Pipitea Street. | 05/06/2018 | 201842225 | Motorist heading north turning right out of Pipitea Street hit pedestrian that crossed the road from the north side. Pedestrian walked away. | Non-injury |
| | At the intersection of Pipitea Street. | 10/08/2017 | 201716374 | Motorist turning right out of Pipitea Street hit pedestrian crossing the road heading north. | Minor Injury |
| | At the intersection of Pipitea Street. | 17/09/2016 | 201616770 | Motorist heading north on Molesworth Street fell asleep and hit traffic signals. Driver fled the crash scene. | Minor Injury |

Table 1: Crash Data. (Source: NZTA)

The crash history does not show any deficiencies in the adjacent road network. There are no reported crashes with vehicles entering or exiting the development site or crashes involving road users on the footpath.

4. Proposed Development

The proposed development will see the construction of a new multi storey office building along with on-site loading and car parking for around 52 vehicles. It is proposed to have a new vehicle crossing adjacent to Collina Terrace with the southern crossing being removed. Access to the car park and loading area will be via the one vehicle crossing.

Figure 3 shows the ground floor layout of the proposed development.

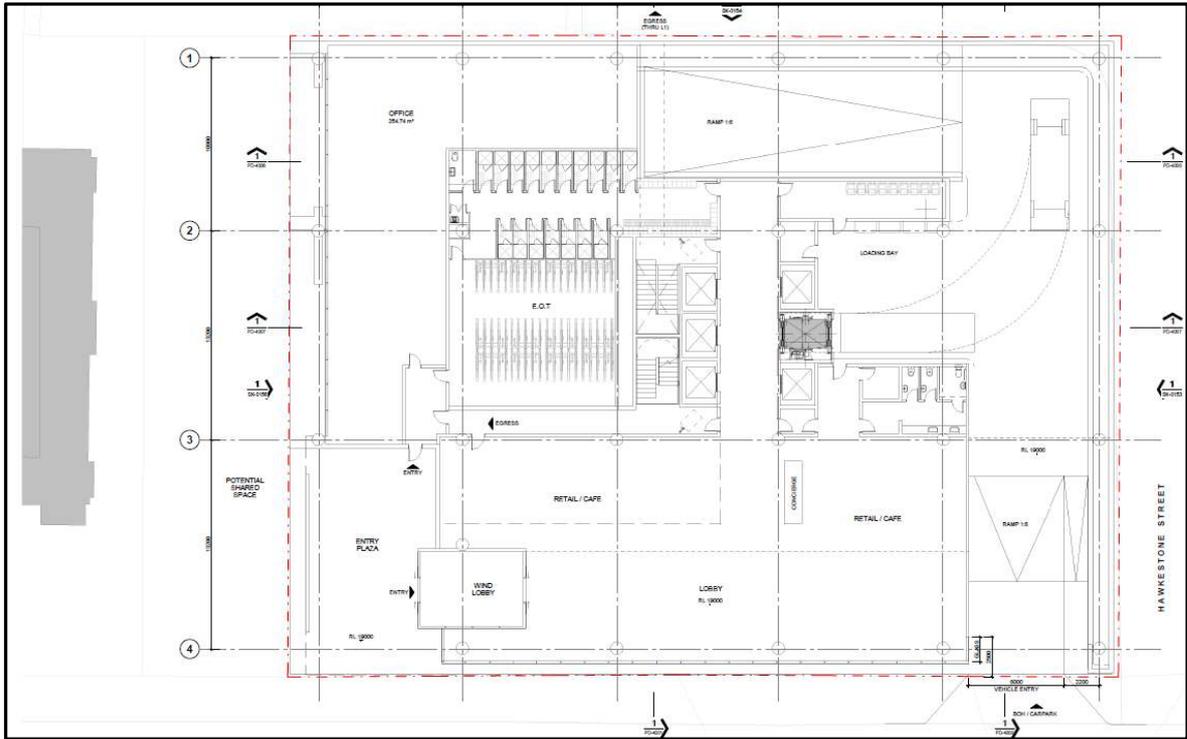


Figure 3: Ground Floor Layout (Source: Jasmax Architects)

As shown the ground floor provides access to the loading dock and ramp to the basement car parking. Access is now located to the north edge of the building next to Collina Terrace. The vehicle access is around 6.0 metres wide. The pedestrian access to the building is located at the southern end of the new structure. There is a vehicle ramp that leads to a basement floor where light vehicle parking is available.

