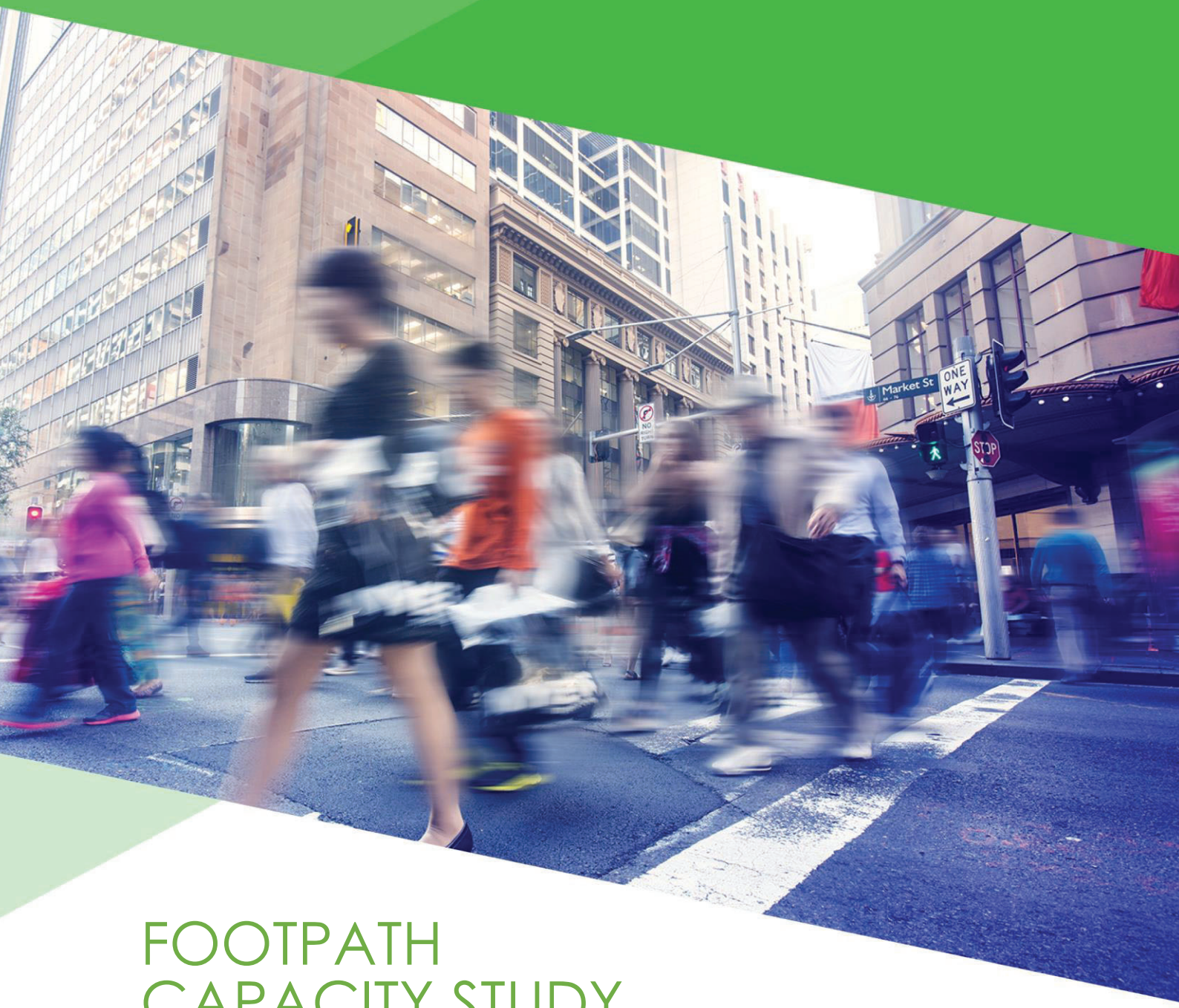
Attachment A15

Footpath Pedestrian Capacity Study
187 Thomas Street, Haymarket



FOOTPATH CAPACITY STUDY

Proposed Mixed-Use Development
187 Thomas Street, Haymarket

Reference: 19.462r03v04
Date: April 2020

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DOCUMENT VERIFICATION

Job Number	18.462			
Project	187 Thomas Street, Haymarket			
Client	Greaton Development Pty Ltd			
Revision	Date	Prepared By	Checked By	Signed
v04	14/04/2020	Neil Caga	Ben Liddell	

CONTENTS

1. INTRODUCTION

TRAFFIX has been commissioned by Greaton Development Pty Ltd to undertake a footpath capacity study for the proposed development at 187 Thomas Street, Haymarket. A concept scheme has been envisaged by Francis-Jones Morehen Thorp Pty Ltd, comprising of a mixed-use development comprising 234 hotel rooms, 219m^2 gross floor area (GFA) of retail space, 40,529 m^2 GFA of commercial space (including 7,429m^2 GFA of innovation space). This report assesses the person trip impacts on the adjacent footpaths and internal pedestrian links as required by Council.

This report documents the findings of our investigations and should be read in the context of the Planning Proposal prepared separately.

The report is structured as follows:

- Section 2: Introduces the capacity study
- Section 3: Documents existing site conditions
- Section 4: Describes the proposed development
- Section 5: Discusses future pedestrian links in relation to the development
- Section 6: Assesses the person trip impacts
- Section 7: Outlines the study assumptions
- Section 8: Discusses the study results
- Section 9: Presents the overall study conclusions

2. FOOTPATH CAPACITY STUDY

2.1 Study Objectives

The primary objective of this study is to provide guidance and direction towards creating a cohesive environment for pedestrian within the site and along the adjacent road frontages at 187 Thomas Street, Haymarket. This can be achieved by undertaking a pedestrian comfort assessment in accordance with the Pedestrian Comfort Guidance – Technical Guide for London 2019. This guideline seeks to provide planners and designers a methodology to assess existing or future pedestrian footpaths for various land uses. The main objectives of a capacity study are to:

- To understand the level of pedestrian comfort and experience as pedestrians walk through streets and crossings;
- Identify potential issues and apply appropriate mitigation measures at an early stage of the planning and design process.

As such, the provision of a holistic pedestrian environment would create several benefits for the proposed site, such as:

- Encouraging active travel options for staff, customers and visitors of the development in order to promote a healthier lifestyle;
- To take advantage of the various public transport services and nearby amenities operating within the vicinity of the development; and
- Reduction of personal vehicle usage and carbon emissions to create a positive image of the development as innovative and environmentally conscious.

2.2 Methodology

In accordance with advice from the City of Sydney Council, this footpath capacity study has been prepared as per the Pedestrian Comfort Guidance – Technical Guide for London 2019, commissioned by Transport for London. This technical guide provides a methodology to assess and classify Pedestrian Comfort Levels (PCL) based on the level of crowding a pedestrian can experience on any given footpath.

