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INTEGRATED TRANSPORT ASSESSMENT

Dunedin Moray Place Hotel

For NZ Horizon Hospitality Group
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Introduction

This report addresses the traffic and parking issues in relation to the proposed Dunedin Hotel on Moray Place. The site of the proposed hotel is currently occupied by a public carpark with access from Filleul Street only.

The proposal is for a 5 star hotel with 210 standard double rooms, 4 penthouse suites and 64self contained apartments. The penthouse suites and self contained apartments will be sold separately but owners will have an option to make them available for the hotel to manage as part of their commercial stock and are hence considered to be part of the commercial development. There will be small conference rooms and meeting rooms with a business centre, games room, gym and hot pools for the use of patrons. There will also be a restaurant and bar for the use of guests of the hotel only. The general public will not be invited into the licensed areas and these areas are ancillary to the hotels residential function.

The hot pools will be open for use by the general public.

Site servicing and most carparking will be underground in the lower 3 levels.

All access to the site will be from Moray Place. All egress from the site will be to Filleul Street via a new roundabout proposed at the Filleul Street/Moray Place intersection.

Additional public carparking areas owned by the Council adjacent to the site with access from York Place will continue to be made available for this development.

Valets will manage all guest car parking from the time the guest arrives until they depart. Coaches and site servicing vehicles will use the site in a clockwise circulation around the main building. Valets will take guest vehicles to the underground car parks in a clockwise direction and bring vehicles back to the reception area for collection by the owner in an anti clockwise direction. The owner will then drive out in a clockwise direction through the Filleul Street exit.

The site is in the Central Activity Zone in the operative District Plan.

Dunedin City District Plan

The proposed Dunedin City District Plan has recently been released. It is understood that there have been submissions raised regarding the Transport sections of the proposed District Plan and that no weight can be given to the proposed District Plan at this stage. Therefore, this assessment has been carried out using only the current operative Dunedin City District Plan.

Two objectives of the operative District Plan are particularly relevant to this project. These are:

*"**Objective 9.2.5** Ensure that the Central Activity and Local Activity Zones continue to develop as 'people places'.*

Explanation:

People bring vitality and vibrancy to activity areas and it is important to enhance and sustain a people-friendly environment. The Central Activity and Local Activity Zones benefit when people take part in all the different activities which are located there."

And

*"**Objective 9.2.6** Avoid conflict between pedestrian and vehicle use in the Activity Zones.*

Explanation:

Activities that attract vehicles can adversely affect pedestrian usage of the Activity Zones. In some circumstances it is appropriate to separate these uses to avoid conflict."

The intent of Policy 9.3.3 – Enhance amenity values in the Central Activity Zone is to improve amenity values in the Central Activity Zone and make the area more enjoyable for people. Amongst other things, this requires consideration of

- Human scale – pedestrians city scale as opposed to car city scale.
- Reduced volumes of vehicular traffic, travelling at slower speeds, with a balance between pedestrian and vehicular traffic.
- safety

Policy 9.3.4 is to *"avoid, remedy or mitigate the adverse effects of car parking for large scale retail or commercial residential activities within the Central Parking Area."* The explanation is *"Public car parking is provided throughout the Central Parking Area for the benefit of the wider community..... Therefore Council will not require the provision of car parking within the zone, except in the case of large scale retail and commercial residential activities. These developments have special car parking requirements in the form of relative extent and duration which cannot be reasonably met by public facilities."*

These objectives and policies have been considered when assessing the transport aspects of the proposed hotel development.

Permitted and Existing baseline

The permitted baseline for this site is that range of activities identified as permitted activities in the operative District Plan. These included:

(i) Commercial Activity.
(ii) Recreational Activity.
(iii) Residential Activity.
(iv) Community Support Activity.
(v) Large Scale Retail Activity.
(vi) Licensed Premises.
(vii) Commercial Residential Activity.

The proposed hotel is a mixture of several of the above activities excluding community support activity and large scale retail activity. Hence, it is clear that a development such as the proposed hotel development was anticipated to be established within this zone and potentially on this site. Alternative activities that would have similar or greater traffic effects such as large scale retail activity could also be established as a permitted activity.

The current use of the site is as a carpark. The carpark is a mixture of leased parking and public short term car parking. There are 39 short term public parking spaces and 102 leased parking spaces with direct access to Filleul Street. All 39 public spaces and 54 of the leased car parking spaces are within the footprint of the proposed hotel and its manoeuvring area and will become part of the proposed hotel site.

The remaining 48 leased car parking spaces are in the triangular area to the west of the proposed hotel that will no longer have direct access to Filleul Street. They will instead be connected to the Councils existing York Street carpark.

Of interest to note is that a stand alone car park on this site is a restricted discretionary activity.

Road environment

In the roading hierarchy, both Filleul Street and Moray Place are collector roads.

Traffic counts for Moray Place and Filleul Street are included in appendix A.

Moray Place has a May 2015 weekday ADT count of 4,608 vpd in the block between Filleul Street and Stuart Street. This is the block containing the access to the proposed hotel. The average morning peak hour is between 8 and 9 am and is 405 vph. The highest average afternoon peak is 424 vph but is reasonably consistent at about 400 vph between 1 and 6 pm.

Filleul Street has a March 2015 weekday ADT count of 6,755 vpd in the block between York Place and Cargill Street. This is the closest available data and is likely to be higher than the actual traffic count near the Moray Place intersection. Between York Place and Cargill Street, Filleul Street has a major access to a shopping centre which will generate a significant amount of traffic raising the ADT for this block compared to the block between Moray Place and York Place. This is clearly evident by the amount of traffic late at night on Friday and Saturday and generally between 6 and 11 pm suggesting access to the car park has a strong influence on the traffic volume. Hence, the traffic volume on Filleul Street at the Moray Street intersection will be lower than this traffic count. York Place is a regional road and would intercept much of the traffic before it continues along Filleul Street to Moray Place.