Figure 4 shows the basement car park level for the new building.

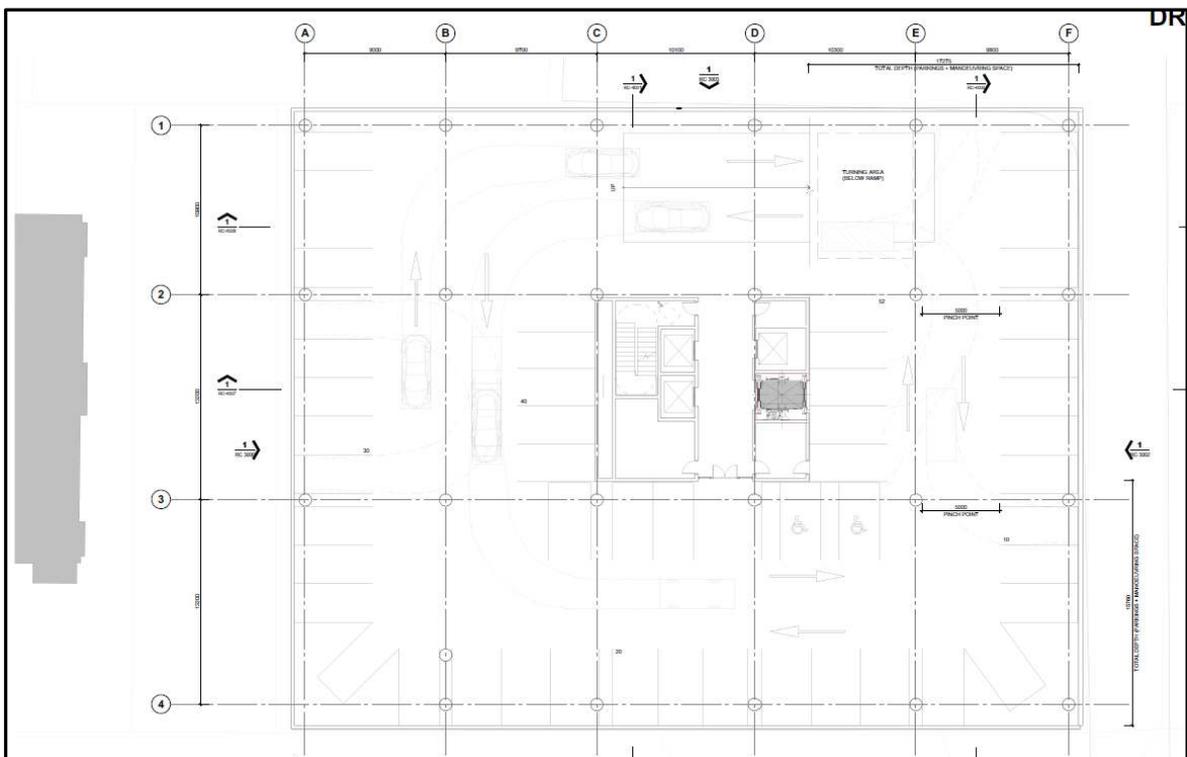


Figure 4: Basement Floor Layout (Source: Jasmax Architects)

The basement is accessed from a two-way ramp located at the rear of the building. The car park layout is still to be finalised once the final internal building structure design has been completed.

There are 52 car parks on this floor which will comply with the AS/NZS 2890.1 parking standard. Upon completion of the structural design for the building, the total number of car parks may change but will fall between 50 and 60 spaces on this floor.

Larger and to scale plans of the ground and basement floors are provided in the application documents.

5. District Plan Provisions

As previously stated, the proposed commercial building is located within the Central Area of the District Plan. It has been assessed against the various transport related provisions of the District Plan, as set out below in **Table 2**.