More specifically, this study focuses on an assessment of the pedestrian comfort, with the methodology outlined as follows:

- Identification and selection of a site, noting static activity and general pedestrian behaviour;
- Classification of the site into one of the following area types:
  - High Street large range of food, drink and retail premises;
  - Office and Retail substantial number of commercial buildings;
  - Residential privately owned properties facing frontages;
  - Tourist Attraction areas with high tourist activity; and
  - Transport Interchange local and national transport interchanges.
- Collection of activity data to determine pedestrian flow at footpaths and crossings;
- Collect footpath data measurements including width and street furniture locations;
- Application of the collected data to the 'Worksheet (Footway)' spreadsheet to calculate PCL and crowding, measured as pedestrians per metre of a clear footway width per minute (ppmm); and
- Review and analysis of results at each nominated location, based on the PCLs as summarised in **Table 1** below.

Table 1 – Pedestrian Comfort Levels

Pedestrian Comfort Level	Description
PCL A – Comfortable for All Areas	
A+	< 3 ppmm and < 3% restricted movement
A	3 to 5 ppmm and 13% restricted movement
A-	6 to 8 ppmm and 22% restricted movement
PCL B – Minimum Recommended for All Areas	
B+	9 to 11 ppmm and 31% restricted movement
B	12 to 14 ppmm and 41% restricted movement
B-	15 to 17 ppmm and 50% restricted movement
PCL C – Increasingly Uncomfortable	
C+	18 to 20 ppmm and 59% restricted movement
C	21 to 23 ppmm and 69% restricted movement
C-	24 to 26 ppmm and 78% restricted movement
PCL D or E – Very Uncomfortable	
D	27 to 35 ppmm and 100% restricted movement
E	> 35 ppmm and 100% restricted movement

3. EXISTING CONDITIONS

3.1 Location and Site

The subject site at 187 Thomas Street, Haymarket is located approximately 280 metres northwest of Central Railway Station and is legally known as Lot 100 of DP804958. More specifically, it is situated on the eastern side of Quay Street, between Thomas Street and Valentine Street.

The site is irregular in configuration and has a total area of approximately 2,351m^2. It has a northern boundary of 25 metres and eastern boundary of 66 metres to neighbouring commercial developments. The southern frontage of Valentine Street measures 52 metres and the western frontage to Quay Street / Thomas Street measures 69 metres.

The site currently accommodates nine-storeys of commercial space, ground floor retail and a public car park. Pedestrian access to the site is currently provided via two (2) pedestrian links that connect George Street and Thomas Street, and another that along the western frontage of the site that links Thomas Street to Valentine Street.

A Site Plan is presented in **Figure 1**. Reference should also be made to the Photographic Record presented in **Appendix A** which provides an appreciation of the general character of roads and other key attributes in proximity to the site.

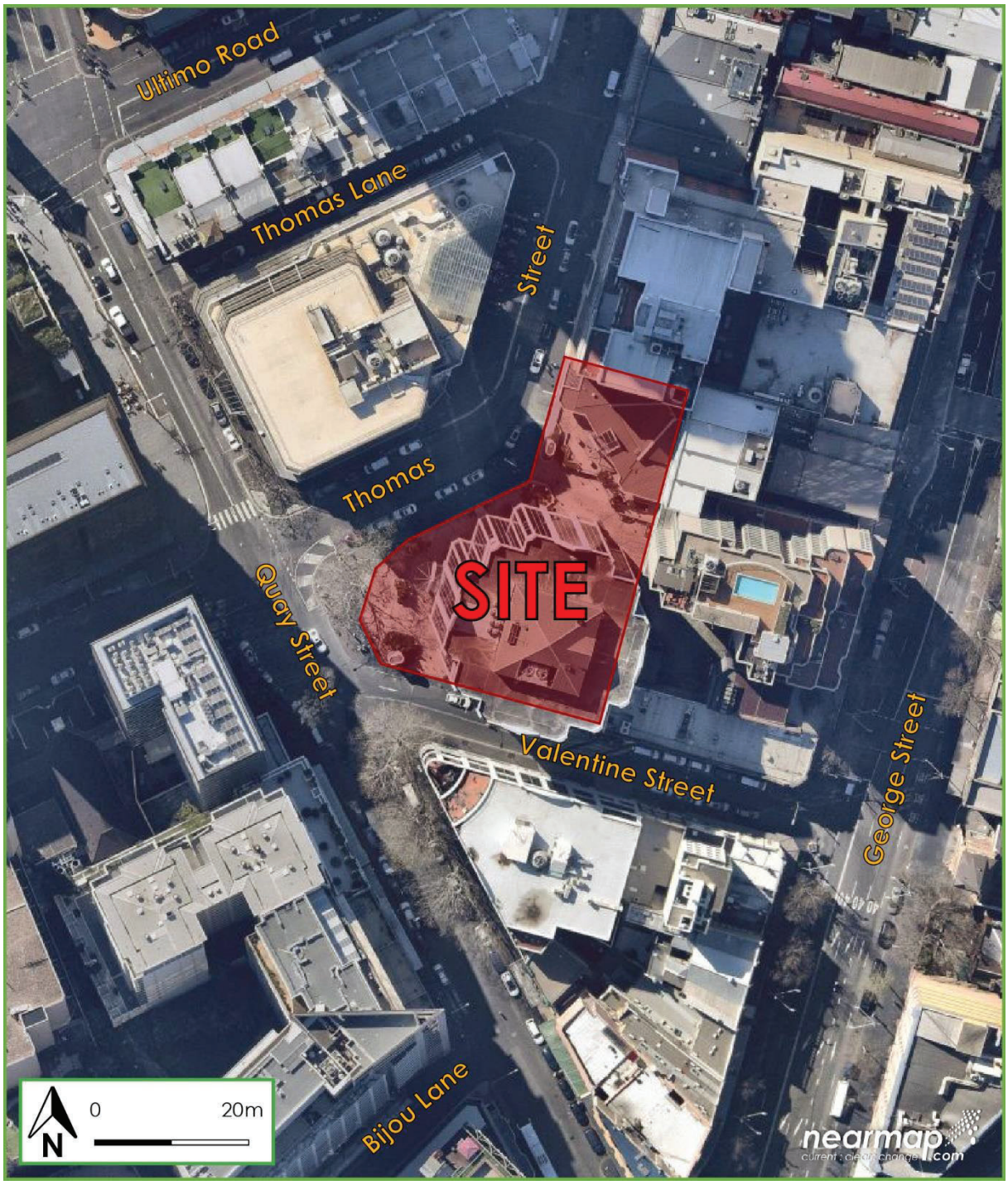


Figure 1: Site Plan

3.2 Pedestrian Facilities

The existing pedestrian facilities in the locality are outlined below:

- George Street: a main road that traverses north-south and provides pedestrian links between Circular Quay in the north and Broadway in the south. Within the vicinity of the site, it accommodates relatively wide pedestrian footpaths along both sides of the road, with signalised pedestrian crossings at Rawson Place and Valentine Street. George Street provides a pedestrian link onto Thomas Street, with the access situated approximately 30 metres north of Valentine Street.
- Quay Street: a local road that generally traverses north-south between Paddy's Market Haymarket in the north and Central Railway Station in the south. Within the vicinity of the site, it accommodates footpaths along both sides of the road, with a 'zebra crossing' along the north side of Thomas Street. Quay Street provides a pedestrian link along the western frontage of the site between Thomas Street and Valentine Street.
- Thomas Street: a local road that generally traverses northeast-west between China town in the northeast and Haymarket in the west. Within the vicinity of the site, it accommodates pedestrian footpaths along both sides of the road, noting a pedestrian plaza between Ultimo Road and Thomas Lane. Thomas Street provides two (2) pedestrian links to George Street and Valentine Street.
- Valentine Street: a local road that traverses east-west between George Street in the east and Quay Street in the west. It accommodates pedestrian footpaths along both sides of the road, noting that the ground floor level of the site has been set back along this frontage to cater for a wider pedestrian footpath. Valentine Street provides a pedestrian link to Thomas Street, along the western frontage of the site.