In any case, the average morning peak weekday count is 605 vph and the average afternoon peak hour weekday count is 632 vph. These are higher than is expected in the block between Moray Place and York Place.

Table 5.5 of AUSTROADS Part 5 "Intersections at Grade" 2009 is reproduced below. Although the table is for a four leg intersection, it provides guidance on the limits of intersection capacity. A four leg intersection can accommodate up to 1500 vph on all approaches combined with single lane approaches before a different type of intersection control needs to be considered. A three leg intersection is likely to be able accommodate ¾ of this amount or 1125 vph. In the case of the Moray Place/Filleul Street intersection, there is less than 700 vph approaching the intersection conservatively assuming the Filleul Street traffic count is similar to the block between York Place and Filleul Street. Adding a conservative allowance of say 50 vph approaching the intersection from the existing Filleul Street car park, the total would increase to only 750 vph. Therefore, capacity of the intersection is not considered to be a problem at this time.

As identified later in this assessment, the traffic generated by the proposed hotel will be less than is currently generated by the carpark so capacity of the Moray Place/Filleul Street intersection will not be compromised by the proposed hotel. Note the increased capacity that is available in Table 5.5 under roundabout control with single lane approaches.

Table 5.5 — Typical Limits of Intersection Capacity (vph)

(Four way intersection with equal demand for all movements

Approach Width	Type of Control		
	No signals [a]	Round-about[b]	Signals[c]
1 lane	1500	2600	1500
2 lanes	1500	4560	3000
3 lanes	1500	6000	4500
4 lanes	1500	na.	6000

Notes:
(a) Based on practical absorption capacities of unsignalised intersections.
(b) Based on gap acceptance criteria.
(c) Based on four split phases (120s cycle).

The Moray Place frontage is not classified as identified pedestrian frontage or verandah required but the short section of frontage on Filluel Street is identified as verandah required. However, all of the pedestrian access to the site is from Moray Place. Since the Filleul Street section of frontage is only for a vehicle exit from the site and has no building frontage, there is little benefit in a verandah so no verandah is proposed.

Note that a verandah is required on the southern side of Moray Place on the inside of the road curve.

Moray Place is a two lane, two way road with a flush median marked along the frontage of the proposed hotel. There is a right turn bay for vehicles turning right into Filleul Street and also access to the Council building car park, Harrop Street and a small carpark just west of Harrop Street. The flush median extends from George Street to about 60 metres north of Stuart Street.

Moray Place borders the Council centre/CBD. A raised pedestrian crossing point has been erected in the median to assist with pedestrians crossing Moray Place between the Council centre and the car parking area of Filleul Street.

As roads in a commercial area, it is inappropriate for the roads to have a major traffic function and have been classified in the District Plan as collector roads. As such, they should not carry a large amount of arterial traffic and the speeds should be constrained to allow pedestrians and manoeuvring vehicles a fair chance to use the road safely and with reasonable amenity.

York Place parallel to and north of Moray Place is classified as a regional road and is expected to have a much higher traffic function carrying arterial traffic than Filleul Street and the section of Moray Place fronting the proposed hotel. Moray Place south of Stuart Street is

classified as a district road and again has a higher expected traffic function than the section fronting the proposed hotel site.

Parking is allowed on both sides of Moray Place where it is possible to have parking. On the southern side of Moray Place, parking is set back from the traffic lanes. All on street parking has time restrictions.

Parking Requirements

Vehicle parking to be provided on site is shown on the architectural plans for levels 2, 3 and 4.

Vehicle parking is required under rule 9.5.2 of the operative District Plan. The activity is classified as Commercial Residential Activity and is guest room type construction. Required parking is:

- 1 car park per 3 guest rooms to 60 guest rooms; thereafter 1 car park per 5 guest rooms
- No parking is required for owner occupied units
- 1 coach park per 50 guest rooms
- Staff requirement of 1 car park per 20 guest rooms.

The proposed hotel contains 210 standard guest rooms, 64 apartments and 4 penthouses. Although the apartments and penthouses may be sold for individual ownership, they will have an option to be available for management by the hotel. Therefore, assuming all are offered to the hotel, a total of **64 guest car parking spaces** are required. If they were not made available to the hotel, the parking requirement would be reduced.

Staff car parking requirements are **14 staff car parking spaces** assuming all apartments and penthouses are available to the hotel.

The small retail units are classified as commercial activity and the public hot pools are a recreational activity, both of which are permitted activities in the Central Activity Zone. Although neither of these activities have any specific car parking requirement, 4 car parking spaces have been set aside near the reception area for public users of these activities.

Therefore, a total of **78 car parking spaces are required** for the proposed hotel activity. 84 car parking spaces have been shown on the plans so the activity is compliant with this part of the rule.

There is a requirement for **6 coach spaces** on site. Five coach parking spaces have been provided on site. On the occasions when the hotel is at capacity, it is intended that the 6th and any subsequent coaches will park off site. Since the coach driver is unlikely to stay in the hotel, the coach will be parked at the accommodation for the coach driver.

The required dimensions of the car parking spaces are given in Appendix 20B of the operative District Plan. The dimensions of the car parking spaces and aisles comply with these requirements.

It is intended that vehicles will circulate through the underground carparking levels in a clockwise direction. However, some spaces will be difficult to access from this direction in a forwards motion and this is common for a car park with an irregular shape and obstructions such as columns to work around. Some of these parking spaces may need to be accessed by reverse parking. Since all guest parking will be managed by valets who are familiar with the carpark and the access requirements for each space, it is expected that only a single reverse manoeuvre will be required to access any space. This is consistent with Rule 20.5.6 (vi) (f) which allows only a single reverse manoeuvre to or from any parking space.