| Rule | Requirement | Compliance |
|------------------------|---|--|
| Vehicle Parking | | |
| 13.6.1.3.1 | Activities in the Central Area are not required to provide on-site vehicle parking, but where parking is provided, it must not exceed a maximum of: <ul style="list-style-type: none"> one space per 100m gross floor area | Complies Around 50 to 60 car parks (52) will be provided on the site. This is well below the one space per 100m ² and the 70 on-site carpark threshold in the Plan. |
| 13.6.1.3.2 | All parking must be provided and maintained in accordance with sections 1, 2, and 5 of the joint AS/NZS 2890.1 – 2004, Parking Facilities, Part I: Off-Street Car Parking. | Complies The car park will comply with AS/NZS 2890.1. The final layout to be completed as part of completion of the structural design. |
| 13.6.1.3.3 | Open vehicle parking areas must not be situated at ground level at the front of sites to which standard 13.6.3.7.1 (display windows) applies. | Complies All car parking areas within the building structure. |
| Servicing | | |
| 13.6.1.3.4 | On each site in the Central Area at least one loading area must be provided. | Complies. Loading for a medium rigid truck is provided on the site. |
| 13.6.3.5 | Turning paths shall be based on the standard for a medium rigid truck. | Complies On site turning for a medium truck is provided on the site. All vehicles can enter and exit in a forward direction. |
| 13.6.3.7 | For loading areas located within a building, the minimum width shall be 4 metres and the minimum length 9 metres. | Complies The loading area is indoors and easily exceeds the minimum loading area requirements. |
| 13.6.3.8 | Where loading areas are located within a building, a minimum height clearance of 4.6 metres is required; | Complies The internal height is more than 4.6 metres |

| | | |
|---------------------------------|--|---|
| 13.6.3.9 | For buildings serviced by lifts, all levels shall have access to a loading area by way of a lift. | Complies The loading area has access to a goods lift located in the central core of the building. |
| 13.6.3.10 | The loading area shall be located no further than 15 metres from a lift and there shall be level access between them. | Complies Access to the goods lift is adjacent to the loading area. |
| Site Access for Vehicles | | |
| 13.6.1.3.11 | Site access shall be provided and maintained in accordance with section 3 of the joint Australian and New Zealand Standard 2890.1 – 2004, Parking Facilities, Part 1: Off-Street Car Parking. | Does not Comply The full pedestrian splays are not provided for the new building. All other requirements are met. |
| 13.6.1.3.12 | No vehicle access is permitted to a site across any restricted road frontage identified on District Plan Map 34 provided that this shall not prevent the continuation or the undertaking of any Permitted Activity on a site involving the use of any lawfully established vehicle access. | Complies The site is not a listed restricted road frontage. |
| 13.6.1.3.13 | There shall be a maximum of one vehicle access to any site except that sites with more than one frontage may have one access across each frontage. | Complies There is one vehicle crossing for this site. It should be noted that there is access to the site from Collina Terrace. However, this is not wide enough to provide for the loading and car park areas for the development. |
| 13.6.1.3.14 | Both the entry and exit of vehicles onto the carriageway of the most adjacent street shall be in a forward direction. | Complies All vehicles can enter and exit in a forward direction. |
| 13.6.1.3.15 | The width of any vehicle crossing to a site shall not exceed 6 metres. | Complies The relocated crossing will remain at six metres wide |
| 13.6.1.3.16 | Where vehicular access can be provided from a service lane or right-of-way registered in favour of the site or other private road or private right-of-way, no vehicle access shall be from a street. | Does not comply The development has access from Collina Terrace. Collina Terrace does not comply with AS/NZS 2890.1 for access to the car park. Collina Terrace cannot provide for a medium rigid truck due to its width. |
| 13.6.1.3.17 | Subject to standard 13.6.1.3.12 no vehicular access shall be situated closer to an intersection than the following: Arterial, principal and collector streets: 20m Other streets: 15m | Does not Comply The intersection of Molesworth Street and Pipitea Street is adjacent to the access. |
| 13.6.1.3.18 | No access shall be provided to a primary street on a site that also has frontage to a secondary street. | Complies The site has only one road frontage. |

Table 2: District Plan Compliance

As shown, the proposed development has been designed to comply as far as practicably possible with the provisions of the District Plan. The areas of non-compliance relate to not providing full pedestrian splays, access not from Collina Terrace and location of access adjacent to intersection of Pipitea Street. These non-compliances along with other traffic matters are discussed in the Assessment of Effects.

6. Assessment of Effects

6.1. General

This section analyses and provides an assessment of the different traffic related matters and in particular those areas that do not comply with the District Plan. Generally, the areas of non-compliance relate to vehicle access due to the inability of Collina Terrace to service the needs of the development. The other non-compliance relates to the minor shortfall in the provision of pedestrian splays.

