



GEORGE ST: PUBLIC LIFE STREET ASSESSMENT

RESEARCH AND REPORT COMPILED BY HERE+NOW | PRODUCED FOR CITY OF EDINBURGH COUNCIL | OCTOBER 2017

H E R E
+ N O W

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HERE+NOW is an Edinburgh-based landscape architecture studio specialised in co-design and urban research.

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INTRODUCTION

This Public Life Street Assessment aims to give insight into the existing public life and pedestrian movement dynamics of George St and the connecting streets.

This research and report has been conducted by HERE+NOW Landscape Architects on behalf of City of Edinburgh Council. We hope this report summarising our findings will prove useful to help inform the re-design of these streets with a people friendly, walkable, public life focus.

Streets covered by this study include:

- George Street
- North Castle Street
- Castle Street
- Frederick Street
- Hanover Street

RESEARCH LOCATIONS

A comprehensive series of research locations were chosen to give a detailed study of the George St area. At each of these locations various research studies were conducted, based on 'direct observation' techniques. These included: tracing studies and pedestrian counts to reveal pedestrian movement function, as well as behavioural mapping, and overall place function analysis using Gehl's 12 Quality Criteria.

Data was analysed at each research location, at different times of day, and on different days of the week, to give insight into the public life and pedestrian dynamics at each of these specific locations. Where appropriate, findings were also combined to give general observations, trends and findings across the George St area. The combination of this location-specific data with overall analysis of the broader trends this reveals, allow us to better understand the public life dynamics and pedestrian qualities of the George St area as a whole.

METHODOLOGY

A thorough and systematic methodology of direct observation studies was conducted throughout the George St area. Information was gathered at each of the 15 research locations, at 3 different times of day (8am, 12.30pm, 5pm), and across 3 different days of the week:

- Tues 25 July (14°C, light cloud, dry, wind 3m/s)
- Sun 3 Sept (16°C, clear AM/cloudy PM, wind 5m/s)
- Weds 6 Sept (16°C, mostly clear, dry, wind 6m/s)

By selecting a mix of weekday and weekend days, and different times of day, we could observe the most diverse range of usage patterns.

The tools and techniques used included:

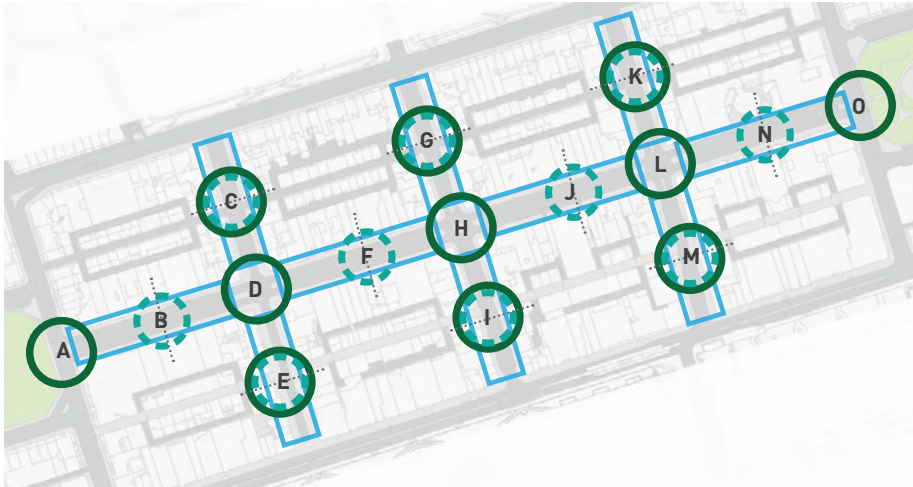
- **Tracing studies (revealing pedestrian movement + desire lines)** at 11 locations, 10min study, at 8am, 12.30pm, 5pm on each of 3 research days.
- **Pedestrian count studies (footfall volume and direction)** at 10 locations, 10min study, at 8am, 12.30pm, 5pm on each of 3 research days.
- **Behavioural mapping study (revealing existing public life)** at 10 locations, 10min study, at 8am, 12.30pm, 5pm on each of 3 research days.
- **12 Quality Criteria - overall place function assessment** at 10 locations, conducted at 8am, 12.30pm, 5pm on each of 3 research days. Assessed against Gehl's 12 Quality Criteria for place function.

This methodology incorporates recognised tools and techniques to reveal insight into both the place function and pedestrian movement function of the George St and adjacent street areas. In addition a standalone study and assessment was made for each street section against Gehl's 12 Quality Criteria to give further insight into place function. This comprehensive mix of tools and techniques ensures the fullest understanding of the current movement dynamics and place function of this area. This may provide useful information to feed into any re-design of George St and the intersecting streets.

The tools, techniques and time for each study are consistent to the standardised methodology that the HERE+NOW team have already used for 8 different Edinburgh local town centres for the City of Edinburgh. This enables potential for comparison of the findings from this study of the George St area with other different areas of the city if desired.

“ If you don't count, you don't count!
 Collecting information about how public spaces are used is critical to their improvement. Data helps to build the case for why investment and improvements need to be made, and creates a “baseline” of information from which you can measure your success.
 8-80 Cities, Gehl Architects ”

RESEARCH LOCATIONS AND TECHNIQUES



○ Tracing studies (revealing pedestrian movement + desire lines)

→ 11 locations, 10min study, at 8am, 12.30pm, 5pm on each research day.

- Researchers observe pedestrians in the area and mark on a map where each person moves with a line. This is done over a 10min period to build up and reveal dominant routes and desire lines.
- This reveals pedestrian movement function and desire lines at these specific locations. It also gives insight and may show patterns across the George St area. These studies highlight the extent to which these movements and desire lines are facilitated by the current street infrastructure, and problem spots where they are not.
- Tracing studies take place at key pedestrian (and vehicular) traffic junctions or nodes, where movement in all directions can be observed and noted down to give a visual picture of pedestrian flow across the area.



Pedestrian count studies (footfall volume and direction)

→ 10 locations, 10min study, at 8am, 12.30pm, 5pm on each research day.

- Pedestrian counts help inform movement function. They reveal footfall volume and direction at specific locations whilst also showing patterns across George St and the adjacent streets.
- Researchers count the number of pedestrians passing an 'invisible line' in front of them (indicated by the grey dotted line), on both sides of the road. They also note the direction each pedestrian is walking in as they are counted. This is either marked as to the left of that invisible line, to the right, or 'other' (for example walking diagonally across the road).



Behavioural mapping study (revealing existing public life)

→ 10 locations, 10min study, at 8am, 12.30pm, 5pm on each research day.

- Behavioural mapping records the type and duration of different pedestrian activities. Categories include sitting, window shopping, waiting to cross the road, standing talking to others, talking on a mobile phone, and smoking). This helps reveal both existing public life and place function.
- Data feeds into the place function of each street section.
- It also reveals the type and diversity of existing public life, identifying where different user activities occur.

12 Quality Criteria - overall place function assessment

→ 10 locations, standalone study conducted separate to research days

- The place function of each street is assessed according to the '12 Quality Criteria' themes (Jan Gehl, Cities for People, 2010) that together help create a conducive setting for public life.
- Detailed notes, observations and photographs are recorded.
- Conducted as a standalone assessment by an experienced Chartered Landscape Architect/Urban Designer, using direct on-the-ground observation of these street spaces and skilled expertise to assess each area against the 12 Quality Criteria.
- Observations from research days and learnings from the other 3 studies for each location are combined with this standalone assessment to assess overall place function/public life for each location.

EXECUTIVE SUMMARY

This Public Life Street Assessment of the George St area has revealed a number of trends relating to:

- current pedestrian movement and desire lines (including where these do not match existing street infrastructure),
- the location and intensity of footfall,
- pedestrian behaviour and activity,
- and overall place function.

This executive summary highlights the key findings from this research, and the four research methods used to investigate these themes (tracing studies, pedestrian counts, behavioural mapping and place function assessment). It is followed by individual, more detailed sections showing the full data collected and findings for each location. This information can be used to input into the design process when considering improvements to be made to the George St area. It can be also used as an evidence base or 'baseline' for later comparison of the impact that any changes to the street environment have had 'post-occupancy'.

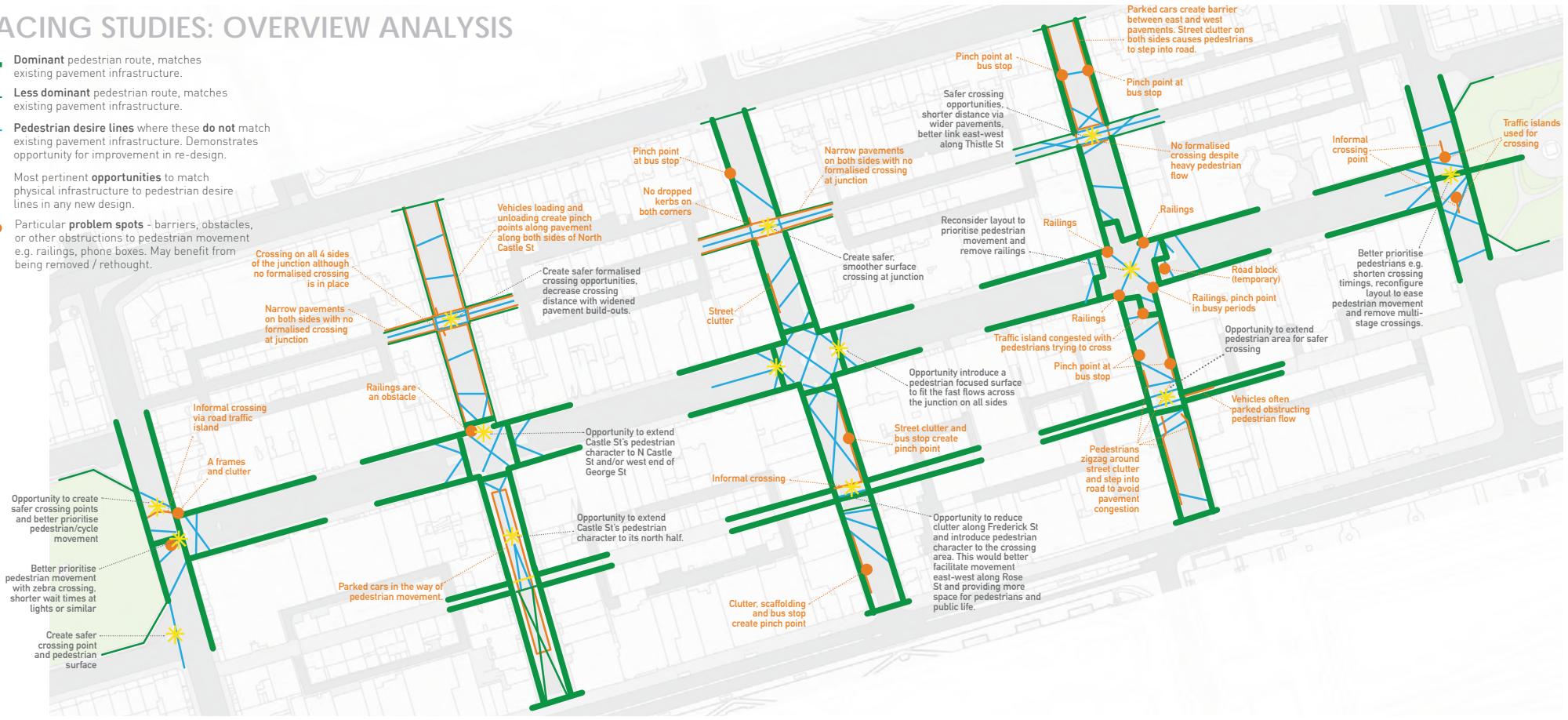
In this way, we hope this Public Life Street Assessment provides useful information that can input into positive changes or improvements for the George St area and how pedestrians utilise and experience these street spaces.

OVERALL FINDINGS

- **There is a general need to improve pedestrian priority and opportunities for public life.** Currently vehicles are dominant in the study area, with street layouts favouring their movement or parking over space for pedestrian movement and public life. This creates linear street environments with public life pushed to facade edges.
- **There is a general lack of public seating available throughout the study area.** This results in pedestrians using building facade steps/recesses as informal places to pause or rest. A lack of frequent, and plentiful public rest spots/seating reduces the accessibility and walkability of the public realm for the most diverse range of pedestrians. It also misses opportunities for increasing public life.
- **Pedestrian desire lines are frequently located away from existing pavement or crossing infrastructure.** This indicates the current street layout does not fully align with desired pedestrian movement. This can result in frequent informal and sometimes hazardous crossing in between traffic/parked cars, and a frustrating walking experience. Desire lines deviating from traffic islands as part of multi-stage crossings further indicate frustration with existing crossing infrastructure, positioning and wait times.
- **The comparatively high quality public realm and pedestrian-priority approach taken at Castle St is the most successful in terms of public life and pedestrian movement in the study area.** However, whilst more successful than all other streets in this study, Castle St is not perfect. There is clear demand for additional public seating to facilitate more optional/recreational activities. The addition of street trees, seating and more nodal/sub-division of street space would help further enhance the pedestrian experience and act as 'hooks' for public life, whilst helping mitigate climatic factors such as wind/light rain. There are also some issues with loading vehicles and parking. Nonetheless, the pedestrian-priority approach at Castle St helps significantly promote public life and pedestrian movement. These lessons could be learnt and applied to other streets in the George St area.
- **Hanover St (south) experiences the highest footfall in the study area and functions as a necessary pedestrian movement route.** Due to a combination of high peak footfall, street clutter, insufficient pavement space at rush hour, and lack of pedestrian priority at crossing points, the pedestrian street infrastructure is often over-capacity or congested. There is a demonstrable need for pedestrian movement to be better facilitated by the street layout. In terms of public life, few optional/recreational activities are possible here due to the noise, proximity and visual dominance of vehicles, as well as high pedestrian volumes causing pavement congestion and few options to retreat from the thoroughfare.
- **There is a need to improve conditions for east-west pedestrian movement along Rose St and to better connect sections of Hill/Young/Thistle St over road junctions.** Currently pedestrians have to informally cross between moving traffic/parked cars due to a lack of pedestrian crossing infrastructure at the junctions of Hill/Young/Thistle St over N Castle/Frederick/Hanover St. There are long wait times and frequent pedestrian congestion at signalised lights over Frederick and Hanover St at Rose St.
- **Junctions of George St with Hanover St and Frederick St create particular problem spots for pedestrian movement at present.** Vehicle movement has been prioritised. Pavement and pedestrian crossing infrastructure requires pedestrians to deviate long distances from their desired line of movement, often with multi-stage crossings.
- **There is a need to rationalise street clutter.** Poorly positioned bins, A-frames, bus stops and poles currently create pinch points obstructing pedestrian movement. These should be removed or repositioned.