3.3 Survey Counts

For the purposes of assessing the pedestrian capacity, pedestrian survey counts were undertaken for the key pedestrian movements within proximity of the site. This survey was performed on Tuesday, 5 November 2019 during the following periods:

- Morning peak period (7:30am to 9:30am);
- Midday peak period (11:30am to 1:30pm); and
- Evening peak period (4:30pm to 6:30pm).

The results of this survey are provided in **Appendix B**, which identified the following key aspects:

- AM, PM and midday peak periods;
- Scale factor between typical peak periods and midday peak period;
- Existing pedestrian movements at the frontage and internal through link; and
- Base case for future pedestrian trip projections.

The above key aspects were utilised during our footpath assessment, as per the Pedestrian Comfort Guidance – Technical Guide for London 2019.

4. DESCRIPTION OF PROPOSAL

A detailed description of the changes sought to the *City of Sydney Local Environmental Plan 2012 (LEP)* is provided in the Planning Proposal, prepared separately. For the purposes of this assessment, the concept development involves the construction of a multi-storey mixed-use development, comprising the following components and associated gross floor areas (GFA):

- Hotel Accommodation with a total provision for 234 rooms;
- Commercial component with a total of 40,529m^2 GFA, including:
  - 33,100m^2 GFA of office space; and
  - 7,429m^2 GFA of innovation space.
- Retail component along the ground floor level with a total of 219m^2 GFA; and
- Provision for a total of 79 vehicles within the basement level car park.

Reference should also be made to the Reduced Plans presented in **Appendix C**. The future internal and external pedestrian links are presented in **Figure 2** below:

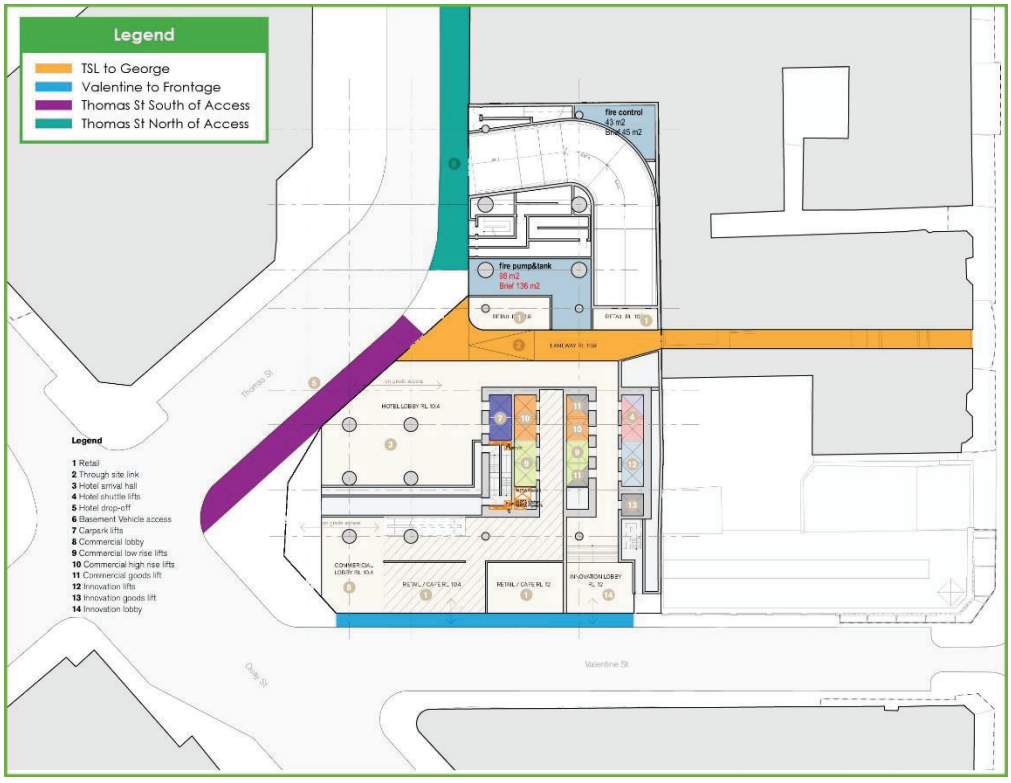


Figure 2: Pedestrian Links

5. FUTURE PEDESTRIAN INFRASTRUCTURE

Major changes are proposed for Quay Street in Haymarket to improve pedestrian and cyclist connections with the aim of also improving connectivity between Central Station and Darling Quarter. A new shared path is proposed along the western side of Quay Street between George Street and Ultimo Road.

Closure of Quay Street between Thomas Street and Valentine Street is proposed to create a new public plaza area with a continuous footpath treatment envisaged for the intersection of Quay Street and Thomas Street.

Valentine Street, which allows for two-way flow of traffic under existing conditions is proposed to be converted to a one-way street with traffic flowing in an easterly direction, noting that there is potential for this street to be a future shared zone. Additional parking will also be introduced along the southern side of Valentine Street. The proposed works along Valentine Street are subject to RMS approval. Reference should be made to **Appendix D** which presents the proposed Quay Street Concept Plan.

6. PROPOSED PERSON TRIP GENERATION

6.1 Proposed Office Development

6.1.1 Office Peak Period Trips

The RMS Technical Direction TDT 2013/04a provides person trip generation rates for office block developments within various NSW metropolitan areas. Determining the average trip rate using the relevant areas within Sydney (removing regional areas) the person trip rates are as follows:

- 2.5 person trips per 100m^2 GFA in the AM peak hour period; and
- 1.8 person trips per 100m^2 GFA in the PM peak hour period.

Application of the above person trip generation rates to the proposed 40,529m^2 of office GFA results in the following person trips:

- 1,013 person trips during the morning peak hour period; and
- 730 person trips during the evening peak hour period.

In order to derive an appropriate trip rate for the midday (lunchtime) peak hour period, the pedestrian survey data was examined to establish a midday scaling factor that can be applied to the morning peak hour period. The surveys demonstrated that the midday peak hour period was approximately 1.92 times larger than the morning peak hour period. Application of this scaling factor to the morning peak person generation results in the following:

- 1,945 person trips during the midday peak hour period.