6.2. Site Access Design

The site is designed to meet the needs of the large commercial building which will provide on-site servicing with a medium rigid truck as required by the District Plan. It is widely accepted that smaller loading areas can be provided, however due to the size and needs of this building, a complying loading area was deemed important.

A medium rigid truck is able to enter and exit in a forward direction with on-site turning provided within the building.

The site has legal access to Molesworth Street and Collina Terrace. Collina Terrace is located on the northern side of the development site. It has a narrow legal width with a 90 degree corner at its western end. Due to the width of Collina Terrace it is not possible to use this access for a medium rigid truck.

It should also be noted that under AS/NZS 2890.1 the width of Collina Terrace also does not comply with dimensional requirements to service a car park area of around 50 spaces.

It is our understanding this has been discussed with Council staff who have agreed in principle that a separate access can be provided for the new building.

The draft designs of the site access had a width of 7.5 metres and no pedestrian splays. This design had some non-compliance and safety issues around the pedestrian vehicle interactions. Following advice on the design, the vehicle access arrangements were modified to provide a six metre wide access with increased separation from Collina Terrace.

The modified access also allowed for better pedestrian splays to be provided.

Figure 5 shows the vehicle entrance and internal ground floor arrangements to the site.

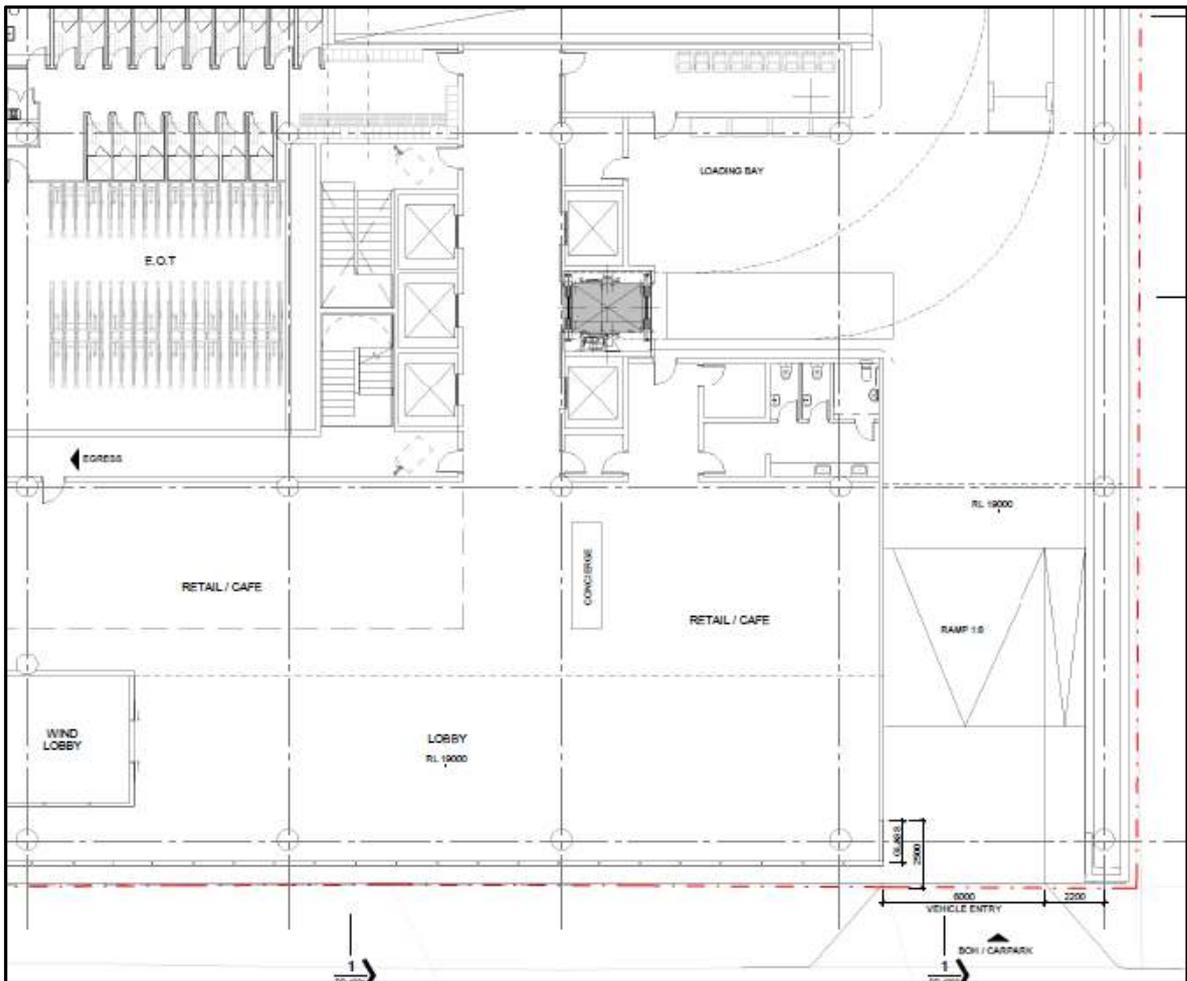


Figure 5: Vehicle Access (Source: Jasmax Architects)

As shown, the access is able to provide pedestrian splays on the southern (left on exit) side through the use of glass on the corner. It should be noted that these are not required for a two-way access as set out in Figure 3.3 of AS/NZS 2890.1.

The access cannot meet the pedestrian splay requirements on the north (right on exit) side of the access due to structural and architectural elements of the new building. The crossing has been moved to the south to provide a pedestrian splay of 1500mm by 2500mm. The requirement is 2000mm by 2500mm. This is a non-compliance of 500mm along the boundary line.

In practice when vehicles exit the building they will mostly be towards the centre of the driveway and in practical terms the pedestrian splays will be provided. The reduction of the pedestrian splay will not have any material difference in effects on the safety of pedestrians using the footpath.

If this shortfall is a concern for Council, then a judder bar could be installed 1500mm inside the access. This would reduce exit speeds. This accepted method of dealing with this non-compliance will address any pedestrian safety issues with any adverse effects being managed.

The sight distances, width and grades for the access can easily meet the provisions of the AS/NZS 2890.1.