TRACING STUDIES: OVERVIEW ANALYSIS

- Dominant pedestrian route, matches existing pavement infrastructure.
- Less dominant pedestrian route, matches existing pavement infrastructure.
- Pedestrian desire lines where these do not match existing pavement infrastructure. Demonstrates opportunity for improvement in re-design.
- ✦ Most pertinent opportunities to match physical infrastructure to pedestrian desire lines in any new design.
- Particular problem spots - barriers, obstacles, or other obstructions to pedestrian movement e.g. railings, phone boxes. May benefit from being removed / rethought.



TRACING STUDIES

Tracing studies reveal pedestrian movement dynamics. They highlight spatially the pedestrian movement flow, including any desire lines, and in what comparative volumes pedestrians use different routes. Tracing studies also show where pedestrian movement is modified by the existing infrastructure or not currently accommodated by the existing street infrastructure.

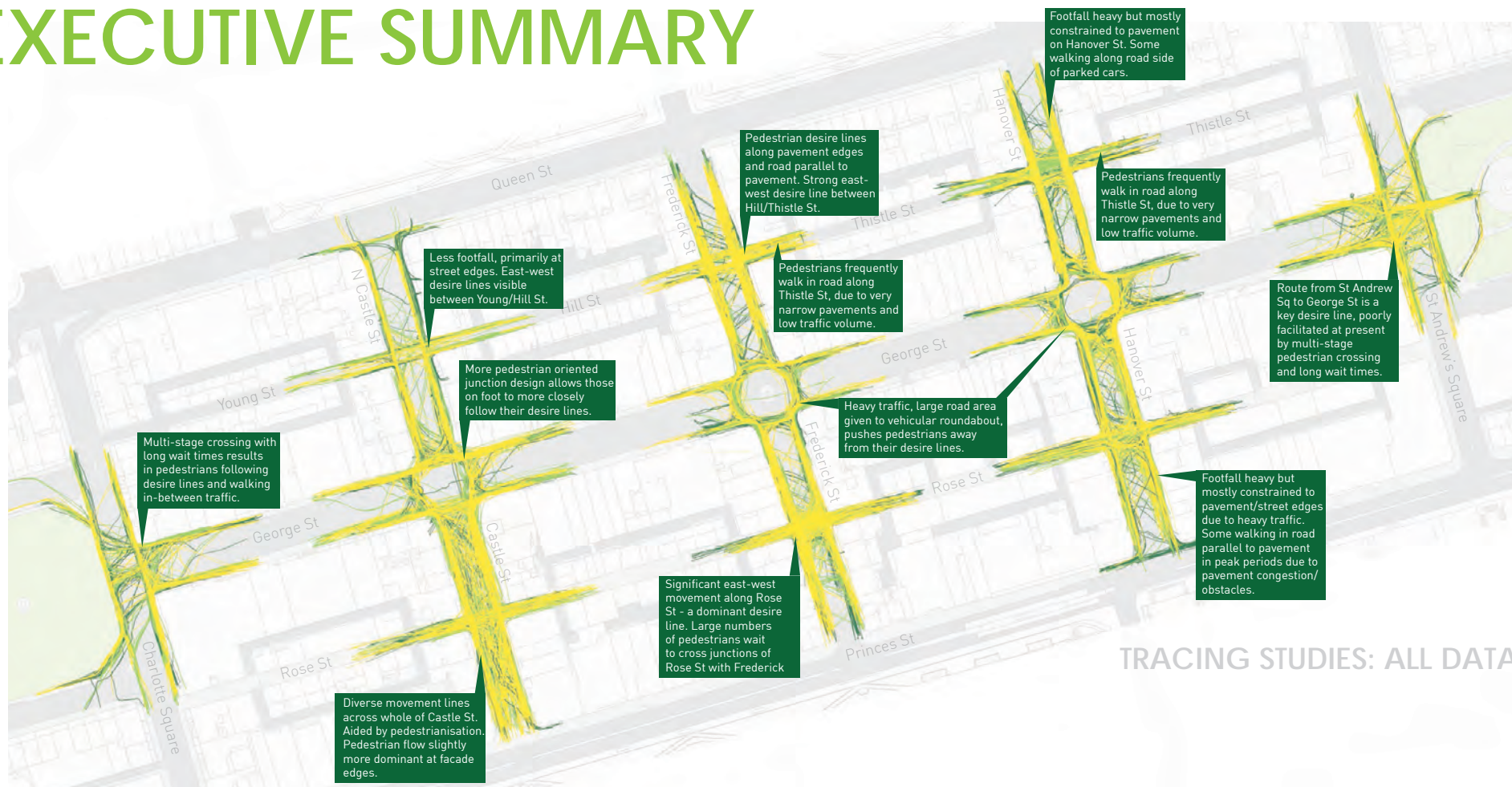
Key findings from tracing studies included:

- Most pedestrian movement is in an east-west or north-south direction, in correlation with the existing street layout. However improved connection between east and west sides of Castle St, Frederick St and Hanover St, and between the north and south sides of George St is needed. Desire lines are visible informally crossing these streets but are not sufficiently provided for by the existing street layout, in which moving and stationary vehicles form a visual and physical barrier. Improving this walkable connectivity between opposite facades/pavements would be beneficial. This might take the form of additional pedestrianisation of certain whole road segments, improvements to existing junctions

to better prioritise pedestrian movement, or alternatively build out wider pavements at key points mid street section to reduce road crossing distances at additional zebra crossing points.

- The junctions of George St with St Andrew Sq, Hanover St, Frederick St, and Charlotte Sq prioritise vehicular movement over walking and cycling. These large junctions feature multi-stage crossings with central traffic islands for pedestrians to wait on, long waiting periods for the 'green man', and railings that push pedestrians away from their desired line of movement. These frustrations result in pedestrians walking within the road to take more direct routes or crossing on

EXECUTIVE SUMMARY



the 'red man'. These behaviours can be hazardous. At the busiest junction (George St/Hanover St), the existing narrow pavement corners and traffic islands are not sufficiently wide to accommodate high footfall in peak periods.

- **East-west pedestrian movement along Rose St, and Young, Hill and Thistle St is not prioritised and is significantly hindered by the existing street layout.** For example, there is a lack of pedestrian crossing infrastructure connecting Young/Hill/Thistle Street over N Castle St/Frederick St/Hanover St. There are

also long pedestrian waiting periods and congestion at the signalised crossings to move east-west along Rose St over Frederick and Hanover St. Walking in the road is common along Hill/Young/Thistle St due to narrow pavements that cannot accommodate two people walking side by side. A lack of drop kerbs and/or continuous pedestrian surfacing for those moving in a north-south direction also hinders pedestrian movement over Young/Hill/Thistle St.

- **Street clutter and bus stops create pinch points along Frederick St and Hanover St.** Combined with

high footfall, this creates an effective narrowing of the available pavement, and pedestrian congestion. Tracing studies show where pedestrians step into the road for periods to avoid this clutter and congestion, particularly on Hanover and Frederick St. Street clutter should be removed, and pavements widened where necessary.

PEDESTRIAN COUNTS

Pedestrian counts reveal footfall volume and direction at key locations throughout the George St area. Pedestrian counts spatially highlight these pedestrian movement dynamics and flow. They give quantitative information about the comparative numbers of pedestrians using different routes and going in different directions. This helps build a picture up as a whole of how pedestrians are moving around the area, and how this varies depending on time of day or day of week.

Key findings from pedestrian counts were:

- **Hanover Street (south) has the highest footfall, and shows a distinctly different pattern to Frederick St south and Castle St (south) due to its dominance as a vehicular and pedestrian through-route.** Hanover St (south) has an average of 38.9 pedestrians passing/minute. Busiest at lunch time and late afternoon. Lowest footfall on Sunday morning (8am), when shops were closed and fewer commuters. Footfall is primarily in a southerly direction on the east pavement of Hanover St, and roughly equitable in a north/south direction on the west pavement. This may be because Hanover St south serves as an important thoroughfare, point of transport exchange and connection for commuters on foot toward Waverley Station, bus services and the wider city, and routes between The Mound, Edinburgh Bus Station and other George St destinations. High footfall at this location is not sufficiently accommodated or prioritised via the existing street infrastructure, and is in need of improvement.
- **The quietest locations were to the north-west of the area at North Castle St (C) and Frederick St (north) (G).** North Castle Street had a significantly lower average number of pedestrians per minute than any other location on George St (5.5 people/minute). This is likely to reflect the lack of retail/restaurant frontages providing fewer opportunities to pause or interact on the street. Instead, those walking through were observed to primarily appear to be commuters walking to work or those visiting guest-houses/offices. Footfall was also low at Frederick St (north), however, with an average of 10.7 people per minute, was nearly double that of N Castle St. This may be due to the higher number of active frontages (particularly on the east side) providing outdoor seating opportunities and more varied and active street life. The west end of George St at location B was the third quietest, followed by location K (Hanover St north) supporting the trend that the north and west of the area experiences least footfall.
- **Weekends were quieter than weekdays, with less footfall at all locations.** This disparity was largest at Hanover St south (M) and N Castle St (C) - the busiest and quietest street sections in the George St area, respectively, which both had significantly lower footfall on weekend days compared to weekdays. This may indicate these streets derive most of their footfall from weekday commuters. Interestingly, Location B (the west end of George St) had half the footfall of other George St locations on the weekend. This may be due to fewer active facades and greater distance from transport hubs like the train and bus stations at this end of George St.
- **High pedestrian volumes on both north and south sides of George Street, with the direction of travel from the east and west ends of George St towards the centre.** This correlates with high levels of recreational activity recorded in the behavioural mapping study across almost all George St locations. The high footfall and levels of public life along George St are likely due - in part - to the presence of active frontages, density of outdoor seating and opportunities for social exchange. Some of this high footfall from the east end of George St toward the Hanover St/Frederick St may also be due to commuters moving from the nearby bus station toward other bus interchanges or work locations to the south-west.
- **The highest footfall on George St itself was recorded to the east at locations J and N.** An average of 22.2 and 23.8 pedestrians/minute respectively. Weekend mornings (8am) were particularly quiet at J and N due to shops being closed. Footfall peaked at lunch time, with highest average footfall on weekday lunchtimes.
- **The east pavement of Frederick St south has a strong directional component to its pedestrian movement - in a northerly direction toward George St from Princes St. Similarly at Castle St, the east side of the pavement showed more dominant movement in a northerly direction toward George St, as did the west pavement, but to a lesser extent.** This northerly movement may be due to pedestrians filtering off the main artery of Princes Street toward shops on George St.
- **At location F (George St between Castle St and Frederick St), more pedestrians move in an easterly direction at lunchtimes throughout the week.** This is true for weekdays and weekend days, and on both sides of the pavement.

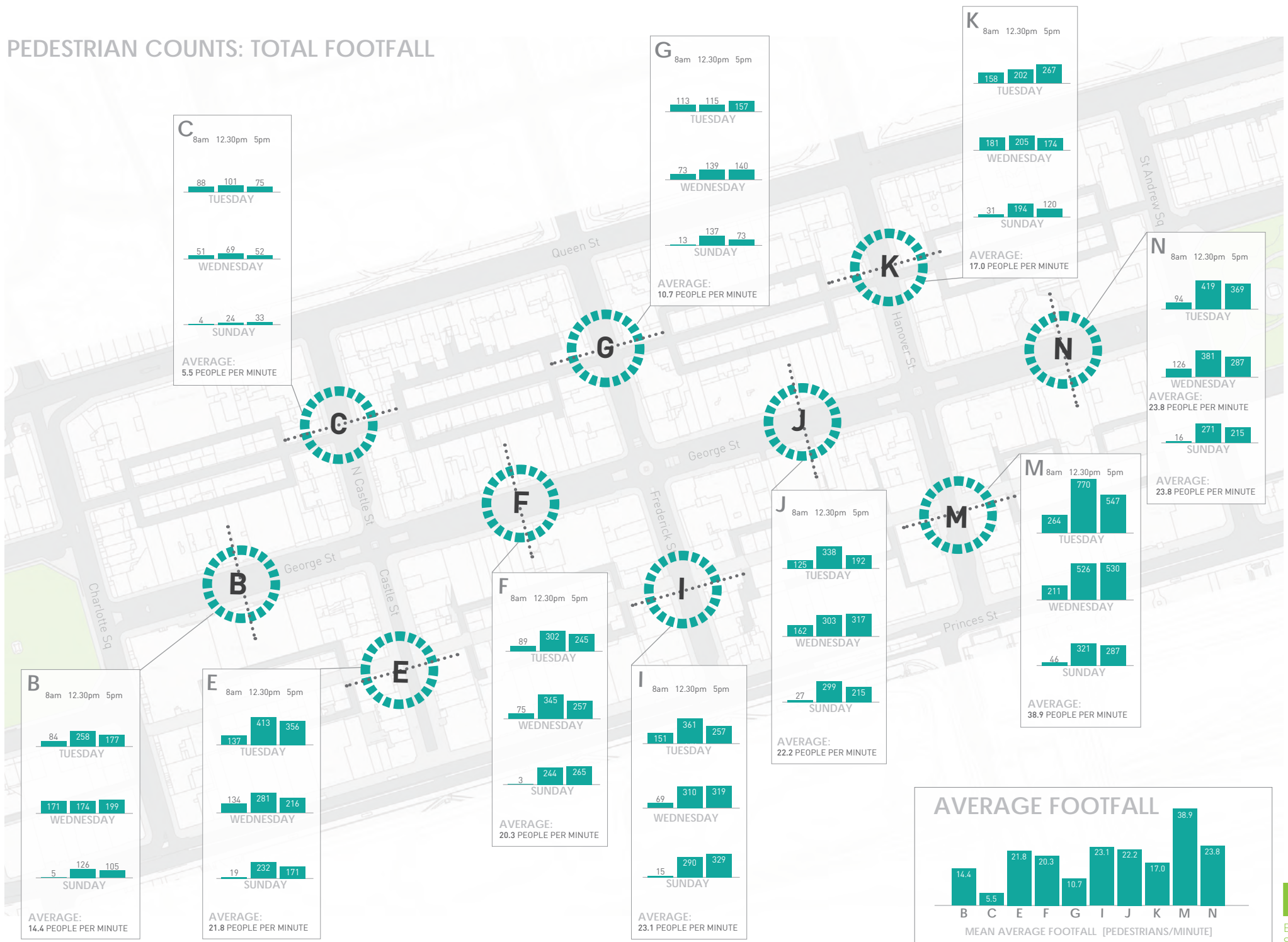
EXECUTIVE SUMMARY



PEDESTRIAN COUNTS: OVERALL TRENDS

-  **Highest footfall route** based on comparative pedestrian count data from research days.
-  **Moderate footfall route** based on comparative pedestrian count data from research days.
-  **Low footfall route** based on comparative pedestrian count data from research days.
-  **Dominant direction of movement** where this was considerably more than any other.
-  **Roughly equitable directions of movement** where these were similar in both directions along the pavement.