Two mobility spaces are required by the District Plan and can be provided. However, it is considered that they are unnecessary since the parking will be controlled by valets. Disabled people will be able to exit and enter their vehicles at the reception area with ample space available, then the vehicle will be parked in a regular parking space by the valet.

It is understood that the Council has a parking strategy in place that regularly reviews the requirements for public parking in the Central Area. Therefore, it is not considered appropriate to consider the effects on public parking of the loss of the Filleul Street car park or the on street spaces required for the new Moray Place access (discussed later). The potential for the public car park to be replaced by a development has clearly been signalled in the operative District Plan by the zoning of the site and the policies relating to public parking. The parking strategy will address any issues that arise from loss of the car park.

Hence, it is considered that the parking complies with the operative District Plan requirements suggesting that the development is within the parameters envisaged by the Council when preparing their District Plan.

On site manoeuvring

The architects drawing for level 4 shows the manoeuvring intended around the site.

All vehicles will enter the site through the vehicle access on Moray Place. All vehicles will exit the site through the vehicle access on Filleul Street. There will be no need for any reverse manoeuvring to or from the public road network.

All vehicle movements on site will be carried out at low speed. This is particularly so for coaches and trucks with the gradients they negotiate.

Car drivers staying at the hotel will leave their vehicle at the reception where it will be taken by a valet to be parked on one of the two floors of underground car parking. When the vehicle is required by the guest, a valet will retrieve the vehicle and bring it up the ramp to

the reception and park it so the guest will take the vehicle down the ramp to the Filleul Street exit. These movements will typically occur before 10 am when guests usually leave and after 4 pm when guests usually arrive.

Staff will park their own vehicles in the underground car park then leave directly through the Filleul Street exit.

Four spaces are available on site near reception for public use for the retail and hot pools and general use. These will be accessed from Moray Place and will exit through the Filleul Street exit. These movements will occur throughout the day.

Coaches have 5 spaces available on site; three spaces near reception and 2 spaces on the ramp towards Filleul Street. The first three coaches to arrive will discharge passengers at reception then park in the spaces near the reception. The next 2 coaches will then park on the ramp. Coaches typically leave the site before 10 am and arrive after 5 pm.

Trucks servicing the site will typically arrive between 10 am and 2 pm when the hotel is least busy with guests. They will enter through the Moray Place access and drive down the ramp to the underground loading bay near the Filleul Street exit. Due to the approach angles and walls limiting visibility when exiting the loading bay, a ramp signal system to stop vehicles on the ramp when a vehicle is exiting the loading bay will be required. Due to the timing of the trucks servicing the site, it is unlikely that a bus will be parked on the ramp when trucks are servicing the site.

The main potential conflict occurs on this site when a valet is retrieving a vehicle from the underground car park and returning to the reception area. The number of potential conflicts is relatively small due to the low traffic volumes and the width of the ramps is generally sufficient for two way traffic. Where vehicles turn from the reception area onto the ramp is the narrowest point on the route. When a coach or truck is turning onto the ramp, it would not leave sufficient room for a car driven by a valet to pass heading towards reception. Hence, a limit line and give way control will be erected at the top of the ramp to require drivers approaching the ramp from the reception area to give way to oncoming traffic. This also serves as a reminder to drivers to expect oncoming vehicles as they drive down the ramp. Other vehicle conflicts at the underground carpark entrances will be managed by the valets and staff who will be familiar with the potential conflicts and will manage them appropriately.

Apart from the valets retrieving guest vehicles, all movement will be in a clockwise direction.

It is considered that all vehicle movements and conflicts on site can be managed safely.

Traffic Generation

There is no reliable local published data for the traffic generation of a hotel such as the one that is proposed. The TDB database and RTA Guide to Traffic Generation were considered. The limited information available is for hotels that have larger conference rooms and consequently high traffic generation rates due to the arrival of conference participants who are not accommodated on site.

Therefore, a first principles approach will be applied.

The hotel will have small conference facilities and all conference attendees will be able to be accommodated on site. The restaurant and bar facilities and all other on site recreation apart from the hot pools will be available only to people staying in the hotel. Therefore, these shall not generate traffic in their own right. The only traffic generated that will use the public road network shall be from the visitor rooms themselves, the staff, coaches and the servicing vehicles for the hotel and a small number of public for the hot pools and small scale retail.

Staff will be a small component of the traffic generated. 14 car parking spaces will be provided for staff as required by the District Plan. Due to the nature of the hotel, there will be shift workers with cleaners predominant during the day and restaurant staff predominant during the evening. Each space will be used by 2 different staff members throughout the day so 4 vehicle trips per day per staff space can be assumed.

A total of **56 vehicle movements per day** can therefore be attributed to staff.

Staff will also arrive by other transport modes such as public transport and bicycles. Bus stops are located near the proposed hotel and a cycle parking facility will be provided on site.

There will be a reliance on tour buses to bring visitors to the site. The remaining 66 underground car parking spaces will be for those free independent visitors who do not arrive by tour bus. It is estimated that there would be 4 vehicle movements per car parking space. This would be one movement to vacate the room in the morning, one movement in the afternoon to occupy the room and one movement out and in for sight seeing, etc each day from each room. This assumes that all 66 spaces are all full with free independent travellers.

Hence, a total of **264 vehicle movements per day** generated by the visitor spaces can be expected.

The 4 public spaces for use by members of the public attending the retail or hot pools on site could have an average time of stay of about 1 hour and therefore could turn over up to 8 times per day. This is a potential total of **64 vehicle movements per day**.

Combining the above, this is a total of **384 car movements per day generated by the site** when operating at capacity.

It is anticipated that there would be up to 8 tour coaches bringing visitors to the site each day. These would typically involve one movement for each coach as they leave in the morning. Three of the coaches will need to be parked off site so there would also be 3 coaches arriving from an off site park each morning. In the afternoon, there would be 8 coaches arriving and 3 would leave to park off site.