6.1.2 Office Average Trips

The RMS Technical Direction TDT 2013/04a provides daily person trip generation rates for office block developments within various NSW metropolitan areas. Determining the daily trip rate using the relevant areas within Sydney (removing regional areas) the person trip rates are as follows:

- 17.87 person trips per 100m^2 GFA per day.

Application of the above person trip generation rates to the proposed 40,529m^2 of office GFA results in the following daily person trips:

- 7,243 person trips per day.

To determine an average person trip rate per hour throughout the day, the above result was divided by 12 to reflect the typical daylight period. This results in the following average:

- 604 person trips per hour.

6.2 Proposed Hotel Development

6.2.1 Hotel Peak Period Trips

The anticipated person trip generation for the hotel component has been assessed, noting that the RMS Guide to Traffic Generating Developments nor the RMS Technical Direction TDT 2013/04a provide a person trip generation rate for hotels. In this regard, the high-density residential rates outlined in the RMS TDT 2013/04a will be adopted and is considered appropriately applicable. Determining the average trip rate using the relevant areas within Sydney (removing regional areas) the person trip rates are as follows:

- 0.32 person trips per room in the AM peak hour period; and
- 0.27 person trips per room in the PM peak hour period.

Application of the above person trip generation rates to the proposed 234 hotel rooms results in the following person trips:

- 75 person trips during the AM peak hour period; and
- 63 person trips during the PM peak hour period.

It is noted that the hotel component of the subject development will generally not experience a midday peak. This is largely because the majority of hotel guests will be off site during this peak period, unlike office staff who will generally leave the building for lunch.

6.2.2 Hotel Average Trips

The RMS Technical Direction TDT 2013/04a provides daily person trip generation rates for high density residential developments (considered comparable to a hotel development) within various NSW metropolitan areas. Determining the daily trip rate using the relevant areas within Sydney (removing regional areas) the person trip rates are as follows:

- 2.13 person trips per room per day.

Application of the above person trip generation rates to the proposed 234 room hotel results in the following daily person trips:

- 498 person trips per day.

To determine an average person trip rate per hour throughout the day, the above result was divided by 12 to reflect the typical daylight period. This results in the following average:

- 42 person trips per hour.

6.3 Combined Proposed Person Trip Generation

The combined person trip generation of the office and hotel components are summarised below:

6.3.1 Peak Period Trips

- 1,088 person trips during the AM peak hour period;
- 1,945 person trips during the midday peak hour period; and
- 793 person trips during the PM peak hour period.

6.3.2 Average Trips

- 646 person trips per hour during the AM;
- 604 person trips per hour during the midday period; and
- 646 person trips per hour during the PM.

6.4 Person Trip Distribution

In order to assess the existing footpath capacities and to determine any remedial measures required, the person trips from the proposed development were distributed at the site's frontages at the rates described in **Table 2** below:

Table 2: Internal Person Trip Distributions (Peaks and Averages)

Period	Thomas Street Access	Valentine Street Access	George Street Access
Office Development			
AM	10%	60%	30%
Midday	40%	40%	20%
PM	10%	60%	30%
Hotel Development			
AM	33%	34%	33%
Midday (using hourly average)	33%	34%	33%
PM	33%	34%	33%

The office percentages shown in Table 2 above, take into consideration the location of Central Station (for staff movements in the AM and PM peaks) and the location of nearby food and beverage developments for the midday period. Hotel guests were distributed evenly over the three (3) access points, noting that major attractors are located towards Darling Harbour and George Street.

The proposed development trips were also split along the Thomas Street and Valentine Street frontages to reflect the location of major attractors within the area. These percentages are outlined below:

- 60% of trips will travel north along Thomas Street towards Chinatown/Paddy's Markets;
- 40% of trips will travel south along Thomas Street towards Quay Street;
- 50% of trips will travel west along Valentine Street towards Quay Street/Darling Harbour; and
- 50% of trips will travel east along Valentine Street towards George Street.

These distributions are considered appropriate for the purpose of this assessment.

6.5 Background Growth

In order to assess the 2039 pedestrian conditions surrounding the site, as required by Council, the following growth rates were adopted on the adjacent streets, noting the planned pedestrianisation of Quay Street:

- 2% growth per annum on Valentine Street;
- 4% growth per annum on Thomas Street; and
- 4% growth per annum on George Street.

These growth rates are considered a conservative assessment of the pedestrian growth within the area and were applied to the existing survey data.

7. ASSESSMENT ASSUMPTIONS

A number of assumptions were adopted throughout this assessment and are listed below for reference:

- Hotel person trip generation is comparable to high density residential developments;
- Hotel developments have AM and PM peaks only;
- Internal pedestrian traffic is distributed as outlined in **Section 6.4**;
- The midday scale factor was determined using the existing pedestrian survey volumes;
- The average day has approximately 12 hours of daylight;
- The Quay Street concept design will be adopted and constructed by 2039;
- Future growth rates are described as per **Section 6.5**;
- The Thomas Street – George Street link is 4.0m wide; and
- The Valentine Street footpath is 1.8m wide.

8. ASSESSMENT RESULTS

8.1 Street Frontage Results and Recommendations

8.1.1 Valentine Street Performance

Valentine Street recorded a Pedestrian Comfort Level (PCL) score of 'F' during average flow, peak flow and Average of Maximum Activity (AMA) conditions, thus remedial measures will be required to increase this score to an acceptable level. In order to provide a PCL score of 'B' during the AMA period (or A- during peak), the Valentine Street frontage should be widened to provide a total width of 4.4m. However, given the potential future pedestrian works discussed in Section 5, most notably converting Valentine Street into a shared zone, the proposed number of pedestrians could be accommodated within a future shared zone. As such, the future shared zone would increase the overall pedestrian capacity along Valentine Street and in turn, increase the associated PCL during the AMA period. It should also be noted that Council is not supportive of setting the building back to provide a wider footpath.

8.1.2 Thomas Street Performance (South of Access)

This section of Thomas Street recorded a PCL score of 'A' during average flow conditions. Thomas Street also recorded a PCL score of 'A-' during the peak hour flow conditions. These conditions are considered acceptable and should operate comfortably during the peak hour. It is noted that the PCL score drops to a 'B+' during the AMA, however, should still operate satisfactorily with the existing footpath width of 3.7m (+800mm > AMA requirement). As such, no external improvements are required.

8.1.3 Thomas Street Performance (North of Access)

This section of Thomas Street recorded a PCL score of 'A' during average flow conditions. Thomas Street also recorded a PCL score of 'A-' during the peak hour flow conditions. These conditions are considered acceptable and should operate comfortably during the peak hour. It is noted that the PCL score drops to a 'B+' during the AMA, however, should still operate satisfactorily with the existing footpath width of 3.9m (+800mm > AMA requirement). As such, no external improvements are required.