PEDESTRIAN COUNTS: TOTAL FOOTFALL



EXECUTIVE SUMMARY

BEHAVIOURAL MAPPING

Behavioural mapping studies reveal what existing public life activities and behaviours are already taking place in the street environment. They reveal, and spatially locate, specific user activities occurring in the public realm, and their duration.

Behavioural activities can be classified as 'recreational', 'optional' or 'necessary'. These terms from Jan Gehl's book 'How to Study Public Life'. A street environment should not just facilitate necessary activities (e.g. waiting to cross the road on the way to the shops/work), but also 'optional' activities whereby you actively choose to spend more time in the public realm (e.g. window shopping) and 'recreational' activities whereby you socialise with others in the street environment (e.g. sitting at outdoor cafe seating with friends).

Behavioural mapping studies also help reveal and feed into the current 'place function' of George Street and the intersecting streets. They do this by revealing where the existing street environment is already conducive to public life and staying activities and where improvement is needed.

Key findings from behavioural mapping studies were:

- **Necessary activities are more prevalent to the east of the George St study area.** Particularly Hanover St where large numbers of pedestrians wait to cross multi-stage crossings at George St, or building up on street corners and into the road at Princes St as they attempt to move east-west.
- **Castle St [south] has the highest concentration of recreational activities and public life.** This is aided by a higher quality and more pedestrian friendly detail design (including some public seating). Partial pedestrianisation allows for markets, and activity within the central street area (not just at the edges).
- **The Castle St/George St intersection operates as an important node for social exchange,** facilitated by the wider pavement corners, with groups stopping to talk/take photos on the corners.
- **More public life than elsewhere in the study area was observed on the east side of Castle St and Frederick St [North], which get afternoon/evening sun,** creating positive conditions for their outdoor cafe seating in good weather.
- **George St between Frederick/Castle St, north side of George St between Frederick/Hanover St, North Castle St and Frederick St [north] on the west side have less recreational activity,** likely due to the lack of outdoor cafe/bar seating on these stretches.
- **Hanover St/George St junction has the highest concentration of necessary activities, resulting from pedestrians waiting to cross the street in all directions.** Long waiting periods and multi-stage crossings indicate a layout that favours vehicle movement over those on foot. Junctions at Charlotte Sq, Frederick St/Princes St, Frederick St [crossing east-west at Rose St], Hanover St/Princes St, Hanover St [crossing east-west at Rose St], St Andrews Sq, and Hanover St (north) crossing east-west at Thistle St also demonstrate long necessary waiting times for pedestrians and street layouts that could be improved.
- **The junction corners of Rose St and Thistle St where these intersect with Frederick St/Hanover St/Castle St are important nodes for social exchange and east-west direction crossings.** Currently these are poorly facilitated by the existing infrastructure [except at Castle St].
- **Steps/building entrances provide the vast majority of public seating/stopping opportunities.** These offer an informal space for smokers/small groups to wait/talk off the main thoroughfare.
- **Public benches are limited but popular. This indicates a lack of available public space for optional/recreational activities.** More public seating is in demand, and would provide new chances for social exchange/rest stops.
- **Almost all stationary behavioural activity occurs at street edges on the existing pavement.** Few recreational/optional activities occur within the larger central road area of George St or the adjacent streets due to dominance of parking/moving traffic. Street edges also provide more pleasant microclimatic conditions for public life due to a lack shelter from wind/rain in the primarily linear and exposed current street layout (for example, no street trees, few sheltered nodal spots). There is opportunity to use more of the street width for pedestrian activity and public life via a rethink of the street layout to better prioritise these public life activities and pedestrian/cyclist movement.

BEHAVIOURAL MAPPING: OVERVIEW

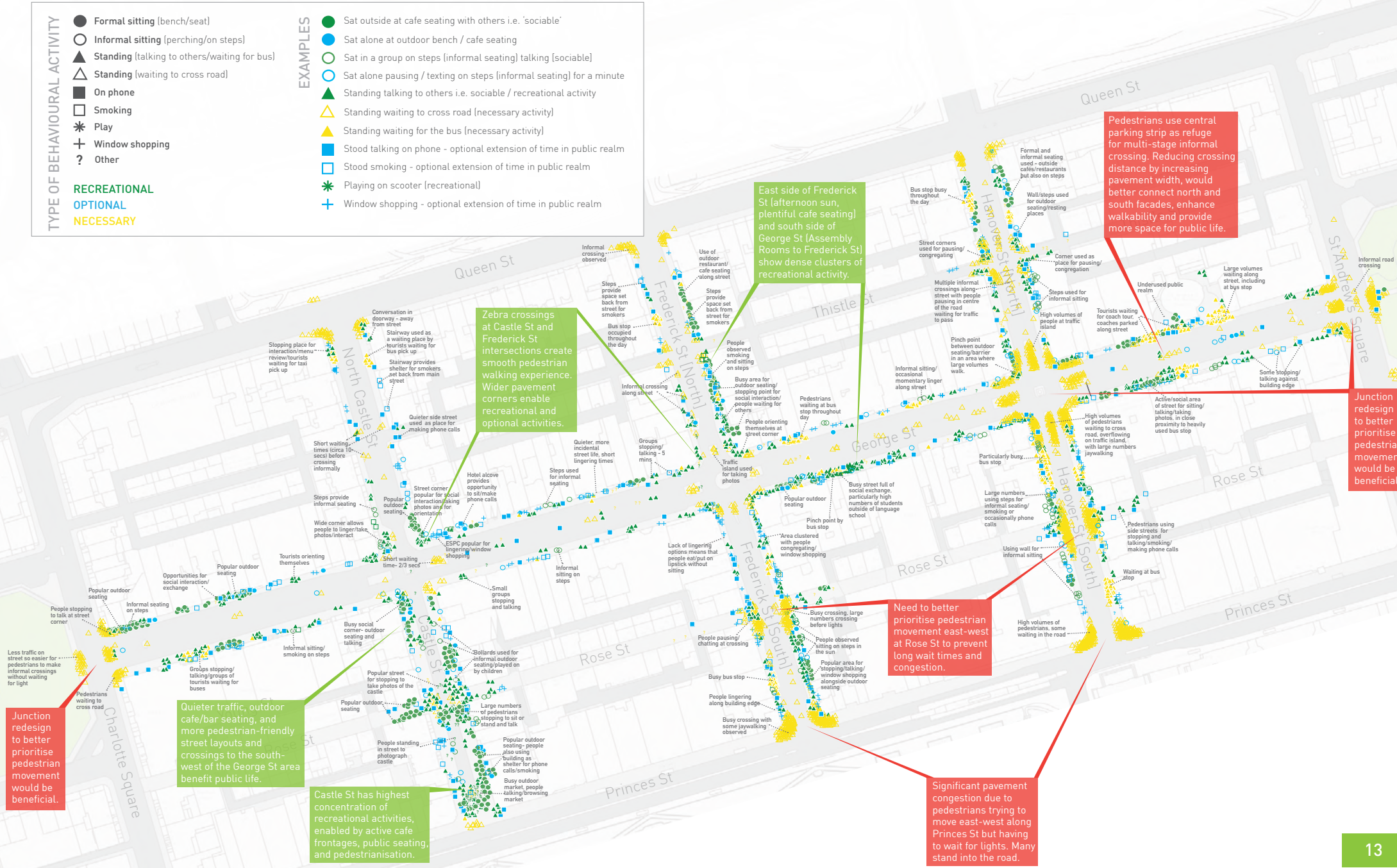
TYPE OF BEHAVIOURAL ACTIVITY

- Formal sitting (bench/seat)
- Informal sitting (perching/on steps)
- ▲ Standing (talking to others/waiting for bus)
- △ Standing (waiting to cross road)
- On phone
- Smoking
- * Play
- + Window shopping
- ? Other

RECREATIONAL
OPTIONAL
NECESSARY

EXAMPLES

- Sat outside at cafe seating with others i.e. 'sociable'
- Sat alone at outdoor bench / cafe seating
- Sat in a group on steps (informal seating) talking [sociable]
- Sat alone pausing / texting on steps (informal seating) for a minute
- ▲ Standing talking to others i.e. sociable / recreational activity
- △ Standing waiting to cross road [Necessary activity]
- △ Standing waiting for the bus [Necessary activity]
- ▲ Stood talking on phone - optional extension of time in public realm
- Stood smoking - optional extension of time in public realm
- * Playing on scooter (recreational)
- + Window shopping - optional extension of time in public realm



Zebra crossings at Castle St and Frederick St intersections create smooth pedestrian walking experience. Wider pavement corners enable recreational and optional activities.

East side of Frederick St (afternoon sun, plentiful cafe seating) and south side of George St (Assembly Rooms to Frederick St) show dense clusters of recreational activity.

Pedestrians use central parking strip as refuge for multi-stage informal crossing. Reducing crossing distance by increasing pavement width, would better connect north and south facades, enhance walkability and provide more space for public life.

Junction redesign to better prioritise pedestrian movement would be beneficial.

Junction redesign to better prioritise pedestrian movement would be beneficial.

Quieter traffic, outdoor cafe/bar seating, and more pedestrian-friendly street layouts and crossings to the south-west of the George St area benefit public life.

Castle St has highest concentration of recreational activities, enabled by active cafe frontages, public seating, and pedestrianisation.

Need to better prioritise pedestrian movement east-west at Rose St to prevent long wait times and congestion.

Significant pavement congestion due to pedestrians trying to move east-west along Princes St but having to wait for lights. Many stand into the road.

EXECUTIVE SUMMARY

PLACE FUNCTION

The overall place function and place quality of the 10 key street spaces within the George St area were assessed using an evaluation structure based on Jan Gehl's '12 Quality Criteria' (Cities for People, 2010). By assessing each street section according to these 12 criteria indicative of an environment conducive to public life, an understanding of how the place function varies across the whole area is revealed.

Observations from research days and learnings from the other 3 studies for each location (tracing studies, behavioural mapping, pedestrian counts) are combined with a standalone assessment by a Chartered Landscape Architect to give a score out of 10 for each of the 12 Quality Criteria. In addition, a mean average score was calculated for each of the 12 Quality Criteria across all locations.

Key findings from the place function assessment were:

- **Castle St (south) had significantly higher place function scores than all other street sections** (7.8 out of 10, compared to the 5.2 average). There is a high quality pedestrianised realm allowing a wider range of activities and opportunities and less traffic. This pedestrian-priority approach could be emulated on other street sections, particularly to the west of George St.
- **Hanover St (south) scored least well for place function** (3.1 compared to 5.2 average). This street section functions as an arterial thoroughfare for a range of vehicles, cyclists and pedestrians. There is little room for optional and recreational activities. Hanover St may need to maintain its functionality as a key vehicular route north-south, though there may be opportunities to further pedestrianise George St

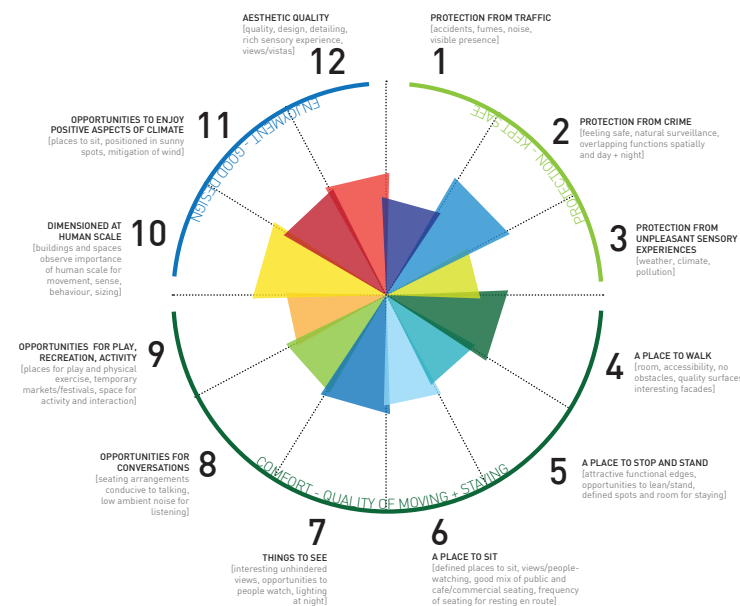
to the east and west of this thoroughfare to create a more conducive setting for public life.