The effects of the areas of non-compliance relating to the site access being on Molesworth Street and the 500mm shortfall in the pedestrian splays are less than minor. The access can operate safely and efficiently.

6.3. Site Access Location

As noted in Table 2, the proposed access is located adjacent to the intersection of Molesworth Street and Pipitea Street. It is also located adjacent to Collina Terrace. Molesworth Street is a one-way road heading south to north with Pipitea Street being a two-way road.

Vehicles entering and exiting the site will be via a left in or left out which will allow the access to operate safely within this road environment. The changes to the vehicle access design will provide a separation distance of 3500mm. Collina Terrace traffic also has to do a left in and left out.

Traffic movements along Molesworth Street can be high at certain times of the day. The traffic signals across Molesworth Street south of Pipitea Street will allow gaps in traffic for vehicles to exit the site safely.

It is understood that the access arrangements have already been discussed with Council officers who accept the proposed layout. The changes noted above provide an improved layout than those seen by Council officers.

Motorists using the site access are able to do so safely with any effects on other road users being less than minor.

6.4. Car Parking Layout

The car park layout is expected to meet the requirements of AS/NZS 2890.1 which is a parking standard widely accepted in New Zealand and Australia. Rule 7.6.1.5.1 requires compliance with AS/NZS 2890.1 and when compliance cannot be met then an assessment of the effects is required. This assessment uses engineering judgement and looks to see if the proposed design is reasonable, workable and will it lead to any effects.

As noted above, the structural elements of the building are still being designed. Due to recent earthquakes in New Zealand, the engineering requirements around the design of buildings has become more complex.

Due to the size of the development footprint it is easy to design complying car parks and associated ramps for the new building. The internal layout of the car parks will be affected by the locations of columns needed for the structural components of the building above.

The proposed layout provides 52 car parks. The individual car parks are at least 2400mm wide and 5000mm which complies with AS/NZS 2890.1. The circulation aisles are more than 7200mm wide for most of the car park area. The aisle width reduces to 5800mm for around

14 car parks. These car parks have a minimum width of around 3000mm to compensate for the 400mm shortfall in the aisle width.

Currently the design of the basement car park has columns located in some of the circulation aisles. While this may change as part of the final structural design, the current layout still allows access to all spaces. Some spaces will require a reverse manoeuvre into the car park or one additional movement to enter or exit the space. These matters are provided for in the AS/NZS 28901 parking standard.