8.2 Through Site Link Results and Recommendations

8.2.1 Valentine Link Performance

No Valentine Street link is proposed in the current scheme, thus no assessment has been conducted.

8.2.2 Thomas Street – George Street Performance

The Thomas Street – George Street link recorded a PCL score of 'A' during average flow conditions and a score of 'A-' during the peak hour flow conditions. It is noted that the PCL score drops to a 'B' during the AMA, however, should still operate satisfactorily with the proposed width of 4.0m (+150mm > AMA requirement). As such, no improvements are required. It is noted that the internal link reduces in width to approximately 2.5m on the eastern boundary. This restriction will need to be addressed by any future development east of the subject site.

Reference should be made to **Appendix E** which presents the footpath assessment output.

9. CONCLUSIONS

The following matters are noteworthy:

- A concept scheme has been envisaged by Francis-Jones Morehen Thorp Pty Ltd, comprising of a mixed-use development comprising 234 hotel rooms, 219m^2 gross floor area (GFA) of retail space, 40,529m^2 GFA of commercial space (including 7,429m^2 GFA of innovation space). This report assesses the person trip impacts on the adjacent footpaths and internal pedestrian links as required by Council.
- The primary objective of this study is to provide guidance and direction towards creating a cohesive environment for pedestrian within the site and along the adjacent road frontages at 187 Thomas Street, Haymarket.
- The proposed development generates the following peak person trips:
  - 1,088 person trips during the AM peak hour period;
  - 1,945 person trips during the midday peak hour period; and
  - 793 person trips during the PM peak hour period.

  The above trips were distributed to the development's access point in accordance with **Section 6.4.1**.
- The results demonstrate that the Valentine Street footpath is required to be widened in order to increase the PCL score for the AMA period. This increased pedestrian capacity can however be achievable via a future shared zone along Valentine Street, subject to the approval from the RMS. The Thomas Street sections operate satisfactorily with PCL scores of 'A-' during the peak hour period. The Thomas Street to George Street link should operate satisfactorily with a total width of 4.0m.

This footpath capacity study demonstrates that sufficient pedestrian comfort levels can be achieved once the above recommendations are implemented in any future designs. TRAFFIX anticipates an ongoing involvement during the development approval process.

APPENDIX A

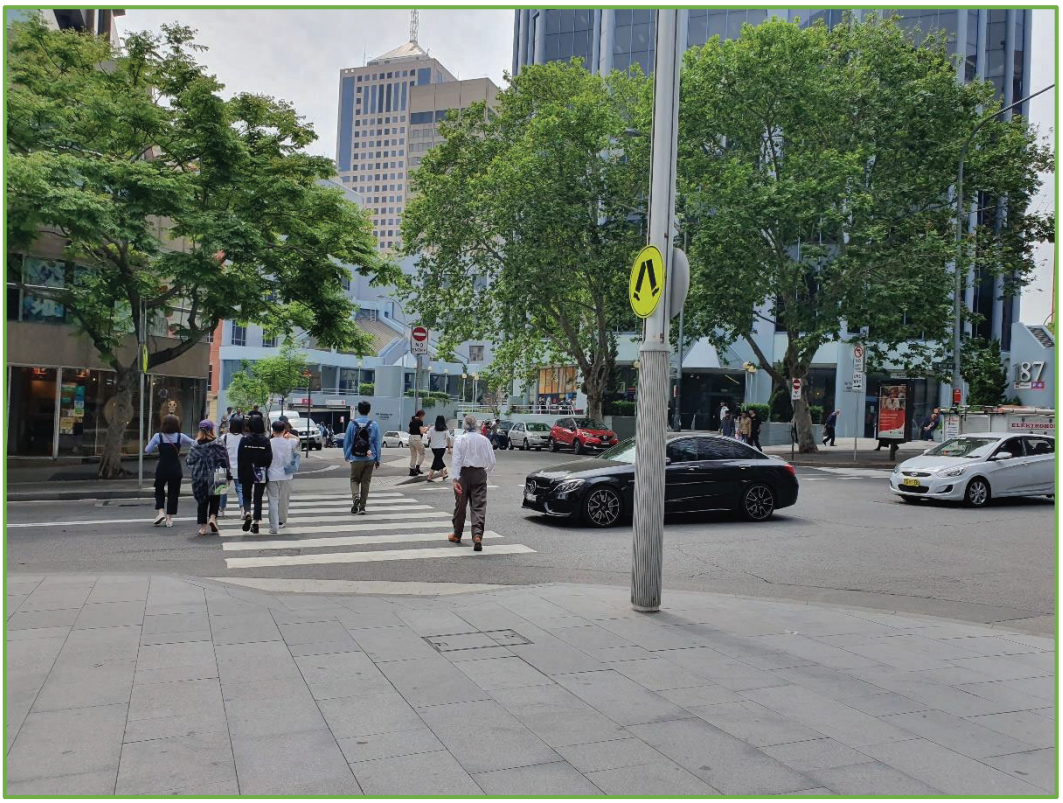
Photographic Record

View looking south-east from Quay Street towards subject site

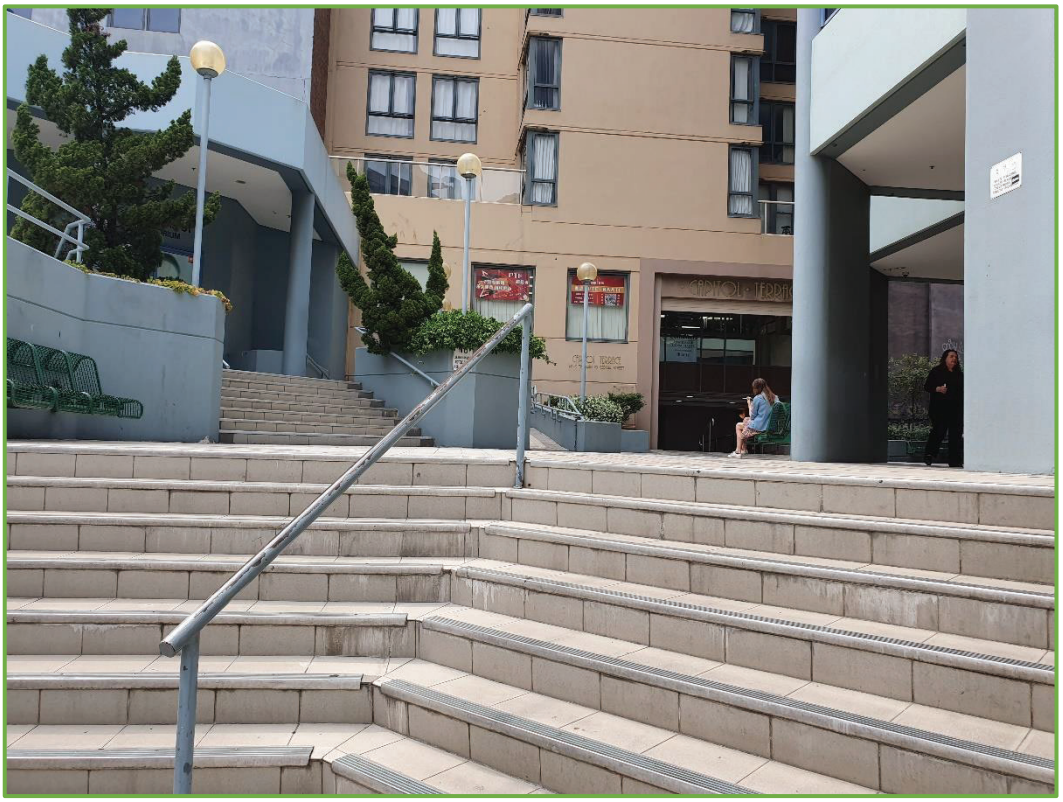
View looking east from intersection of Quay Street and Valentine Street