- **There are lower scores for 'protection from traffic to the south-east of the area.** This is due to heavier traffic, especially buses, which are often queued (restricting views and connectivity between different sides of the street), increased traffic noise, and a larger scale street environment. .
- **Overall, across the area, the highest average scores were for being 'dimensioned at human scale' (6.3), and 'protection from crime' (6.0).** Particular exceptions to this were Frederick St (south) and Hanover St (south) which scored much lower due to their vehicle-dominated street layouts and junctions with George St/Princes St. Most street sections scored well for 'protection from crime' due to a mix of daytime and evening overlapping land use functions and active facades. The main exception to this was North Castle St, which has both low footfall and limited active frontages for natural surveillance.
- **Overall, across the area, the lowest place function scores were for 'protection from unpleasant experiences' (average of 4.1) and 'protection from traffic' (4.5).** This particularly related to a lack of shelter from rain/wind, or protection from traffic fumes. Also heavy traffic causing noise, significant amounts of street space designated to parking, and a vehicle-dominated street layout that prioritises car/bus/taxi movement rather than pedestrians (particularly to the south-east).
- **'A place to stop and stand' also scored poorly overall (4.6).** Whilst George St has typically wide pavements, there are limited public seating opportunities or designated nodal spaces to stop and spend time. Instead, George St, and the other north-south oriented streets offer a highly linear pedestrian experience, and which operate more as movement

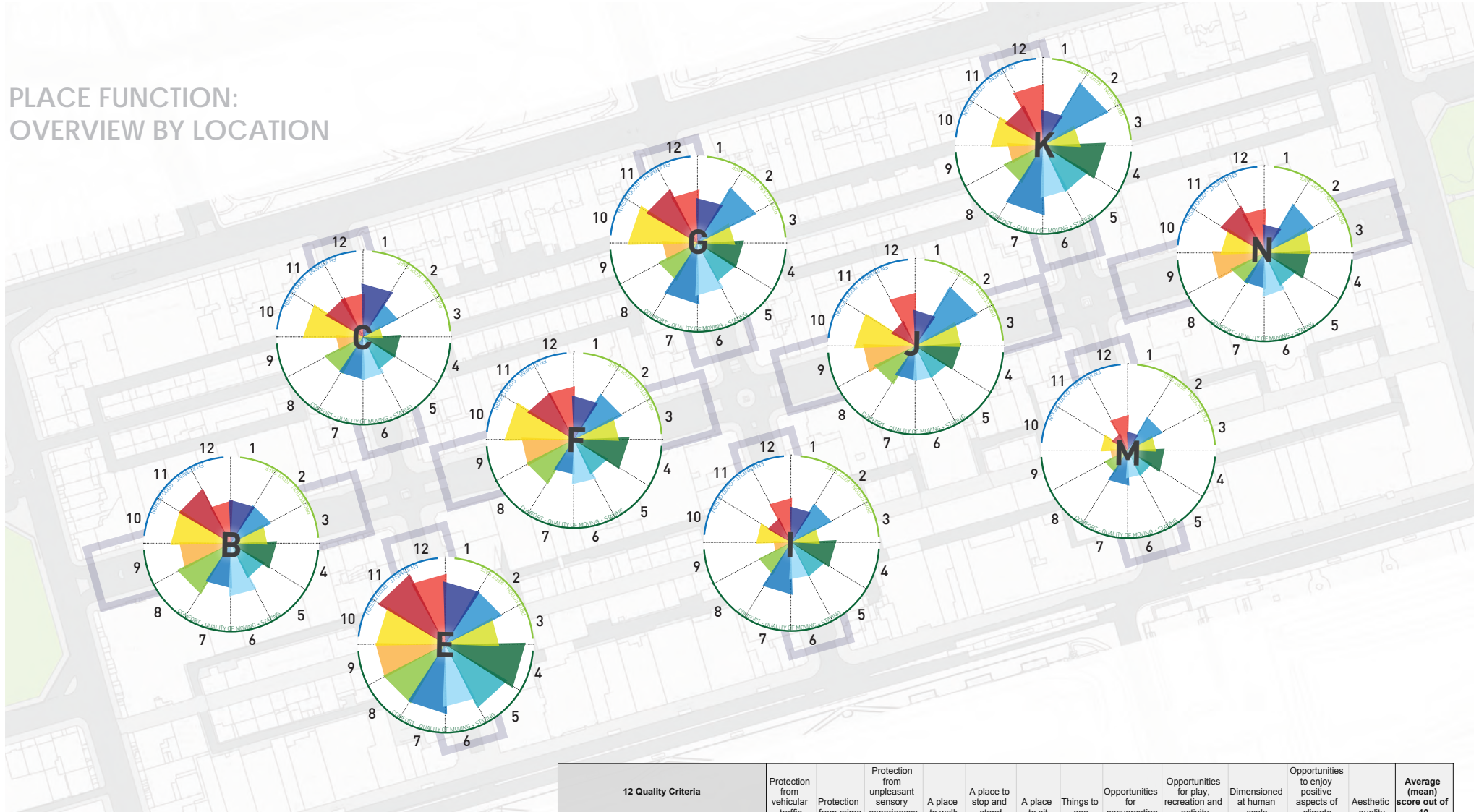
route in most cases. On busier streets (such as Hanover St and Frederick St south), high footfall also makes stopping to stand for even brief periods a challenge without causing pedestrian congestion on the pavement thoroughfare.

- **Castle St is the exception to these typically more linear street layouts where pedestrian activity is constrained to linear edge pavements.** The pedestrianised zone and shared space, combined with public seating helps create a wider pedestrian-priority space and aids stopping/standing activities. This also subdivides the Castle St street section into the beginnings of different character areas used for different functions (movement, markets, commercial cafe seating, public seating etc).

AREA'S OVERALL PLACE FUNCTION



PLACE FUNCTION: OVERVIEW BY LOCATION



12 Quality Criteria	Protection from vehicular traffic	Protection from crime	Protection from unpleasant sensory experiences	A place to walk	A place to stop and stand	A place to sit	Things to see	Opportunities for conversation	Opportunities for play, recreation and activity	Dimensioned at human scale	Opportunities to enjoy positive aspects of climate	Aesthetic quality	Average (mean) score out of 10
Location													
B George St (between Charlotte Sq/Castle St)	5	5	4	5	4	6	5	7	6	7	7	5	5.5
C North Castle St	6	4	2	4	4	5	5	5	3	7	5	5	4.6
E Castle St (south)	7	7	6	9	8	7	8	8	8	8	9	8	7.8
F George St (between Castle St/Frederick St)	5	6	5	6	4	5	4	6	6	8	6	6	5.6
G Frederick St (north)	5	7	4	5	5	6	7	5	4	8	7	6	5.8
I Frederick St (south)	4	5	3	5	4	4	6	4	2	4	3	5	4.1
J George St (between Frederick St/Hanover St)	4	8	5	5	4	4	4	5	6	7	3	6	5.1
K Hanover St (north)	4	8	4	7	6	6	8	5	4	6	5	7	5.8
M Hanover St (south)	2	4	3	4	3	3	4	3	2	3	2	4	3.1
N George St (between Hanover St/St Andrew Sq)	3	6	5	5	4	5	4	4	6	5	6	5	4.8
Average (mean) score out of 10	4.5	6	4.1	5.5	4.6	5.1	5.5	5.2	4.7	6.3	5.3	5.7	5.2

EXECUTIVE SUMMARY

POTENTIAL OPPORTUNITIES

Throughout the full report, and more detailed tracing studies, pedestrian counts, behavioural mapping and place function assessments, issues are sometimes identified in terms of public life and pedestrian movement due to drawbacks in the current street layout. In many cases, a logical extension of these findings suggests a potential opportunity for improvement. These key opportunities for the George St study area are identified and summarised here.

Whilst based on the findings of this research study, these are intended as suggestions for consideration only, and may constitute just one way of solving these issues.

- **Reconsider the balance of street space from favouring vehicles (moving or parked) toward pedestrians/cyclists to better enable public life and pedestrian movement.** Improvements might include; wider pavements to accommodate existing high footfall, more fluid pedestrian movement at junctions to better meet desire lines, nodal spaces with seating/trees for rest stops (increasing accessibility and opportunities for public life), wider spaces for gathering/markets/events/public life along the currently highly linear pavement/street spaces, creating character areas to aid navigation, and improved pedestrian connectivity between opposite facades (to create a more cohesive, walkable, vibrant public realm).
- **Consider introduction of additional pedestrianised or shared space streets (building on lessons learned at Castle St) to improve walkability and enable more diverse activities, events and public life across the full street width.** For example, to the west of George St where there is less traffic. With reconsideration of existing bus routes this approach could more boldly be taken along the full length of George St to create a street vibrant with pedestrian and public life, whilst integrating cycle infrastructure and some limited vehicular access. Hanover St is a busy vehicular thoroughfare and could still function north-south as a key arterial route, including bus stops at the intersection with a more pedestrian-focussed George St.
- **Better facilitate existing pedestrian desire lines east-west through the area.** Consider introduction of pedestrian crossing infrastructure over N Castle St, Hanover St and Frederick St at Hill/Young/Thistle St, and more pedestrian-priority crossings with reduced wait times if moving east-west along Rose St over Frederick/Hanover St.
- **Increase quantity and frequency of public seating options throughout the study area.** There is currently very limited public seating, with the exception of semi-public building facade steps/recesses which are used informally for seating/pausing as a result. The addition of more public (non-commercial) seating would improve the accessibility of the walking environment to more diverse users, as well as providing more opportunity for public life.
- **Rethink Hanover St and Frederick St junctions with George St to better facilitate pedestrian movement,** and more closely align pavement/crossing infrastructure with desire lines.
- **Rationalise street clutter to improve walkability.** Remove unnecessary poles/phone boxes. Reposition bus stops and bins that create pinch points (e.g. bus bulbs could replace the bus stops causing congestion within the existing pavement thoroughfare).



TRACING STUDIES

OVERALL ANALYSIS

This section looks in detail at the tracing studies conducted at 11 locations across the George St area.

Tracing studies reveal the movement dynamics of the pedestrians currently using George Street and the intersecting streets. They spatially highlight pedestrian movement flow, in what comparative volumes pedestrians are using different routes, and where pedestrian desire lines are not currently accommodated by the existing street infrastructure. For example patterns of pedestrians informally crossing the road at certain points despite there being no crossing point or pavement. Tracing studies also show where pedestrian movement is modified by the existing infrastructure. For example railings on corners restricting pedestrian movement to narrow thoroughfares, or the use of traffic islands by pedestrians to aid them in crossing the road.

Tracing studies are shown on the following pages for each specific location. These give more detail about pedestrian movement at these key movement nodes within the George St area. Overall findings and analysis of pedestrian movement are first summarised in the box adjacent. These key findings are based on the cumulation of knowledge gained from tracing studies across the area.

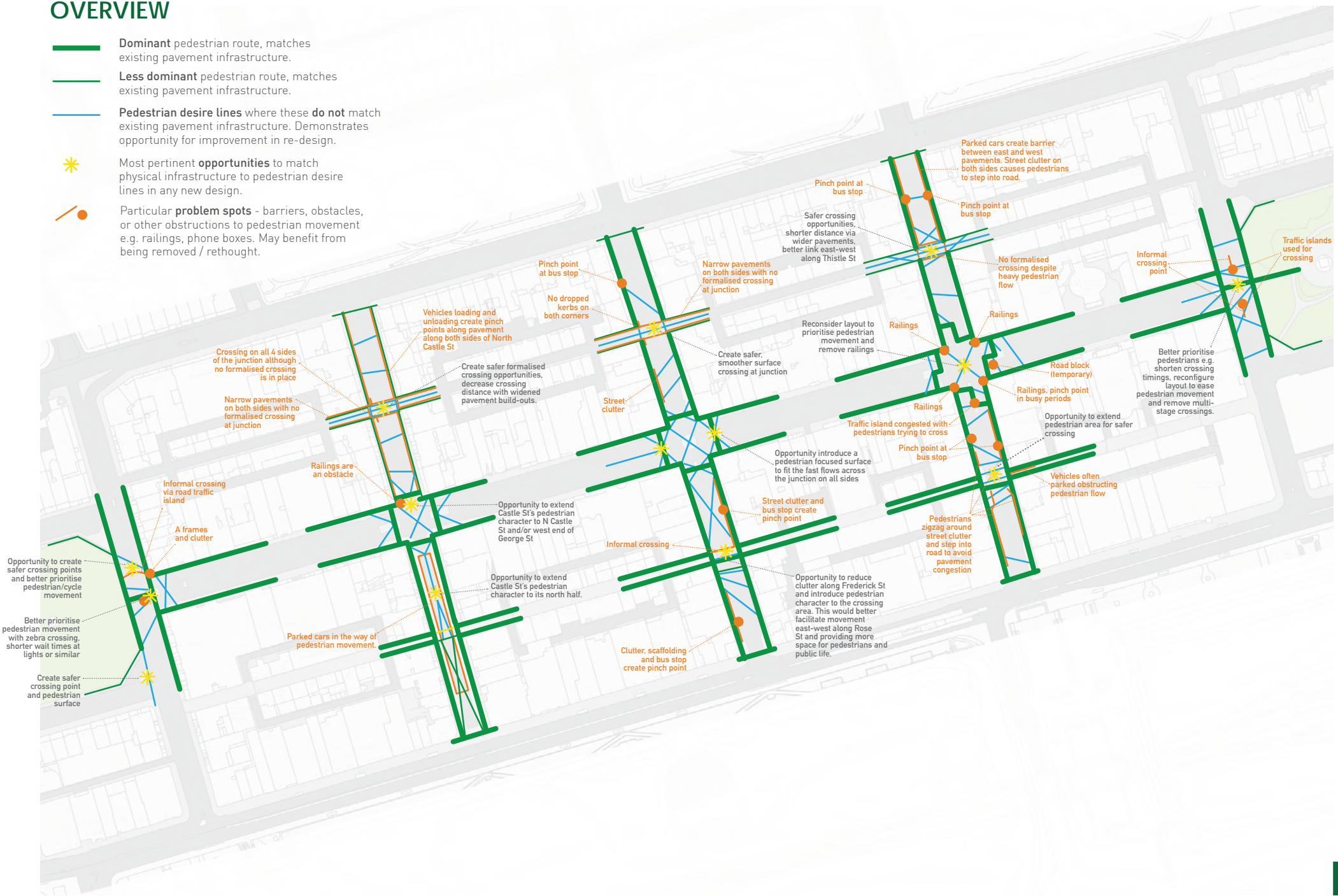


KEY FINDINGS

- **Most pedestrian movement is in an east-west or north-south direction, in correlation with the existing street layout. However improved connection between east and west sides of Castle St, Frederick St and Hanover St, and between the north and south sides of George St is needed.** Desire lines are visible informally crossing these streets but are not sufficiently provided for by the existing street layout, in which moving and stationary vehicles form a visual and physical barrier. Improving this walkable connectivity between opposite facades/pavements would be beneficial. This might take the form of additional pedestrianisation of certain whole road segments, improvements to existing junctions to better prioritise pedestrian movement, or alternatively the addition built out wider pavements at key points mid street section to reduce road crossing distances at additional zebra crossing points.
- **The junctions of George St with St Andrew Sq, Hanover St, Frederick St, and Charlotte Sq prioritise vehicular movement over walking and cycling.** These large junctions feature multi-stage crossings with central traffic islands for pedestrians to wait on, long waiting periods for the 'green man', and railings that push pedestrians away from their desired line of movement. These frustrations result in pedestrians walking within the road to take more direct routes or crossing on the 'red man'. These behaviours can be hazardous. At the busiest junction (George St/Hanover St), the existing narrow pavement corners and traffic islands are not sufficiently wide to accommodate high footfall in peak periods.
- **East-west pedestrian movement along Rose St, and Young, Hill and Thistle St is not prioritised and is significantly hindered by the existing street layout.** For example, there is a lack of pedestrian crossing infrastructure connecting Young/Hill/Thistle Street over N Castle St/Frederick St/Hanover St. There are also long pedestrian waiting periods and congestion at the signalised crossings to move east-west along Rose St over Frederick and Hanover St. Walking in the road is common along Hill/Young/Thistle St due to narrow pavements that cannot accommodate two people walking side by side. A lack of drop kerbs and/or continuous pedestrian surfacing for those moving in a north-south direction also hinders pedestrian movement over Young/Hill/Thistle St.
- **Street clutter and bus stops create pinch points along Frederick St and Hanover St.** Combined with high footfall, this creates an effective narrowing of the available pavement, and pedestrian congestion. Tracing studies show where pedestrians step into the road for periods to avoid this clutter and congestion, particularly on Hanover and Frederick St. Street clutter should be removed, and pavements widened where necessary.
- **George St (north and south sides of the pavement) and Hanover St (east pavement) are shown to be the sites of primary foot traffic.** Quieter streets include N Castle St and Young/Hill/Thistle St.