Hence, a total of **22 coach movements** would be expected per day.

Servicing of the site will typically be carried out during the period between 10 am and 2 pm when there are few visitors and no coaches on site. It is unknown how many vehicles per day will be required to service the site but it has been assumed that 10 medium trucks per day generating **20 truck movements per day** would service the site.

Since the site will be accessed only from Moray Place and exit onto Filleul Street, the vehicle movements will be evenly split between the two accesses. **192 car movements and 21 coach and medium trucks** would enter from Moray Place and the same would exit onto Filleul Street each day.

This will compare favourably to the traffic generated by the existing Filleul Street car park. No data is currently available for the turnover of the car parking spaces so assumptions have been made. A recent casual check of the parking tickets on car windows showed parking was purchased for between less than 1 hour and about 4 hours with most around 2 hours. It is conservatively assumed that the public carpark will have a typical stay of around 2 hours and that each parking space will turn over 3 times per day. Hence, a total of 6 movements per day per space. This is conservative based on casual observation of the carpark which shows it is often used to capacity throughout the day but makes an allowance for those who stay longer than they pay for.

In addition, some drivers enter the car park when it is full and leave again immediately if it is full and these short visits have not been factored into this assessment.

Occupiers of the leased spaces are assumed to arrive in the morning and leave in the evening. There will also be a number of these spaces where the vehicle will be used for business during the day to visit clients, go home for lunch, etc. If half of the spaces are vacated during the day to visit clients or go home for lunch then return, that would be an average of 3 movements per day per leased space.

Based on 39 public spaces and 102 leased spaces, these would conservatively generate 540 vehicle movements per day and potentially a lot more. All of these movements enter and leave through the existing Filleul Street access.

The vehicle activity around the Filleul Street access will be reduced significantly and the complexity of the access reduced as a result of the car park being replaced with the proposed hotel with an entry on Moray Place. The overall reduction in traffic generated by the proposed hotel and reduced complexity around the Filleul Street access is a positive traffic effect in accordance with the policies of the District Plan identified previously.

Vehicle access and impact on intersections

There will be two vehicle accesses to the hotel development. Both accesses are shown on the level 4 plan in the architects drawings.

One access will be on Moray Place and one on Filleul Street. This is compliant with Table 20.2 of the operative District Plan which allows one vehicle access on each frontage.

A new access will be constructed on the outside of the curve on the northern side of Moray Place. This access will be for entry to the proposed hotel only. All vehicles will enter through this access. The access will allow both left and right turns into the site.

The Moray Street vehicle access will require 3 existing on street car parking spaces to be removed. The access will be 25 metres from the nearest vehicle access on the same side of the road being the Kingsgate secondary access. The access will be about 15 metres from the Harrop Street intersection on the opposite (southern) side of the road. Although Table 20.4 of the District Plan requires a separation of 20 metres from a local road intersection, expected provision of a raised median on Moray Place discussed under urban design below will prevent any interaction between the vehicle access and Harrop Street so the distance between the access and the Harrop Street intersection is irrelevant.

The sight distance was measured for a driver stopped in the centre of Moray Place waiting to turn right into the proposed hotel access. 76 metres of sight distance towards oncoming northbound vehicles on Moray place was achieved. While there is no requirement for sight distances in the District Plan, Road and Traffic Standard 6 (RTS 6) "Visibility at Driveways" published by the Land Transport Safety Authority provides guidance. RTS 6 suggests that for a driveway on a collector road with fewer than 200 vehicle movements per day, a sight distance of 65 metres is required for a road with an operating speed of 60 km/hr. In this case, the operating speed on Moray Place is considered to be less than 60 km/hr so the visibility requirement is easily achieved.

A second access will be constructed on Filleul Street to replace the existing car park access. The existing access is a poorly defined access with both entry and exit to the existing car park. The new access will have much better definition and will be for exit from the proposed hotel development only.

A number of options were considered to improve the intersection but were discounted for a variety of reasons:

1. Existing intersection

- Some coaches need to re enter the proposed hotel. Coaches cannot easily turn left from Filleul Street into York place then Stuart Street then Moray Place due to the lack of turning space at the traffic signals. Hence, they need to turn right from the Filleul Street site exit and turn right onto Moray Place.
- The Filleul Street access is too close to the intersection. A coach could not turn right from the site towards Moray Place without overhanging onto the northbound traffic lane of Filleul Street and partially blocking the road while stopped at the limit line.

2. Change of priority.

- If priority is given to the Moray Place west /Filleul Street legs of the intersection, turning right from the site would have restricted visibility due to the curve.
- Drivers coming down the hill on Moray Place turning left into Filleul Street would be able to do so at speed and may have difficulty stopping if a coach is turning right out of the site.
- If priority is given to the Moray Place east/Filleul Street legs, a similar problem to the existing situation exists for the coach since it would need to stop near the centreline to turn right in a similar position to the current Filleul Street limit line and at least partially blocking the northbound traffic lane.
- Change of priority would provide no benefit to other road users such as pedestrians.

3. Traffic signals

- Traffic signals are an expensive option to maintain and operate into the future.
- Yellow signal poles and black aspects would detract from the urban design of the building.
- The layout of the traffic signals could accommodate the Filleul Street exit directly into the intersection but would be non standard and could result in confusion for drivers and pedestrians.
- Traffic signals are unlikely to be justified on the basis of traffic demands and would introduce unnecessary delays to drivers causing frustration.

After discounting the above options, a roundabout was considered to be the most viable alternative for the following reasons:

- A roundabout can incorporate the Filleul Street exit directly into the intersection and is a standard design.
- It can be landscaped and enhance the urban environment.
- The roundabout itself is a speed control device that will reduce and maintain traffic speeds along Moray Place consistent with Objective 9.2.6 of the Operative District Plan and assist to address the imbalance between pedestrians and vehicles.