View looking south-west along Thomas Street

View looking south-west at intersection of Thomas Street and Quay Street



View looking west towards intersection of Thomas Street and Quay Street



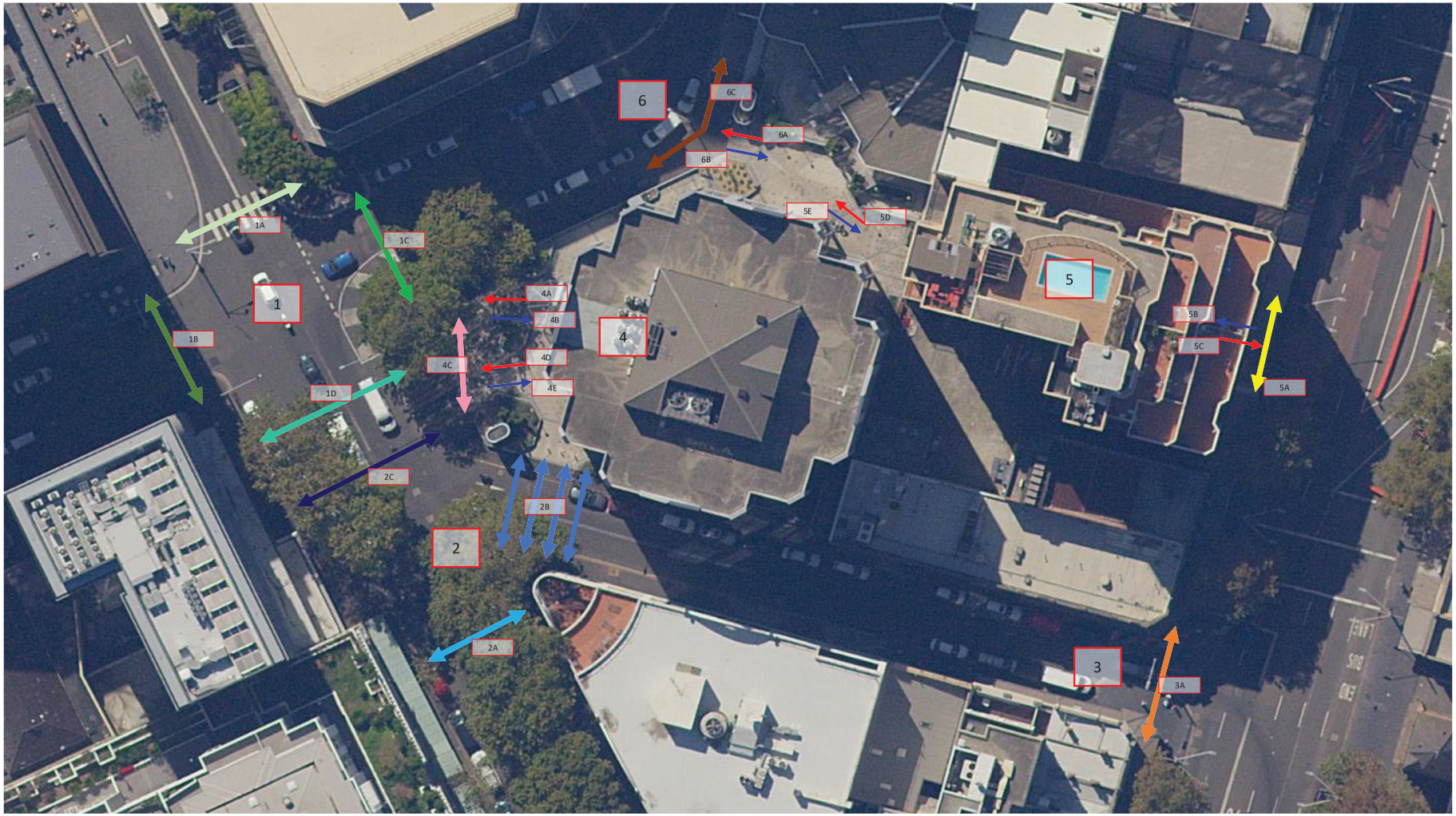
View looking east towards pedestrian connection to George Street

View looking west from pedestrian connection between George Street and Thomas Street

View looking west from subject site towards Thomas Street

APPENDIX B

Survey Results



187 Thomas Street - HAYMARKET

Traffic Information Specialist
ABN: 42 613 389 923
Email info@tistraffic.com.au

Location	187 Thomas Street
Suburb	HAYMARKET
Client	TRAFFIX
Job No/Name	19130
Survey Duration	6 HOURS
Day/Date	Tuesday, 5 November 2019