OVERVIEW

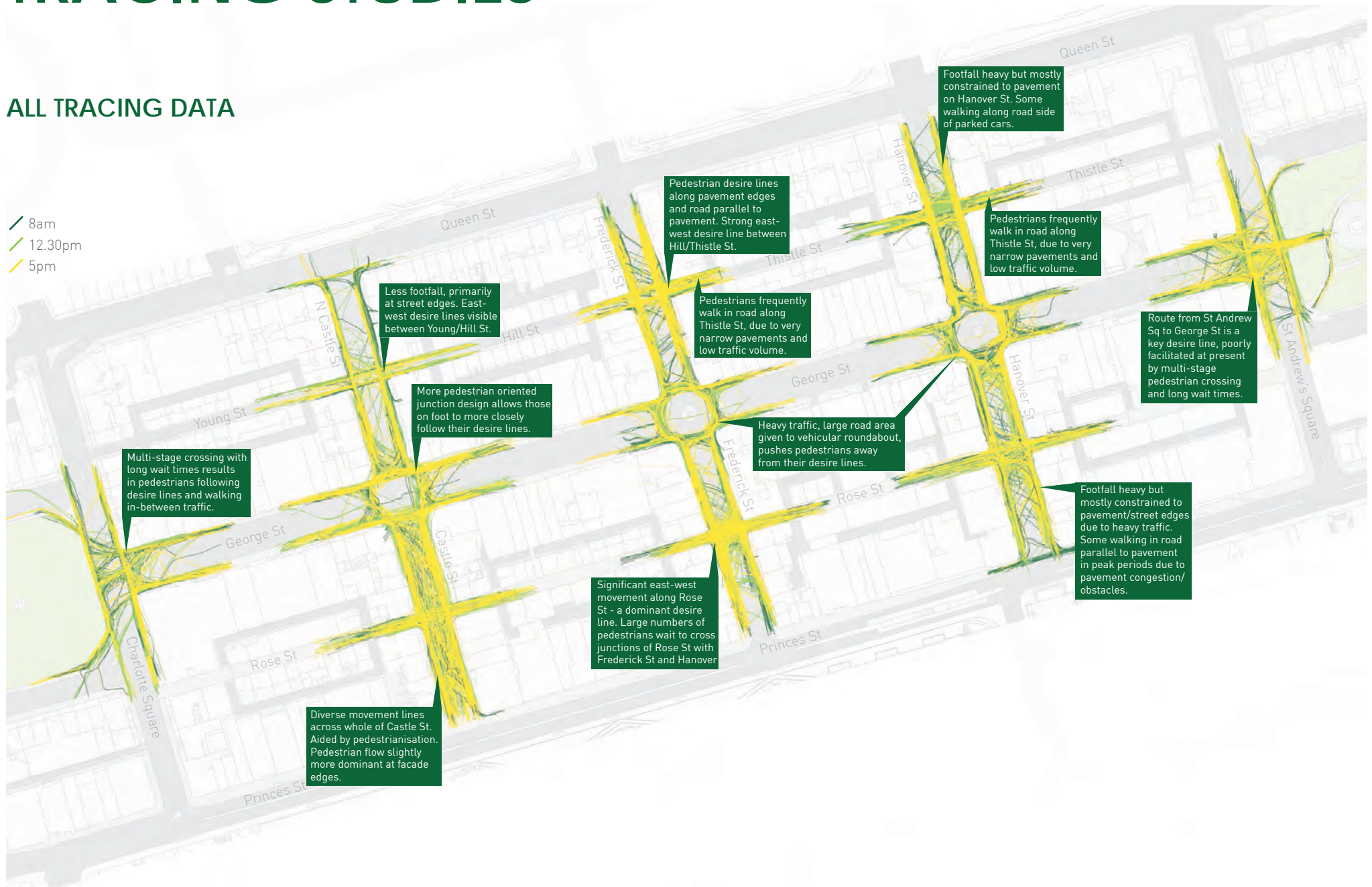
- Dominant** pedestrian route, matches existing pavement infrastructure.
- Less dominant** pedestrian route, matches existing pavement infrastructure.
- Pedestrian desire lines** where these **do not** match existing pavement infrastructure. Demonstrates opportunity for improvement in re-design.
- Most pertinent **opportunities** to match physical infrastructure to pedestrian desire lines in any new design.
- Particular **problem spots** - barriers, obstacles, or other obstructions to pedestrian movement e.g. railings, phone boxes. May benefit from being removed / rethought.



TRACING STUDIES

ALL TRACING DATA

- 8am
- 12.30pm
- 5pm





Multi-stage signalised pedestrian crossing at Hanover St/George St

TRACING STUDIES

A: CHARLOTTE SQUARE



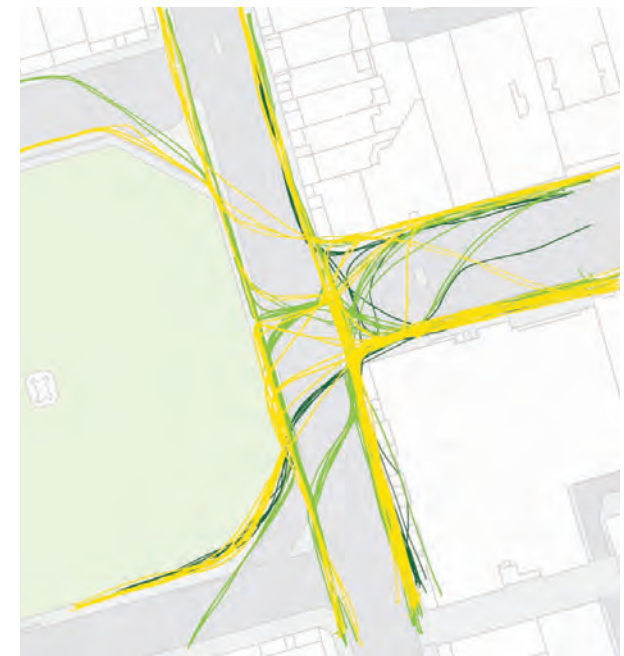
TUESDAY



WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary routes: The south side of George St connecting around the corner with the east side of Charlotte Sq. The east side of Charlotte Sq is equally dominant in a north/south direction.
- Secondary routes: The west pavement of Charlotte Sq street in a north/south direction.
- Tertiary routes: Various, including desire lines across the road at Charlotte Sq to/from George St.

Visible desire lines (not facilitated by existing street infrastructure):

- Across Charlotte Sq in an east-west direction between west pavement of Charlotte Sq and George St (north and south pavements). Main desire lines converge on the central traffic island. Additional desire lines to other points to/from the George St north and south pavements. Pedestrians observed often running between vehicles at these points to cross more closely with their desire lines and avoid long waits at the Charlotte Sq pedestrian crossing.
- In a north/south direction from the west pavement of Charlotte Sq over the traffic island to/from Princes St. No pavement infrastructure currently exists here. Steps make the current layout even more inaccessible for some users.

Obstacles:

- Planters on the traffic island on George St cause pedestrians to divert their route but are otherwise a pleasant addition.
- Seating and signs on north corner of George St create a pinching point,

Opportunities for improvement:

- Frequent informal crossing across the whole junction due to long wait times and multi-stage nature of pedestrian crossing. Reduced pedestrian wait times, shorter crossing distance and one-stage crossing that better prioritises pedestrian and cycle movement needed.

TRACING STUDIES

C: NORTH CASTLE STREET [AT YOUNG ST / HILL ST]



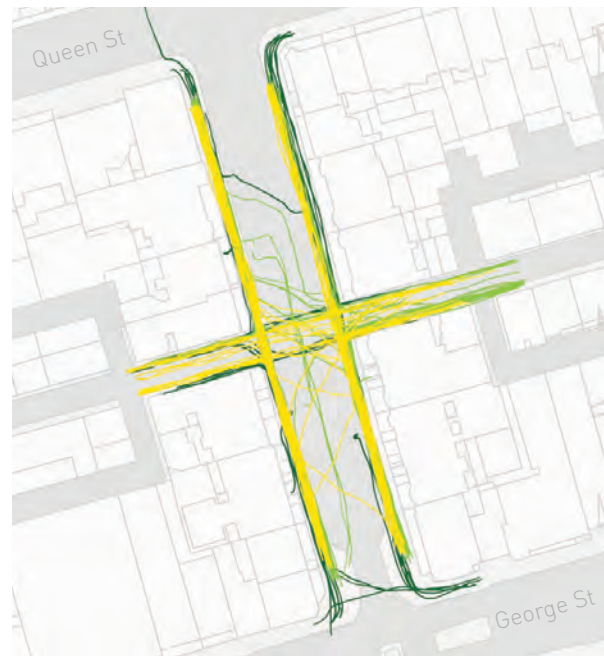
TUESDAY



WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: both east and west sides of N Castle St. Very slight predominance on west side.
- Secondary route/s: both north and south sides of Hill St/Young St, including movement east-west over junction with N Castle St.

Visible desire lines (not facilitated by existing street infrastructure):

- East-west over N Castle St connecting Young St and Hill St. This indicates a demand for improved pedestrian crossing infrastructure east-west, particularly near Young/Hill St where there is currently no pedestrian crossing lights.
- Informal crossing east-west of N Castle St along its length, with a focus closer to Hill/Young St and George St. In particular people moving from west side of N Castle St to east corner of George St.

Obstacles:

- High frequency of vehicles and taxis loading and unloading on the street and pavement, making pedestrian movement difficult at times.
- Much of street area used for parking. This means pedestrians trying to cross need to do so between cars with limited sight-lines.

Other findings:

- Generally a quiet section of street with fewer cars than elsewhere in the area.

Opportunities for improvement:

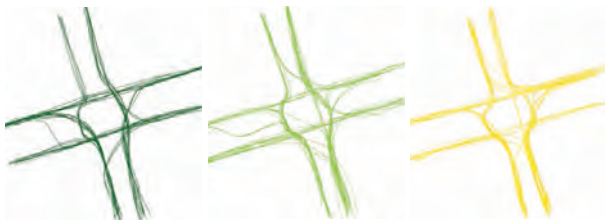
- Add safe opportunities to cross east-west at between Hill St and Young St. This could include wider pavement build outs, and/or a zebra crossing.
- Reduce wait times for pedestrians crossing N Castle St at Queen St, and reduce crossing distance.

TRACING STUDIES

D: GEORGE ST / CASTLE ST



TUESDAY



WEDNESDAY



SUNDAY



- 8am
- 12.30pm
- 5pm





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: along George St east of the junction, and south side of George St to west of the junction. Castle St (south), especially east side.
- Secondary route/s: north side of George St to west of junction, east and west sides of N Castle St.

Visible desire lines (not facilitated by existing street infrastructure):

- To/from both traffic islands as part of the multi-stage pedestrian crossing on George St.
- Divergent movement splaying across Castle St (south). This upper section is not pedestrianised but is treated as such due to low traffic volume and flush surfaces.
- To/from the east and west sides of N Castle St to the corners of George St.
- Small numbers of pedestrians walk along the George St central parking strip, and continue east-west over the roundabout.

Obstacles:

- Desire lines registered outside the railings on west corner of N Castle St/George St.
- Otherwise few obstacles.

Other findings:

- Whilst zebra crossings better prioritise pedestrian movement, crossing distances and the roundabout area designated for vehicles are still large. These could be reduced to a more human scale.
- Frequent informal crossing over the junction and outside of formal pavements, especially on south side.

Opportunities for improvement:

- Increase the existing pedestrian character of Castle St (south), extending its surface treatment and character to the whole junction, and potentially the west end of George St.