- A roundabout is more flexible in the way it controls moderate traffic volumes than the alternatives and is more efficient at these volumes.
- A roundabout can eliminate the reasons people choose to avoid the Moray Place/Filleul Street intersection and encourage more traffic to use Filleul Street which could reduce the traffic volumes on George Street.

On balance, a roundabout is considered the best option to control exit from the site and incorporate the exit in an upgraded and improved Moray Place/Filleul Street intersection. A preliminary sketch to prove the concept is shown in the architects plans on the level 4 plan.

Road safety

A number of crashes occurred on Moray Place between George Street and Stuart Street and on Filleul Street within 20 metres of Moray Place. The crash listing is included in Appendix B. The crashes typically involved vehicles manoeuvring to and from parking spaces. Two crashes involving pedestrians at the Filleul Street intersection resulted in minor injuries.

Three of the crashes involved road rage.

The crash record does not suggest that there is any underlying crash problem on Moray Place or at the Moray Place/Filleul Street intersection. It is not expected that any of the changes proposed as a result of this proposed hotel development would result in a reduction in safety and the urban design should enhance safety, particularly for pedestrians.

Pedestrians/Urban design

From casual observation, pedestrians feel uncomfortable when crossing Moray Place at the Filleul Street intersection. They are unaided when crossing the road through two traffic lanes and the flush median or right turn bay. Moray Place is curved and the Filleul Street intersection and carpark access complicates the area. Note that the two minor pedestrian injury crashes both occurred at the Filleul Street intersection.

A mid block raised median refuge is constructed on Moray Place west of Filleul Street but it does not coincide with the evident pedestrian desire line to cross Moray Place at the Moray Place/Filleul Street intersection.

It is understood that the Council has a desire to improve the urban design of Moray Place. This is appropriate and will assist all road users to negotiate the area safely.

The urban design of the road reserve has not yet been carried out. However, there are typical aspects of urban design that are expected to feature in any modern urban design scheme. The principles of urban design are that the area should look attractive but also be functional and enhance the experience of all road users. This typically requires a low speed

traffic environment that provides a safe and convenient environment for pedestrians to cross as indicated in the objectives of the District Plan.

It is expected that as part of the urban design improvements, there will be a raised median on Moray Place between Filleul Street and the proposed hotel access to control cross centreline manoeuvres and provide additional opportunities for pedestrians to cross the road using the median as protection. Right turns into and from Harrop Street and the adjacent car park to the west of Harrop Street would be prevented. The proposed new roundabout at the Filleul Street intersection and expected changes in surface texture on the Moray Place carriageway will ensure that traffic speeds are reduced and maintained at a speed appropriate for a CBD road. The environment will be improved to link the commercial developments on the northern side of Moray Place (including the proposed hotel) and those on York Place and beyond with the Octagon and Council buildings.

Moray Place is currently part of the bus network and the road design will ensure that tour coaches are the design vehicle for manoeuvring purposes.

Detailed urban design of the road will be undertaken after consent is granted.

Vehicle loading

Commercial vehicle loading will be carried out in a purpose built area under the building. This is shown in the architects plans on the level 1 plan. Commercial vehicles will enter the site through the Moray Place access and exit through the Filleul Street access once their servicing is completed.

Visibility when exiting the building will be restricted. A signal system to stop vehicles on the ramp to allow a truck to leave the service area will be provided to address the visibility restriction.

Assessment of District Plan compliance

Compliance with section 20:Transportation and section 9:Activity Zones of the operative Dunedin City Plan is detailed below. Although the replacement District Plan has been advertised, the relevant transport clauses have been challenged and can therefore not be given any weight.

Clause/Rule	Assessment	Comment
9.5.2 (iv) Identified Pedestrian Frontage	Moray Place is not an identified pedestrian frontage so this rule does not apply to Moray Place. Filleul Street is shown as a verandah required frontage but not an identified pedestrian frontage so this rule does not apply to Filleul Street.	**Does not apply.**
9.5.2 (v) Minimum car parking On-site car parking is not required except for Commercial Residential and Large Scale Retail Activities, which shall comply with the performance standards in Section 20 (Transportation) and shall be provided on the following basis: (a) **Commercial Residential Activity** (ii) Guest room type construction, for example hotels: (a) 1 car park per 3 guest rooms to 60 guest rooms; thereafter 1 car park per 5 guest rooms. (b) 1 coach car park per 50 guest rooms. (c) Staff requirement of 1 car park per 20 guest rooms	Car parking has been assessed using the rule and the proposed hotel requires 78 car parking spaces. 84 car parking spaces have been provided. 6 coach parks are required on site but 5 have been supplied. It is expected that coach drivers will not stay at the hotel and will have accommodation supplied elsewhere. The 6th and subsequent coaches will park off site where the coach drivers are accommodated.	**Does not Comply**
20.5.2 Performance standards for permitted activities (i) Street furniture	Street furniture resulting from the urban design of Moray Place will be designed later but will comply with these standards.	**NA**
20.5.5 Parking Performance Standards	Parking requirements were calculated in accordance with	**Complies**