MOVEMENTS	1				2			3	4					5					6		
Time Per 15 Mins	A	B	C	D	A	B	C	A	A	B	C	D	E	A	B	C	D	E	A	B	C
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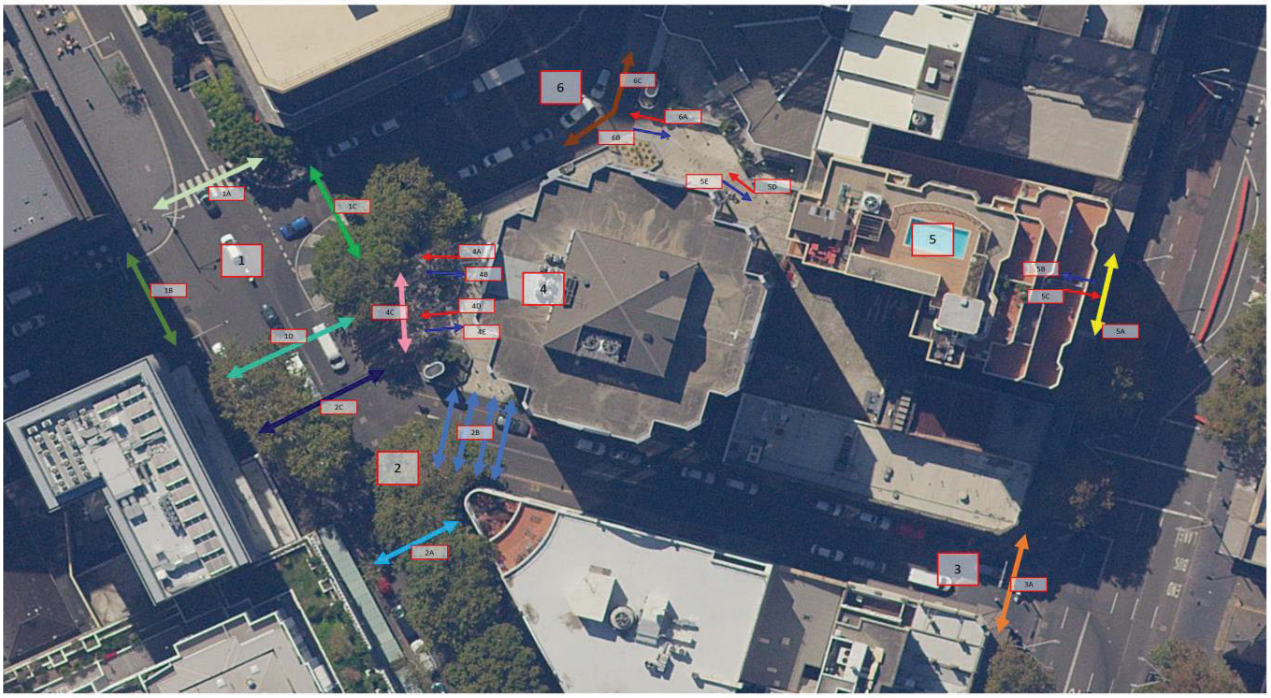
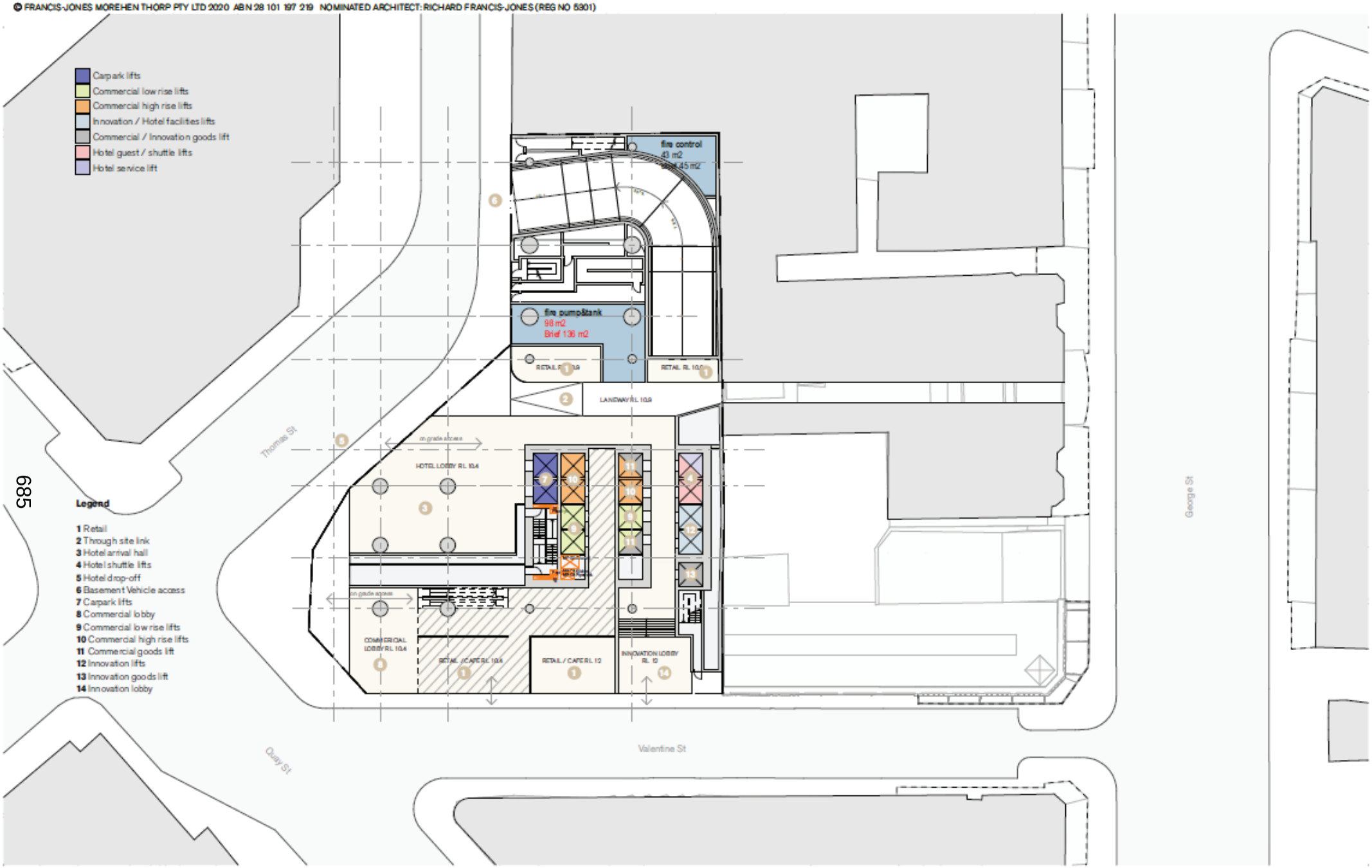
8:00 - 9:00	453	915	281	19	37	423	55	550	68	148	177	31	27	545	253	74	102	5	150	53	187
8:15 - 9:15	472	904	325	26	49	455	61	550	75	187	171	30	39	528	272	89	108	12	153	72	179
8:30 - 9:30	442	859	323	31	52	411	57	497	81	170	137	27	44	492	237	90	85	17	108	73	132
Period End																					
14:30 - 15:30	711	883	355	35	70	392	53	753	123	86	165	22	28	772	116	96	50	29	84	60	182
11:45 - 12:45	809	930	383	49	68	431	61	813	133	101	196	30	31	822	125	132	59	33	117	64	214
12:00 - 13:00	970	1020	465	57	98	506	83	837	232	120	217	57	33	855	142	175	72	35	200	80	281
12:15 - 13:15	1101	1089	556	66	114	676	107	874	285	165	306	84	68	918	171	199	83	70	259	136	465
12:30 - 13:30	1141	1069	642	65	130	781	119	916	298	208	352	101	79	944	195	205	104	77	300	180	506
Period End																					
16:30 - 17:30	699	1327	401	21	90	503	75	973	108	74	272	40	25	951	105	200	68	65	115	88	225
16:45 - 17:45	751	1437	403	28	97	523	73	1051	113	62	253	39	21	1008	110	203	64	61	108	88	246
17:00 - 18:00	831	1528	475	29	87	628	94	1047	162	67	314	43	19	1008	118	228	68	95	125	116	372
17:15 - 18:15	911	1540	544	30	95	693	88	1048	159	61	337	54	25	1006	114	218	61	105	109	121	399
17:30 - 18:30	921	1558	545	36	97	727	83	1000	150	59	362	58	28	972	98	210	50	93	96	109	419
Period End																					



187 Thomas Street - HAYMARKET

APPENDIX C

Reduced Plans



fjmt

Ground Floor

GREATON - 187 Thomas St

0 4 10 20m

1:400 @ A3

27/2/20

For Information

fjmt-1006

APPENDIX D

Quay Street – Concept Plans

Quay Street

The City is upgrading several streets and public spaces in Haymarket, Chinatown to improve walking and cycling in the city centre.