TRACING STUDIES

E: CASTLE STREET [AT ROSE ST]



TUESDAY

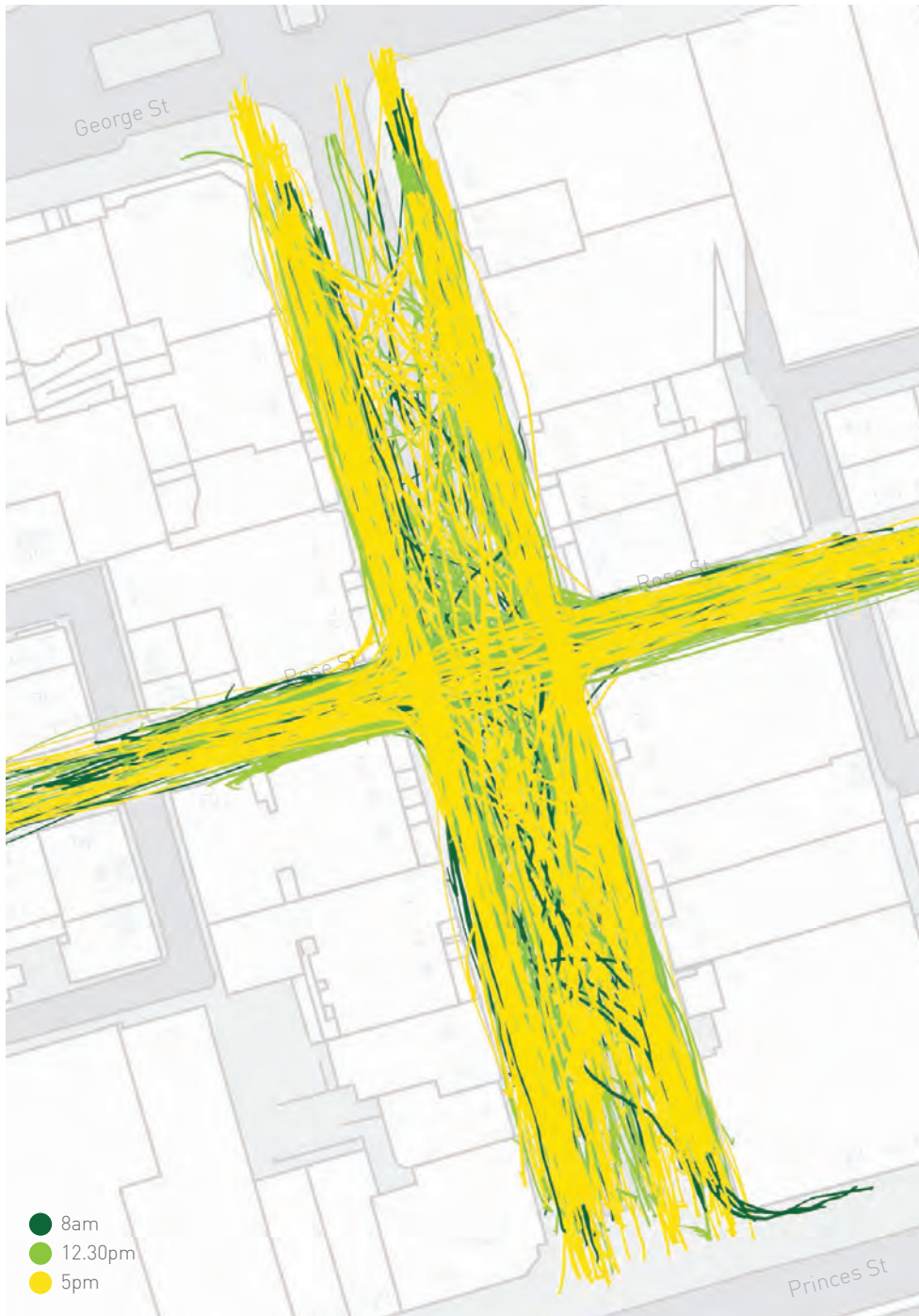


WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: both east and west sides of Castle St, especially its pedestrianised south section across the whole width. Also Rose St, east and west of Castle St.
- Secondary route/s: central (non-pedestrianised) section of Castle St carriageway north of Rose St.

Visible desire lines (not facilitated by existing street infrastructure):

- In general, excellent use of full width of pedestrianised area (south section of Castle St) and Rose St, indicating success of this approach for free pedestrian movement in accordance with their desire lines.
- Significant splayed desire lines across north section of Castle St within the road carriageway (in between the busy east and west edges). Whilst this is not a pedestrian only zone, the flush surfaces, high quality materials and low traffic volumes make this relatively successful too.

Obstacles:

- Parked cars on the north section of Castle St deter pedestrian use.
- Parked cars/vans frequently observed throughout the day within the pedestrian zone to the south of Castle St, and some cars turning in this space. This reduces the pedestrian perception of priority and restricts movement on foot.

Other findings:

- Researchers note particularly high pedestrian activity on this street compared to others, encouraged by the car-free zone and higher quality public realm.
- Whilst tracing studies show significant pedestrian movement on all days, unlike other streets, Sunday appears to show the busiest and most diverse use of the space. This may indicate a street environment that facilitates more recreational and diverse use of the area, as opposed to as a through-route for weekday commuters.

Opportunities for improvement:

- Opportunities to extend the pedestrianised area to the north section of Castle St, and potentially along the west end of George St.
- Provision of additional seating and trees to build on and expand the existing public life. These could double as visual indications that cars are not permitted in pedestrianised areas of the street.

TRACING STUDIES

G: FREDERICK STREET [AT THISTLE ST / HILL ST]



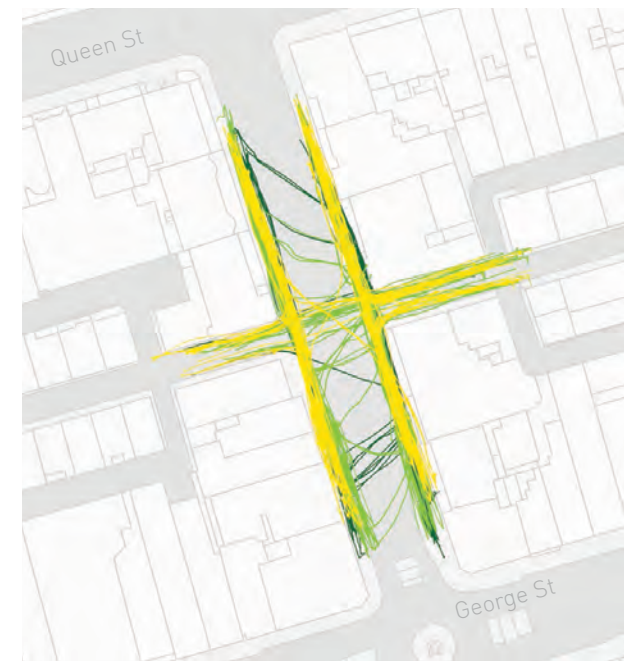
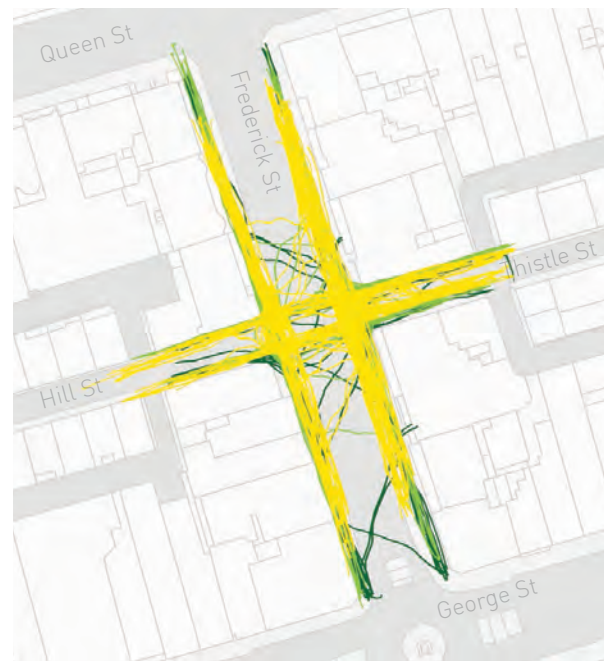
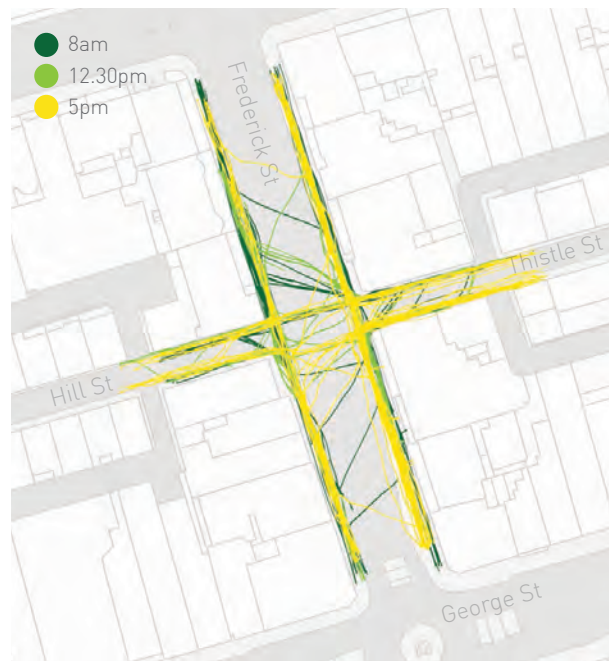
TUESDAY

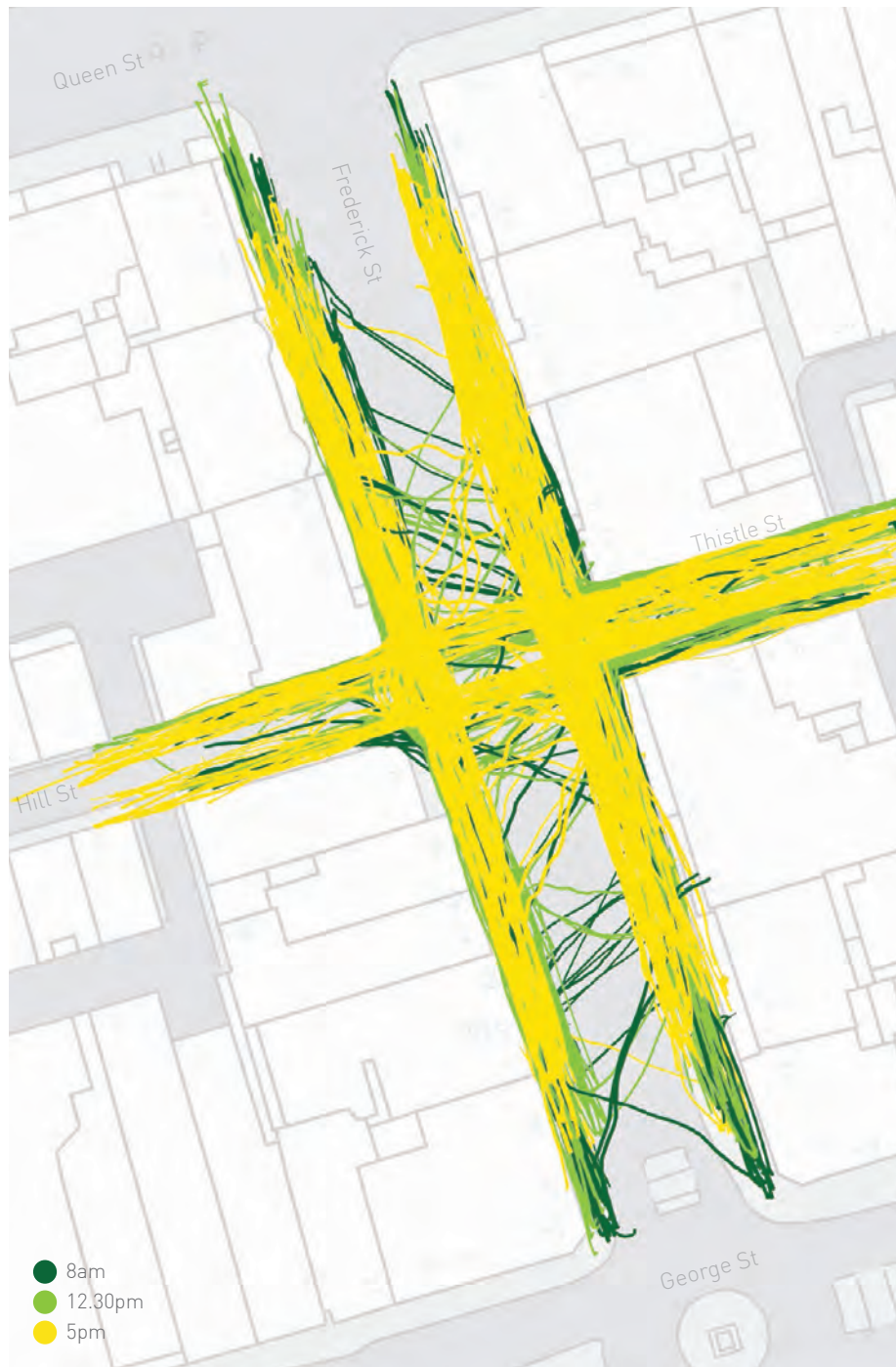


WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: both east and west sides of Frederick St. Both north and south sides of Thistle St.
- Secondary route/s: Both north and south sides of Hill St.

Visible desire lines (not facilitated by existing street infrastructure):

- Significant numbers of pedestrians crossing east-west over Frederick St between Hill St and Thistle St, in line with both the north and south sides of these side streets. However, no formalised crossing is in place at this point, the crossing distance long, and busy traffic makes this hazardous at present.
- Desire lines visible to/from the west side of Frederick St and the east side. These are particularly dense going to/from the central section closest to Thistle St to the opposite side of the road, with many pedestrians then taking this route.
- These east-west desire lines indicate a demand for improved connectivity between east and west pavements, particularly near to Thistle/Hill St.

Obstacles:

- Bus stop on the west side of Frederick St (north of Hill St) creates a pinch point. Pedestrians avoid this by walking in the road at peak times.
- Pavements on Hill St and Thistle St too narrow for the volume of pedestrians using them, forcing individuals to walk in the road. Too narrow for pedestrians to walk side by side or easily pass one another.
- No dropped kerbs on Hill St are a hindrance for those using wheelchairs or with prams.

Other findings:

- Parked cars along Hill St and Thistle St create obstacles for pedestrians, further hindering their ability to freely walk. Frequent double parking/loading along Frederick St.

Opportunities for improvement:

- Widening of pavements, restricting of traffic, creation of flush shared surface, or other similar measures to better prioritise pedestrians along Hill and Thistle St.
- Improve east-west crossing of Frederick St at Thistle St/Hill St. Provision of zebra crossing, widening of pavement corners/build outs at this point to narrow pedestrian crossing distance and provide additional pavement space for public life (seating, trees, nodal spots for activity).

TRACING STUDIES

H: GEORGE ST / FREDERICK ST



TUESDAY

WEDNESDAY

SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: all crossings around roundabout very busy. Very slight dominance of east-west route on south side.