(i) calculation of on site parking requirements	this clause.	
20.5.5 Parking Performance Standards (ii) Location and availability of parking spaces	Required car parking spaces are available on the same site as the activity and will be managed by valets.	**Complies**
20.5.5 Parking Performance Standards (iii) Parking spaces for people with disabilities	Disabled spaces will be provided but are considered unnecessary because of the valet parking.	**Complies**
20.5.5 Parking Performance Standards (iv) Queueing spaces	18 metres of queueing is required. More than 20 metres of queuing is provided on the entry from Moray Place	**Complies**
20.5.5 Parking Performance Standards (v) Design of parking spaces	The gradient, surface, illumination and dimensions of parking spaces is in accordance with this clause	**Complies**
20.5.5 Parking Performance Standards (vi) On site manoeuvring	Valets will park vehicles. The parking areas will comply with the vehicle manoeuvring expectations of this clause	**Complies**
20.5.6 Vehicle Loading Performance Standards (i) Design of Loading areas	All loading can be carried out on site underground separated from the car parking and public areas.	**Complies**
20.5.6 Vehicle Loading Performance Standards (ii) For activities, except Residential Activities, that involve construction of a new building on a site which fronts a State Highway, loading and access shall comply with the performance standards in Rules 20.5.6(i) and 20.5.7	The activity is residential and does not front a state highway.	**NA.**
20.5.7 Vehicle Access performance Standards (i) Maximum number of vehicle crossings	Moray Place and Filleul Street are collector roads so 1 vehicle access is permitted on each frontage. These have been shown on the plans.	**Complies**
20.5.7 Vehicle Access performance Standards (iii) Distances of vehicle	The distance between Harrop Street and the vehicle access is irrelevant because the proposed	**Complies**

crossings from intersections	raised median eliminates any interaction between vehicles. The vehicle access on Filleul Street will be incorporated into the proposed roundabout at the Moray Place/Filleul Street intersection so this clause does not apply.	
20.5.7 Vehicle Access performance Standards (iv) Vehicle access standards	The vehicle access on Moray Place shall be constructed to heavy vehicle access standards. The Filleul Street access shall be constructed as a road to prevent confusion for pedestrians using Filleul Street.	**Complies**
20.5.7 Vehicle Access performance Standards (v) Dimension requirements for vehicle access on a site	Although residential by definition, vehicle accesses shall be between 6.0 and 9.0 metres wide to accommodate the commercial activities	**Complies**

Summary

The proposed hotel development is fully compliant with all transport related clauses for a commercial residential development in the Central Activity zone. This suggests the proposed development is consistent with what the Council expects to be provided in this location.

The traffic effects of the proposed hotel will be less than those of the existing car park.

A number of improvements including a roundabout at the Moray Place/Filleul Street intersection will provide significant improvements to the road environment and all road users including pedestrians.

The effects of granting this consent are less than minor.

Appendix A –

Traffic Counts

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-10 -- English (ENZ)

Datasets:

Site:	**[068_000412_000256] FILLEUL ST YORK PLACE - CARGILL ST <50> OS#**
Attribute:	[-45.870743 +170.502748]
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	14:53 Thursday, 26 February 2015 => 13:29 Friday, 6 March 2015,
Zone:	
File:	068_000412_000256 0 2015-03-06 1330.EC1 (Plus)
Identifier:	K3669WDC MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default axle (v4.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**14:54 Thursday, 26 February 2015 => 13:29 Friday, 6 March 2015 (7.94134)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (NZTA2011)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 51224 / 51607 (99.26%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-10
Site: 068_000412_000256.1.2NS
Description: **FILLEUL ST YORK PLACE - CARGILL ST <50> OS#**
Filter time: **14:54 Thursday, 26 February 2015 => 13:29 Friday, 6 March 2015**
Scheme: Vehicle classification (NZTA2011)
Filter: Cls(1-13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	11.0	11.0	14.0	26.0	30.5	121.0	112.0	20.5	44.5
0100-0200	3.0	5.0	8.0	13.0	28.5	59.0	78.0	14.3	27.9
0200-0300	2.0	3.0	4.0	6.0	18.0	40.0	62.0	8.5	19.1
0300-0400	6.0	1.0	7.0	4.0	14.5	35.0	26.0	7.8	13.5
0400-0500	8.0	13.0	11.0	11.0	17.0	14.0	27.0	12.8	14.8
0500-0600	19.0	19.0	20.0	16.0	19.0	21.0	14.0	18.7	18.4
0600-0700	53.0	53.0	49.0	43.0	45.0	18.0	10.0	48.0	39.5
0700-0800	185.0	178.0	186.0	173.0	167.5	40.0	22.0	176.2	139.9
0800-0900	**611.0**	**623.0**	**604.0**	**591.0**	**601.0**	125.0	53.0	**605.2**	476.1
0900-1000	418.0	413.0	427.0	422.0	425.0	325.0	178.0	421.7	379.1
1000-1100	407.0	464.0	438.0	419.0	446.0	477.0	340.0	436.7	429.6
1100-1200	430.0	477.0	484.0	478.0	555.5	**610.0**	**439.0**	496.7	**503.6**
1200-1300	423.0	563.0	558.0	587.0	625.5	659.0	**512.0**	563.7	**569.1**
1300-1400	479.0	515.0	535.0	552.0	447.0	**703.0**	475.0	495.8	519.1
1400-1500	470.0	499.0	546.0	281.0	572.0	487.0	489.0	441.5	453.1
1500-1600	559.0	616.0	585.0	629.0	646.0	448.0	428.0	610.7	567.5
1600-1700	**613.0**	**659.0**	**633.0**	608.0	**676.0**	382.0	343.0	**632.8**	565.3
1700-1800	557.0	657.0	609.0	**642.0**	634.0	330.0	248.0	623.5	539.9
1800-1900	323.0	343.0	397.0	349.5	389.0	275.0	168.0	358.5	324.3
1900-2000	185.0	209.0	355.0	267.0	287.0	341.0	144.0	261.7	256.9
2000-2100	163.0	180.0	185.0	197.5	180.0	188.0	122.0	183.8	176.6
2100-2200	126.0	136.0	143.0	124.0	187.0	210.0	112.0	140.0	145.3
2200-2300	57.0	80.0	144.0	104.5	168.0	177.0	58.0	109.7	111.6
2300-2400	23.0	23.0	67.0	66.5	152.0	123.0	26.0	66.3	68.4
Totals									
0700-1900	5475.0	6007.0	6002.0	5731.5	6184.5	4861.0	3695.0	5862.8	5466.6
0600-2200	6002.0	6585.0	6734.0	6363.0	6883.5	5618.0	4083.0	6496.3	6084.9
0600-0000	6082.0	6688.0	6945.0	6534.0	7203.5	5918.0	4167.0	6672.3	6264.9
0000-0000	6131.0	6740.0	7009.0	6610.0	7331.0	6208.0	4486.0	6755.0	6403.0
AM Peak	0800	0800	0800	0800	0800	1100	1100		
	611.0	623.0	604.0	591.0	601.0	610.0	439.0		
PM Peak	1600	1600	1600	1700	1600	1300	1200		
	613.0	659.0	633.0	642.0	676.0	703.0	512.0		

* - No data.