Quay Street is a popular walking connection between Central and Darling Quarter.

Proposed improvements include:

1.
Wider footpath on the western side of Quay Street to improve safety between George Street and Chinatown.

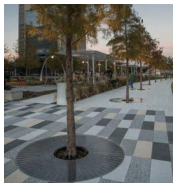
2.
Closing Quay Street at Valentine Street to create a new public plaza with street trees, lighting and furniture.

3.
A new shared path on the western side of George Street to Ultimo Road, creating a safe bike connection for the growing number of people riding.

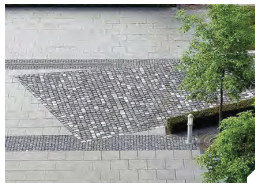
4.
Extended footpath and new pedestrian crossing on Thomas Street to improve safety and prioritise walking journeys.

5.
New bike lanterns on George and Lee Streets to create a bike connection to Central Station. (with Approval from The Roads and Maritime Services)


paving pattern


paving pattern with tree pit


outdoor cafe seating

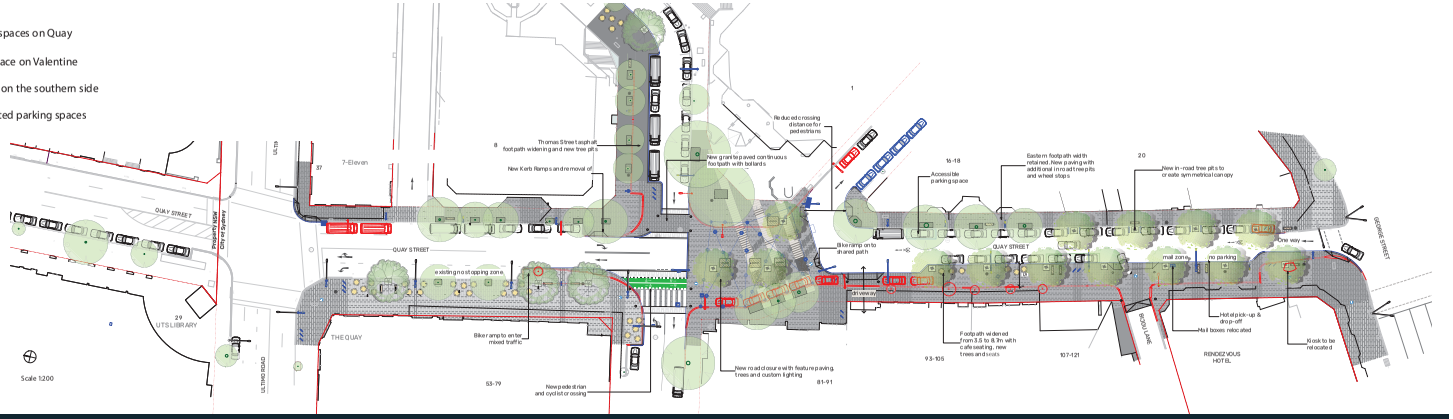

Cobblestone paving to encourage slow and safe riding

Traffic changes:

- New one-way loop George Street via Quay Street and Valentine Street
- Thomas Street road closure
- Removing the existing pedestrian crossing on Quay Street

Parking changes:

- All loading zones retained
- Removing seven ticketed parking spaces on Quay Street
- Removing one ticketed parking space on Valentine Street
- Four new ticketed parking spaces on the southern side of Valentine Street
- Total net parking loss of four ticketed parking spaces



Concept design

Project / City South: Quay Street & Connecting Streets, Chinatown


Seating platforms in Darling Quarter


pedestrian crossing with adjacent bike crossing


catenary lighting


catenary lighting and outdoor dining

city of villages

CITY OF SYDNEY

APPENDIX E

Assessment Outputs

PEDESTRIAN COMFORT ASSESSMENT: FOOTWAY COMFORT

Clear Examples

	Location Name	Location Type	Area Type	Average Flow	Peak Hour Flow	Ave of Max Activity	Total Width	Building Edge?	Kerb Edge?	Any unusable width (<0.6m)	Street Furniture 1			Street Furniture 2			Street Furniture 3			Clear Footway Width	Average Flow Crowding (ppmm)	Peak Hour Flow Crowding (ppmm)	Ave of Max Activity Crowding (ppmm)	Pedestrian Comfort Level (For Average Flows)			Pedestrian Comfort Level (For Peak Hour Flows)			Pedestrian Comfort Level (Average of Max Activity)		
											Type	Width of Furniture	Buffer	Type	Width of Furniture	Buffer	Type	Width of Furniture	Buffer					Average PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+	Peak Hour PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+	Ave of Max PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+
1																																
2																																
3																																
4																																
5																																
6																																
7	TSL Thomas St - George St	Full Footway Width	Office Retail	874	1564	2622	4	Yes	No											3.8	4	7	12	A	1.70	1.50	A-	2.38	2.18	B	3.85	3.65
8																																
9																																
10																																

PEDESTRIAN COMFORT ASSESSMENT: FOOTWAY COMFORT

Clear Examples

	Location Name	Location Type	Area Type	Average Flow	Peak Hour Flow	Ave of Max Activity	Total Width	Building Edge?	Kerb Edge?	Any unusable width (<0.6m)	Street Furniture 1			Street Furniture 2			Street Furniture 3			Clear Footway Width	Average Flow Crowding (ppmm)	Peak Hour Flow Crowding (ppmm)	Ave of Max Activity Crowding (ppmm)	Pedestrian Comfort Level (For Average Flows)			Pedestrian Comfort Level (For Peak Hour Flows)			Pedestrian Comfort Level (Average of Max Activity)		
											Type	Width of Furniture	Buffer	Type	Width of Furniture	Buffer	Type	Width of Furniture	Buffer					Average PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+	Peak Hour PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+	Ave of Max PCL	Total Width Required for PCL B+	Clear Width Required For PCL B+
1																																
2																																
3																																
4																																
5																																
6	Valentine Street	Full Footway Width	Office Retail	952	1550	2856	1.8	Yes	Yes											1.4	11	18	34	F	1.90	1.50	F	2.56	2.16	F	4.37	3.97
7	Thomas Street South of Acce	Full Footway Width	Office Retail	695	1420	2085	3.7	Yes	Yes											3.3	4	7	11	A	1.90	1.50	A-	2.38	1.98	B+	3.30	2.90
8	Thomas Street North of Acce	Full Footway Width	Office Retail	743	1576	2229	3.9	Yes	Yes											3.5	4	8	11	A	1.90	1.50	A-	2.59	2.19	B+	3.50	3.10
9																																
10																																