Visible desire lines (not facilitated by existing street infrastructure):

- Between south-west junction corner and the central parking area to the west on George St. Also to a lesser extent, between south-east junction corner and central parking area to the east. This is used as an informal traffic island between the north and south sides of George St.
- Occasionally, pedestrians cross via the centre of the roundabout, using the existing statue as a traffic island. This can be hazardous.

Obstacles:

- The large area dedicated to vehicular roundabout creates a large obstacle in pedestrian movement. The dense traced movement around this vehicle space shows this as the largest obstacle to movement on foot in all directions.

Other findings:

- Despite zebra crossings positively reducing wait times, researchers noted the junction is still scaled at a large vehicular scale, with the majority of the road carriageway devoted to car/vehicle movement, not pedestrians.

Opportunities for improvement:

- Considering the high volume of pedestrians in all directions across the junction, a more pedestrianised streetscape would allow an even more fluid use of the area. Reducing the proportion of street carriageway designated to vehicles to 'tighten up' the junction, reducing crossing distances, and providing wider pavements, would allow pedestrians to better follow their desire lines and provide more space for public life.

TRACING STUDIES

I: FREDERICK STREET [AT ROSE ST]



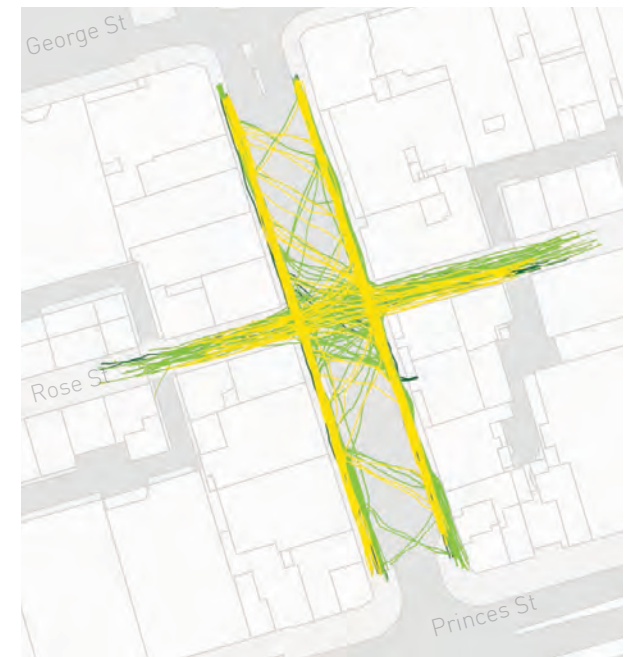
TUESDAY

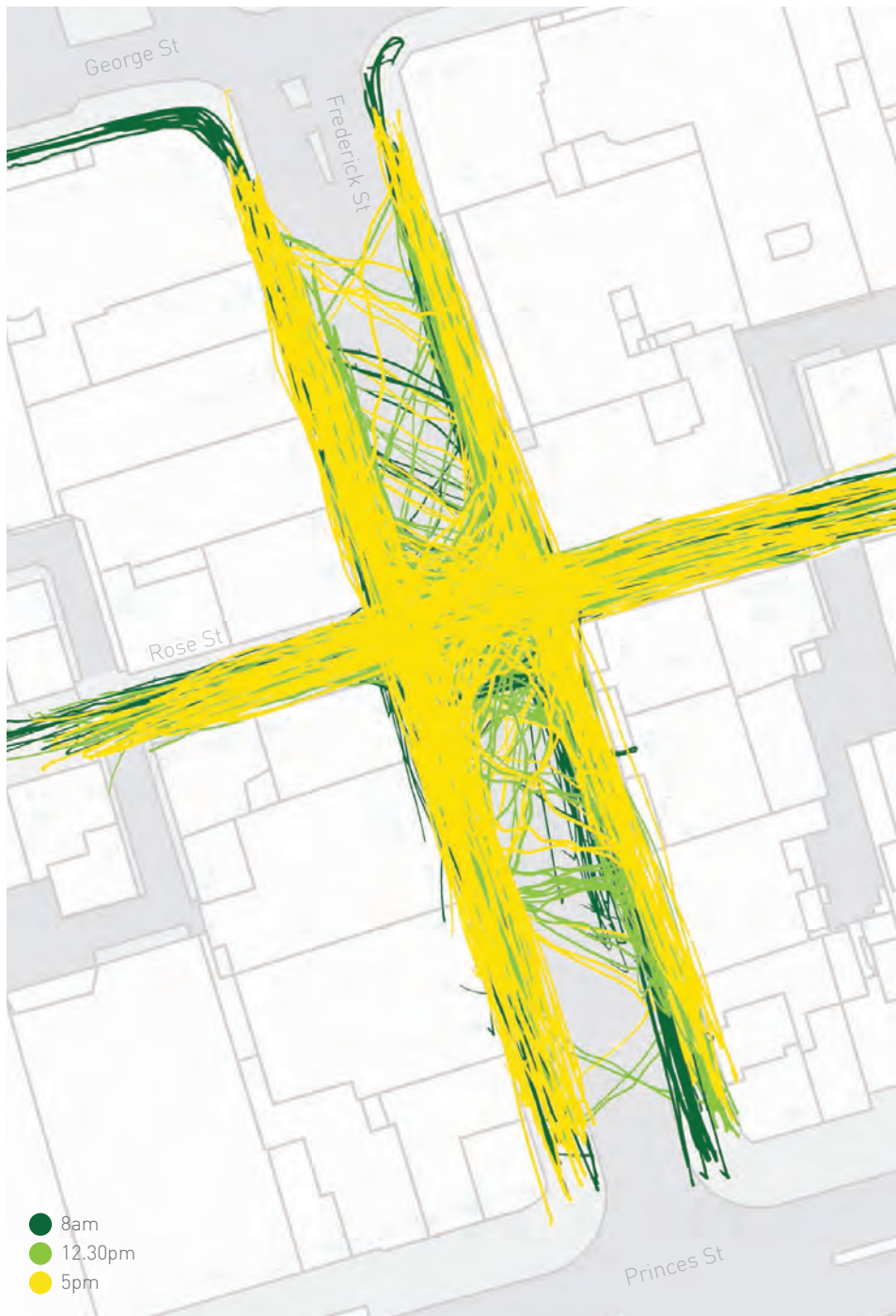


WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: West side of Frederick St, and Rose St (including east-west crossing of Frederick St).
- Secondary route/s: east side of Frederick St.

Visible desire lines (not facilitated by existing street infrastructure):

- Large numbers of pedestrians crossing east-west across Frederick St near Rose St junctions.
- Considerable informal crossing of Frederick St at all points along its length indicating a desire to better connect the east and west sides of the pavement.
- Pedestrians frequently walk in road along Frederick St to pass one another at peak times. This is due to congestion and obstacles on the pavement creating pinch points, in combination with higher footfall than the pavement width can comfortably accommodate in peak periods.

Obstacles:

- Street clutter particularly prevalent on the west side of Frederick St to the south. Researchers noted bus stops and phone boxes on the south west and north east side of Frederick St as obstacles hindering the smooth flow of pedestrians.
- High footfall results in frequent congestion on the pavement. This is exacerbated by obstacles including poles, bins, scaffolding, bus stops, A-frames and phone boxes.

Other findings:

- Existing pavement infrastructure struggles to accommodate current high footfall levels in peak periods. This leaves little room for more recreational or public life activities that require an ability to stop in comfort in the street environment.

Opportunities for improvement:

- Better prioritise pedestrians wanting to cross Frederick St east-west at Rose St. This might include a zebra crossing, reduced crossing width with pavement build-outs at this point mid-street, a flush pedestrian surface east-west or similar interventions to create safer crossing experience..
- Rationalise/remove street clutter.
- Widen pavements to better accommodate high footfall.
- Prioritise pedestrian movement and experience over car parking and vehicle lanes.

TRACING STUDIES

K: HANOVER STREET [AT THISTLE ST]



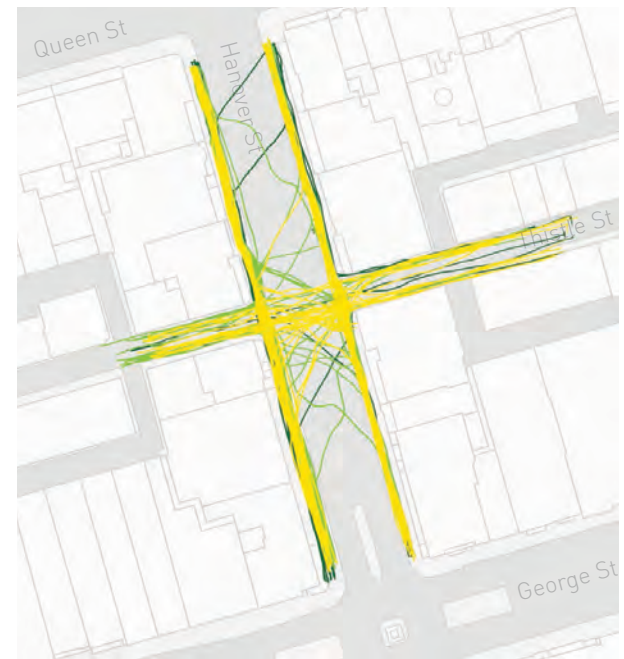
TUESDAY



WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: Both the east and west sides of Hanover St, moving in a north-south direction. West side of Hanover St slightly more dominant at weekends, but equitable on weekdays.
- Secondary route/s: Thistle St, on both the north and south side of the street, to the east and west of the junction with Hanover St.

Visible desire lines (not facilitated by existing street infrastructure):

- Significant crossing east-west over Hanover St at Thistle St. This behaviour was particularly dominant on weekday lunchtimes. There is no pedestrian crossing at present here despite the popularity and frequent use of this route.
- Additional less dominant east-west desire lines crossing Hanover St are visible along the length of the street. Pedestrians often run in between moving and parked cars whenever they see a gap in traffic, crossing between east and west sides of Hanover St.

Obstacles:

- Pinch points at bus shelters on both sides of Hanover St, as well as phone boxes, bins and poles.

Other findings:

- Tourists frequently stop dangerously in the middle of the road to take pictures of views to the north. This positive public life behaviour is not currently facilitated or supported by the current street infrastructure.
- Pedestrians informally cross east-west between parked cars - this can be hazardous with poor sight lines

Opportunities for improvement:

- Creation of a more pedestrian priority streetscape. Currently the street is dominated by road carriageway with multiple lanes and parked cars, whilst high pedestrian footfall is pushed to street edges.
- Continuous pedestrian surfacing materials over minor junctions with Thistle St would be beneficial to prioritise busy north-south pedestrian movement.
- Wider pavements, including build-outs and zebra crossing over Hanover St at Thistle St to better connect east and west sides of Hanover St and enable east-west movement.

TRACING STUDIES

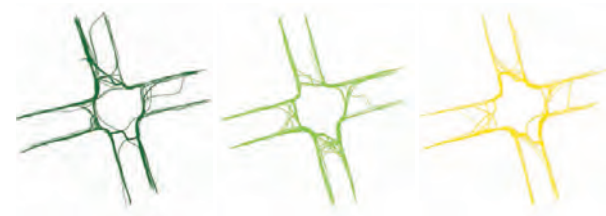
L: GEORGE ST / HANOVER ST



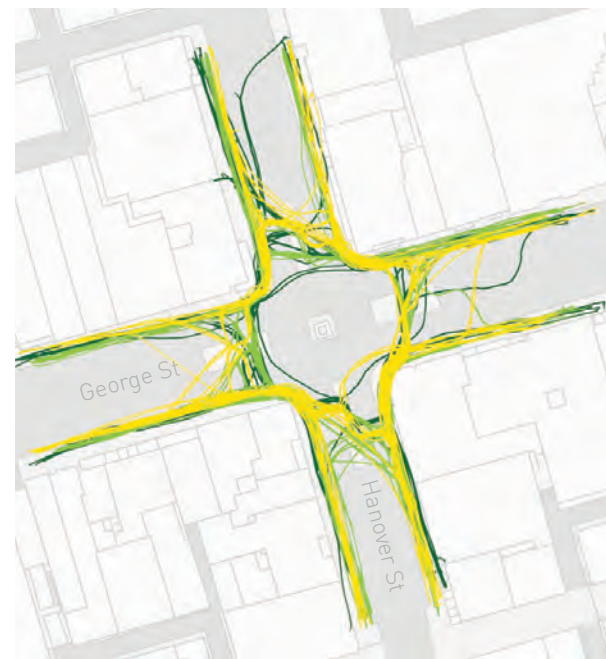
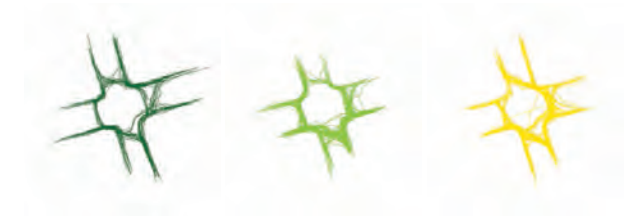
TUESDAY



WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: this is an extremely busy junction with all routes experiencing heavy footfall. On the weekend, the south and east side of the junction were busiest.
- Secondary route/s: Very slightly less intense traffic along the north side of the Hanover/George St junction

Visible desire lines (not facilitated by existing street infrastructure):

- Pedestrian movement mostly constrained to designated routes at junction, indicative of high traffic volume causing reliance on formal crossings, and making informal crossing hazardous in busy periods.
- Diagonal desire lines from west side of Hanover St to further south on the east side of Hanover St visible both above and below the junction.
- Temporary road block reducing traffic on east side of George St facilitated increased desire lines diagonally between the north and south side here.
- Pedestrians walking outside the railings particularly visible on the south-east and north-west junction corners. This is done to take a 'short cut' and walk closer to their desired more direct route, which the current street layout does not facilitate. Despite the railings' intentions to protect pedestrians from large buses turning over the pavement corners, this actually creates hazardous conditions in some instances..

Obstacles:

- Railings on all corners of the junction were observed to limit movement and create pinch points at peak times.

Other findings:

- Movement around the south-west corner appears to be busiest, and also where pedestrians are most frustrated by the existing railings, and multi-stage crossing requiring a deviation from their desired route.