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-11 -- English (ENZ)

Datasets:

Site:	**[068_000335_000380] MORAY PLACE STUART ST - FILLEUL ST <50> OS#**
Attribute:	[-45.872745 +170.502430]
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration:	15:11 Monday, 27 April 2015 => 15:36 Wednesday, 6 May 2015,
Zone:	
File:	068_000335_000380 0 2015-05-06 1536.EC1 (Plus)
Identifier:	BH0740NN MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default axle (v4.08)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**15:12 Monday, 27 April 2015 => 15:36 Wednesday, 6 May 2015 (9.01686)**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound), P = North, Lane = 0-16
Separation:	Headway > 0 sec, Span 0 - 100 metre
Name:	Default Profile
Scheme:	Vehicle classification (NZTA2011)
Units:	Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile:	Vehicles = 39464 / 39641 (99.55%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-11
Site: 068_000335_000380.1.2NS
Description: **MORAY PLACE STUART ST - FILLEUL ST <50> OS#**
Filter time: **15:12 Monday, 27 April 2015 => 15:36 Wednesday, 6 May 2015**
Scheme: Vehicle classification (NZTA2011)
Filter: Cls(1-13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	1 - 7
Hour									
0000-0100	5.0	9.5	10.5	6.0	16.0	43.0	64.0	9.6	19.3
0100-0200	3.0	3.5	4.5	2.0	14.0	46.0	85.0	5.0	18.4
0200-0300	3.0	2.5	4.0	4.0	6.0	33.0	93.0	3.7	16.9
0300-0400	5.0	6.0	1.5	7.0	8.0	15.0	60.0	5.0	12.2
0400-0500	3.0	3.5	7.5	5.0	10.0	20.0	43.0	5.7	11.4
0500-0600	13.0	11.0	4.5	15.0	18.0	7.0	18.0	11.0	11.3
0600-0700	33.0	30.5	28.0	32.0	25.0	11.0	9.0	29.6	25.2
0700-0800	123.0	120.0	111.5	96.0	96.0	36.0	15.0	111.1	92.1
0800-0900	**388.0**	**409.5**	**416.5**	**402.0**	**394.0**	90.0	39.0	**405.1**	329.4
0900-1000	255.0	295.5	279.5	277.0	314.0	158.0	87.0	285.1	249.0
1000-1100	256.0	355.5	322.5	341.0	320.0	232.0	156.0	324.7	295.7
1100-1200	326.0	355.5	375.0	378.0	375.0	**375.0**	**271.0**	362.9	**354.0**
1200-1300	342.0	385.0	403.0	406.0	423.0	373.0	276.0	392.4	377.3
1300-1400	**401.0**	414.0	425.0	425.0	468.0	**395.0**	289.0	**424.6**	**406.2**
1400-1500	361.0	401.0	415.5	424.0	456.0	327.0	315.0	410.6	390.7
1500-1600	307.5	433.5	330.0	**464.0**	**495.0**	290.0	**317.0**	387.6	370.8
1600-1700	339.0	444.0	410.0	429.0	463.0	272.0	196.0	409.7	370.7
1700-1800	301.5	**449.5**	**449.0**	415.0	233.0	223.0	212.0	371.3	337.1
1800-1900	175.0	232.5	251.0	271.0	0.0	221.0	139.0	191.0	188.6
1900-2000	137.0	164.5	140.0	210.0	214.0	214.0	95.0	166.7	164.0
2000-2100	90.0	119.5	90.0	126.0	175.0	154.0	92.0	115.7	117.3
2100-2200	71.5	82.5	89.0	83.0	132.0	123.0	65.0	87.4	88.9
2200-2300	43.5	54.5	52.0	77.0	108.0	105.0	33.0	61.9	63.4
2300-2400	17.0	19.0	28.0	33.0	83.0	77.0	9.0	30.9	33.6
Totals									
0700-1900	3575.0	4295.5	4188.5	4328.0	4037.0	2992.0	2312.0	4076.2	3761.6
0600-2200	3906.5	4692.5	4535.5	4779.0	4583.0	3494.0	2573.0	4475.6	4157.0
0600-0000	3967.0	4766.0	4615.5	4889.0	4774.0	3676.0	2615.0	4568.3	4254.0
0000-0000	3999.0	4802.0	4648.0	4928.0	4846.0	3840.0	2978.0	4608.3	4343.7
AM Peak	0800	0800	0800	0800	0800	1100	1100		
	388.0	409.5	416.5	402.0	394.0	375.0	271.0		
PM Peak	1300	1700	1700	1500	1500	1300	1500		
	401.0	449.5	449.0	464.0	495.0	395.0	317.0		

* - No data.