Accordingly, the car park can meet the requirements of AS/NZS 2890.1 by providing a workable design for its intended users. There are no effects from the proposed car park layout.

6.5. Servicing

The proposed development will provide a complying loading area and access to a goods lift within the building. It has been designed to accommodate a medium rigid truck with this vehicle being able to enter and exit the site in a forward direction.

Figure 6 provides the tracking curves for an eight metre long service vehicle for the development site.

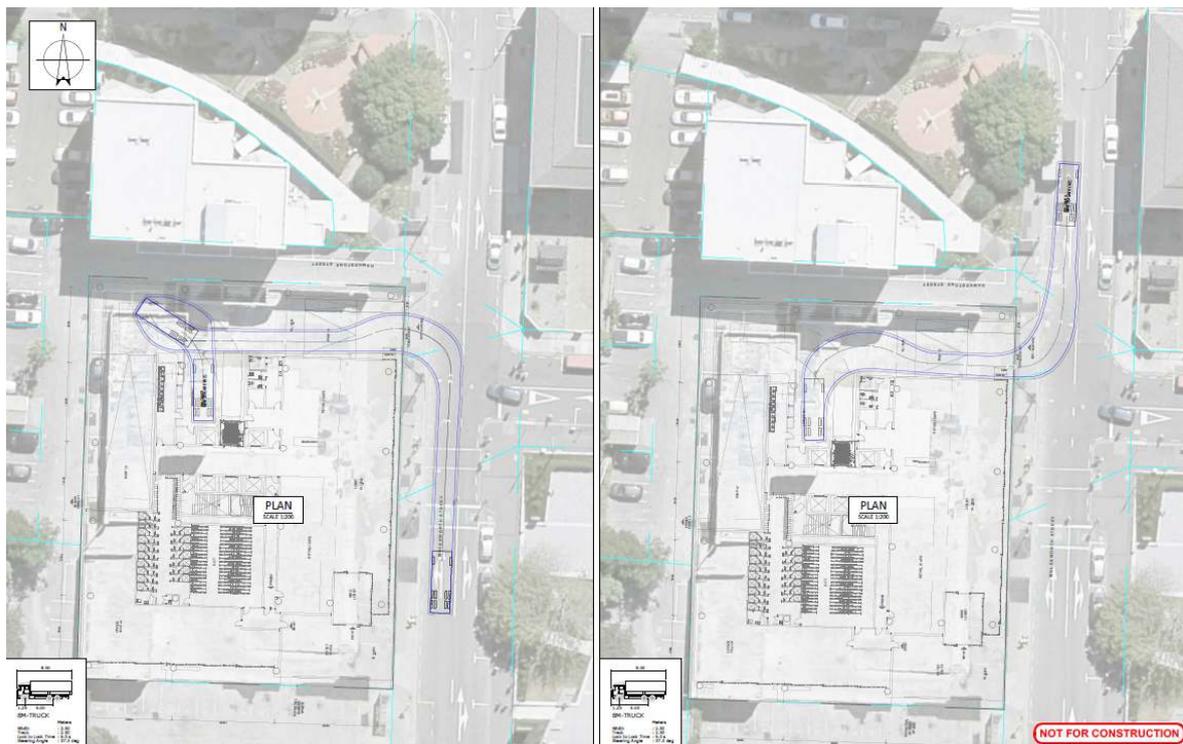


Figure 6: Truck tracking (Source: CivilTEC)

As shown a complying eight metre truck can enter and exit the site in a forward direction. A larger scale plan is attached to this report.

The servicing provisions are expected to meet the needs of the development with any effects being less than minor.

7. Conclusion

The proposal will see the construction of a new building on a site that is currently used for commuter car parking. The new building will be used as commercial offices and will provide around 52 on site car parks with access from Molesworth Street. The six metre wide vehicle crossing will provide access to the new carparks as well as the loading area. All vehicles are able to enter and exit the site in a forward direction.

There are three areas of non-compliance which are the 500mm shortfall in pedestrian splays, site access from Molesworth Street and the proximity to the adjacent intersection of Pipitea Street. The analysis above shows that the assessment of the potential effects is less than minor on other road users and the development can be accommodated within the surrounding road network.

We are happy to provide any further clarification if required.

Regards



Gary Clark

Director

NZCE (Civil), REA, MIPENZ, CPEng