Appendix B –

Crash data

First Street	Distance	D I R	Second street or landmark	Crash Number	Date DD/MM/YYYY	Day	Time HHMM	M V M	D R VH	VVV T 1 234	Factors and Roles A is for vehicle 1 B is for veh 2 etc	O B J E C T	C U R V E	W E T N S	L I G H T	W E T R	J U N C T	C O N T L	M A R K S	S P D L T	Total Inj F A T	S E R	I N J	P E a g e	C Y C a g e
MORAY PLACE	15E	FILLEUL ST	201271313	29/02/2012	Wed	1535	MO	CE	1C	386A		M	R	D	O	F		C	050					
MORAY PLACE	5E	FILLEUL ST	201440113	10/07/2014	Thu	1650	EA	CE	1C	386A		M	E	D	O	F	T	N	C	030				
MORAY PLACE	5E	FILLEUL ST	201416285	10/12/2014	Wed	1355	NB	CW	1	355A 377A 710B			E	D	O	F	T	G	P	030		1	38	
MORAY PLACE	I	FILLEUL ST	201271598	04/02/2012	Sat	2314	CC	CS	2	130A		IS	R	D	DO	F	T	G	R	050				
MORAY PLACE	I	FILLEUL ST	201441326	11/07/2014	Fri	1230	GA	CN	14	181A 357A			E	D	O	F	T	G	C	050				
FILLEUL ST	5N	MORAY PLACE	201418136	12/12/2014	Fri	1335	PO	CS	1E	383A			E	D	O	F	T	G	R	050		1	22	
FILLEUL ST	20N	MORAY PLACE	201173856	27/12/2011	Tue	0830	MO	CN	1C	357A 386A		M	R	D	B	F		C	030					
MORAY PLACE	20W	FILLEUL ST	201370027	06/01/2013	Sun	1750	MO	CE	1C	428A		M	M	D	O	F		C	050					
MORAY PLACE	5E	HARROP ST	201536696	04/05/2015	Mon	1100	MG	CW	1C	357A 357B 512B			E	D	B	F	T	G	C	050				
MORAY PLACE	60W	FILLEUL ST	201554086	05/11/2015	Thu	1440	MA	CW	1C	375B			R	D	B	F			C	050				
MORAY PLACE	40W	HARROP ST	201633863	25/02/2016	Thu	1855	EA	OG	1C	129A		M	E	W	O	L			C	050				

First Street	Distance	DI	Second street or landmark	Crash Number	Date DD/MM/YYYY	Day	Time HHMM	Description of Events	Crash Factors (ENV = Environmental factors)	Road	Natural Light	Weather	Junction	Cntrl	Tot Inj F A T	S E R	M I N
MORAY PLACE	15	E	FILLEUL ST	201271313	29/02/2012	Wed	1535	CAR1 EBD on MORAY PLACE hit Parked Vehicle while manoeuvring	CAR1 misjudged speed of own vehicle	Dry	Overcast	Fine	Unknown	N/A			
MORAY PLACE	5	E	FILLEUL ST	201440113	10/07/2014	Thu	1650	CAR1 EBD on MORAY PLACE hit parked veh, CAR1 hit Parked Vehicle	CAR1 misjudged speed of own vehicle	Dry	Overcast	Fine	T Type Junction	Nil			
MORAY PLACE	5	E	FILLEUL ST	201418285	10/12/2014	Wed	1355	CAR1 WBD on MORAY PLACE hit WHEELED PEDESTRIAN2 (Age 38) crossing road from right side	CAR1 attention diverted while trying to find intersection, didnt see/look when visibility obstructed by other vehicles WHEELED PEDESTRIAN2 crossing road	Dry	Overcast	Fine	T Type Junction	Give Way Sign			1
MORAY PLACE	1	I	FILLEUL ST	201271598	04/02/2012	Sat	2314	CAR1 SBD on FILLEUL ST lost control; went off road to right, CAR1 hit Traffic Island, Traffic Sign	CAR1 lost control	Dry	Dark	Fine	T Type Junction	Give Way Sign			
MORAY PLACE	1	I	FILLEUL ST	201441326	11/07/2014	Fri	1230	CAR1 NBD on MORAY PLACE hit rear of left turning SUV2	CAR1 following too closely, emotionally upset/road rage	Dry	Overcast	Fine	T Type Junction	Give Way Sign			
FILLEUL ST	5	N	MORAY PLACE	201418136	12/12/2014	Fri	1335	CAR1 SBD on FILLEUL ST hit PEDESTRIAN2 (Age 23)	CAR1 misjudged pedestrians movement or intention	Dry	Overcast	Fine	T Type Junction	Give Way Sign			1
FILLEUL ST	20	N	MORAY PLACE	201173856	27/12/2011	Tue	0830	CAR1 NBD on FILLEUL ST hit Parked Vehicle while manoeuvring	CAR1 emotionally upset/road rage, misjudged speed of own vehicle	Dry	Bright	Fine	Unknown	N/A			
MORAY PLACE	20	W	FILLEUL ST	201370027	06/01/2013	Sun	1750	CAR1 EBD on MORAY PLACE hit Parked Vehicle while manoeuvring	CAR1 parking brake not fully applied	Dry	Overcast	Fine	Unknown	N/A			
MORAY PLACE	5	E	HARROP ST	201539696	04/05/2015	Mon	1100	CAR1 WBD on MORAY PLACE hit CAR2 reversing along road	CAR1 emotionally upset/road rage CAR2 emotionally upset/road rage, intentional collision	Dry	Bright	Fine	T Type Junction	Give Way Sign			
MORAY PLACE	60	W	FILLEUL ST	201554086	05/11/2015	Thu	1440	CAR1 WBD on MORAY PLACE hit CAR2 parking/unparking	CAR1 Did not check / notice another party	Dry	Bright	Fine	Unknown	N/A			
MORAY PLACE	40	W	HARROP ST	201633863	25/02/2016	Thu	1855	OTHER1 SBD on MORAY PLACE hit parked veh, OTHER1 hit Parked Vehicle	OTHER1 too far left/right	Wet	Overcast	Light Rain	Unknown	N/A			