Opportunities for improvement:

- Investigate junction design options to better facilitate pedestrian and cyclist movement, rationalising the amount of vehicle-dominated road carriageway compared to pavement space for pedestrians. Eliminate need for multi-stage signalised crossings if possible. Better prioritise pedestrians and cyclists movement
- Heavy footfall, pedestrians wanting to move in multiple, often conflicting, directions, and a lack of the existing street infrastructure to accommodate this without constraining their movement should be addressed.

TRACING STUDIES

M: HANOVER ST [AT ROSE ST]



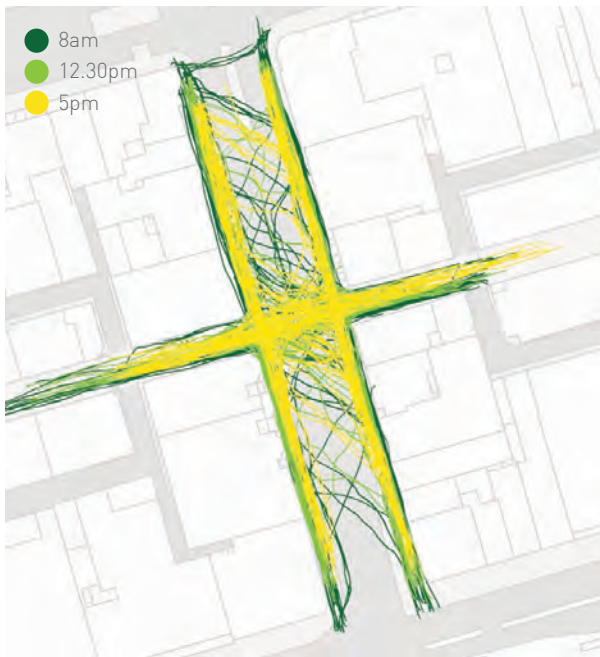
TUESDAY

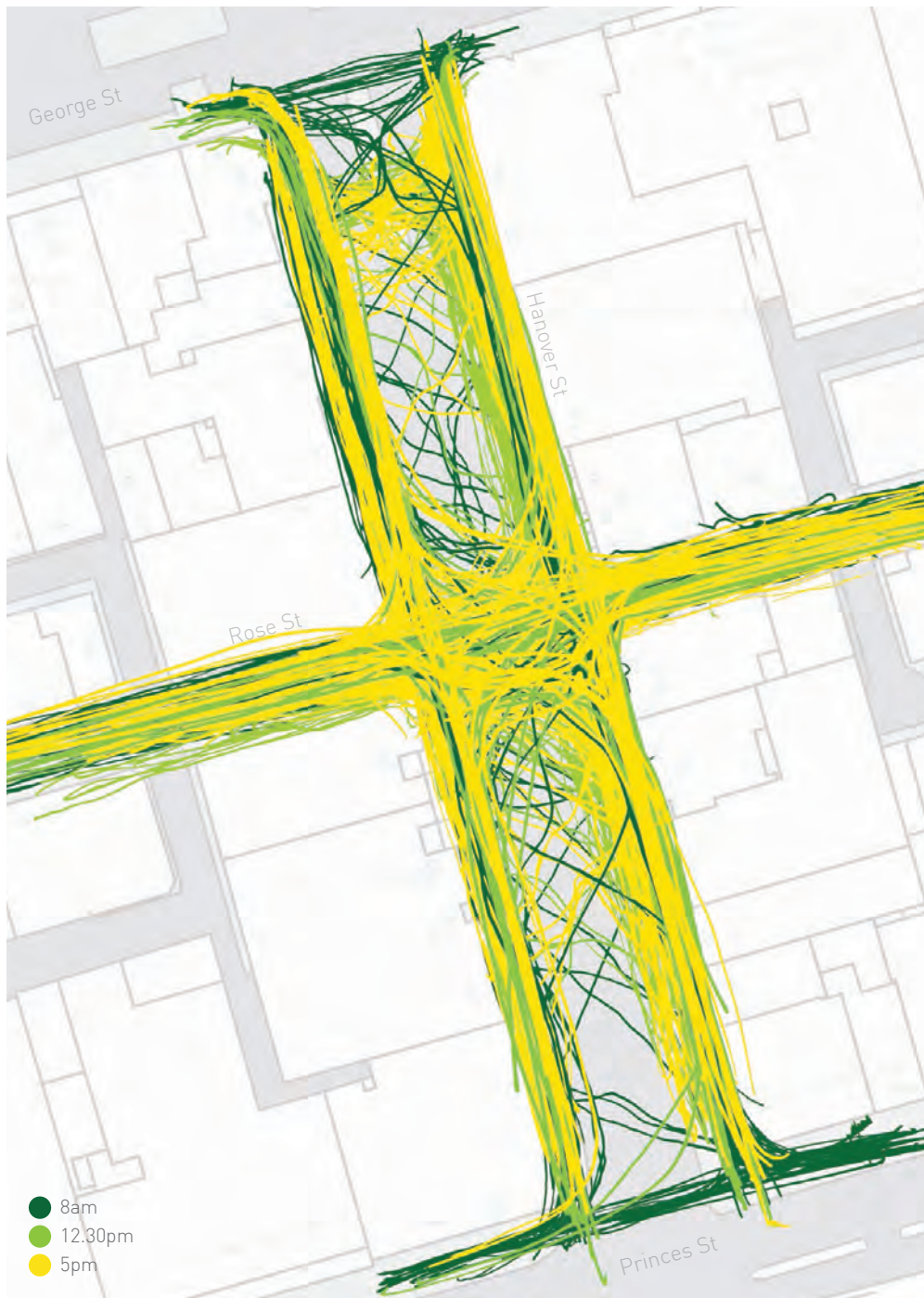


WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: both east and west sides of Hanover St, and Rose St (east and west sections).
- Secondary route/s: informal crossing of Hanover St along its length.

Visible desire lines (not facilitated by existing street infrastructure):

- Heavy presence of desire lines east-west across Hanover St.
- Heavily trafficked crossing east-west over Hanover St at Rose St shown by dense cluster of desire lines. Large groups of pedestrians wait to use the designated crossing point in heavy traffic. Many also instead wait on pavement edges or in the road and run across between traffic to avoid waiting for the lights.
- Desire lines visible diagonally east-west near George St/Hanover St junction to north. Pedestrians often cross halfway to the traffic island then wait to continue diagonally to the other side of the road. This is a shorter route than walking up to the designated crossing point and more in line with their desired destination.

Obstacles:

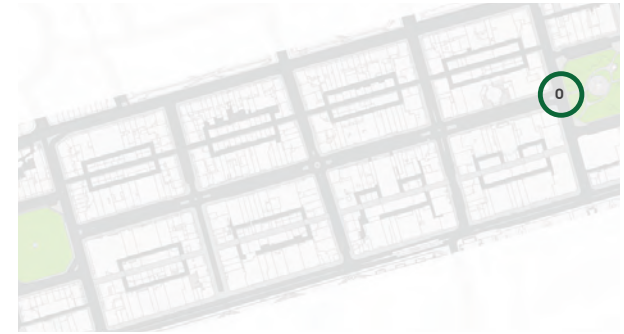
- Temporary scaffolding and lorries parked on Rose St create disruption to pedestrian flow at various times of day.
- Moving traffic often stops over the pedestrian crossing near Rose St and disrupts pedestrian flow.
- Bus stop on the west side of Hanover St (north of Rose St) causes pedestrian congestion at peak times with many pedestrian stepping into the road to pass.

Opportunities for improvement:

- Consider a more pedestrian oriented streetscape near the Rose St crossing. For example, extension of the wider pavement build outs, and reduced waiting times for pedestrians crossing.
- Widen east and west Hanover St pavements to better accommodate high footfall without the need for pedestrians to step into the road. Reconsider if current loading/taxi/bus stop bays could be relocated to instead prioritise space for pedestrians. This would enable narrowing of the road carriageway to the minimum lanes needed, with space reclaimed for pedestrian movement/public life.
- Reduce street clutter, and consider repositioning bus stops/phone boxes etc to reduce pinch points.

TRACING STUDIES

O: ST ANDREW SQUARE / ST DAVID STREET



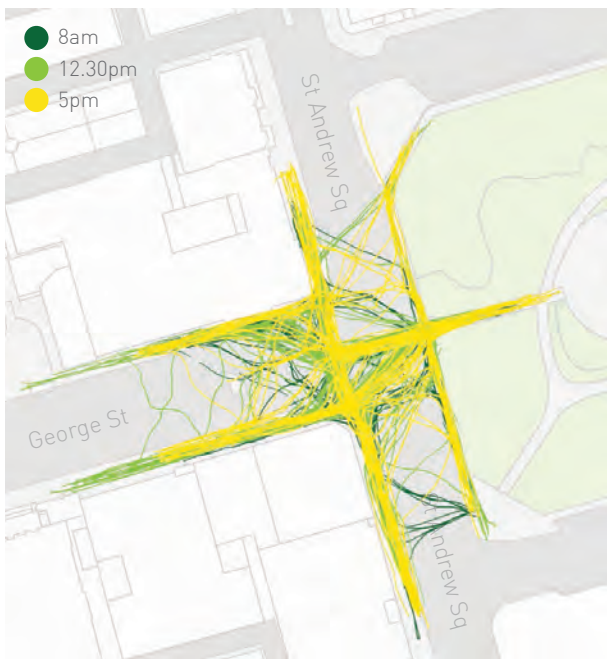
TUESDAY

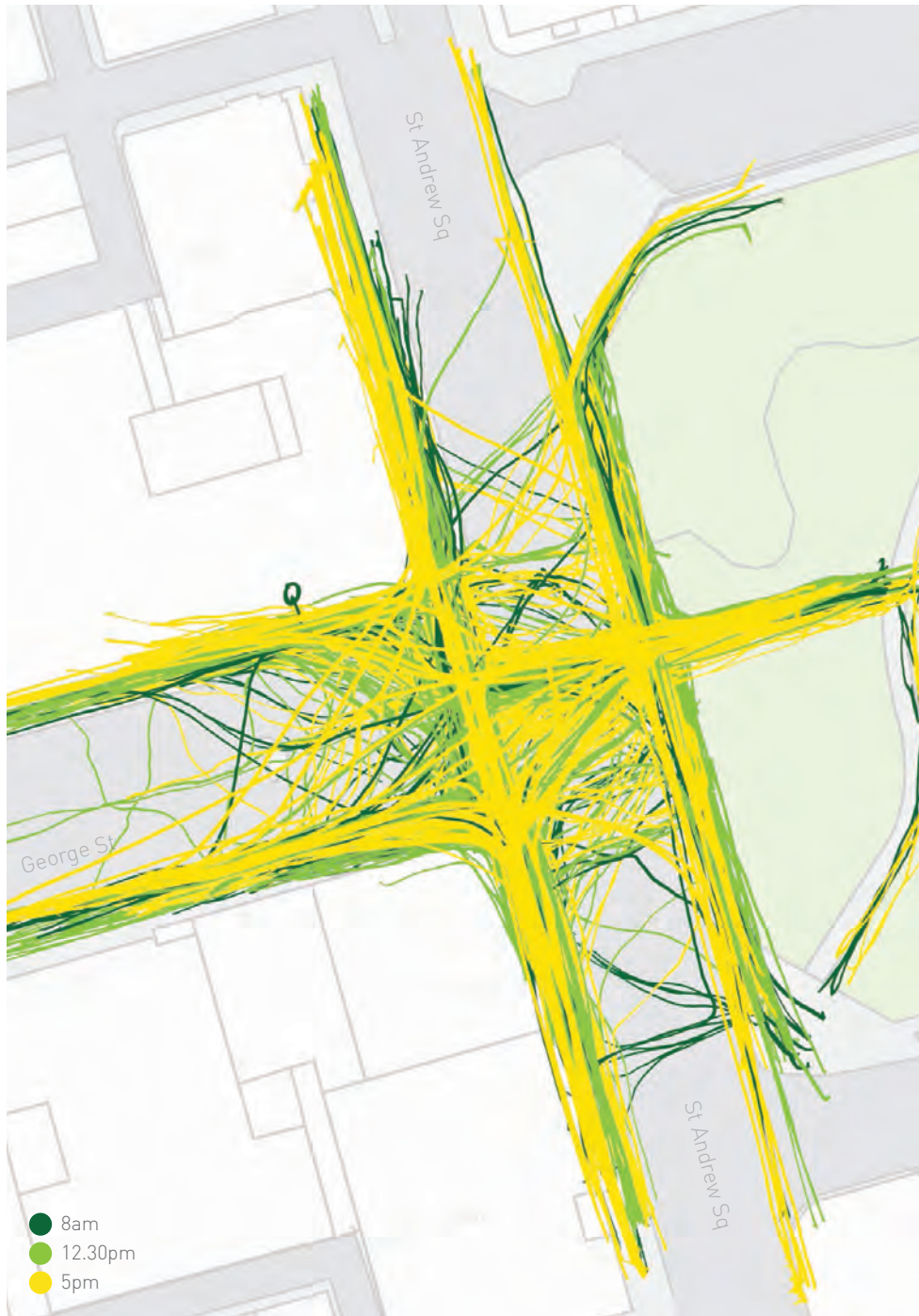


WEDNESDAY



SUNDAY





KEY FINDINGS:

Hierarchy/dominance of routes:

- Primary route/s: North and south sides of George St in an east-west direction, central exit/entrance to St Andrew Sq park moving to/from the crossing, west pavement of St Andrew Sq in a north-south direction.
- Secondary route/s: East pavement of St Andrew Sq in a north-south direction adjacent to the green area.
- Tertiary route/s: crossing St Andrew Sq east-west at various points, and crossing George St north-south diagonally (to/from the other pavement or junction traffic island).

Visible desire lines (not facilitated by existing street infrastructure):

- Dense clustering of desire lines around the junction of George St/ St Andrew Sq. Desire lines particularly focus to/from the central St Andrew Sq exit/entrance, to/from the central George St traffic island and south-west junction corner.
- Those cutting diagonally across George St make use of the cobbled central parking strip and pedestrian island at the junction as a mid-point in crossing the road.
- Many pedestrians also informally use the small traffic islands mid St Andrew Sq road to aid their crossing east-west between George St and St Andrew Sq park. These are very small and can result in hazardous situations.

Obstacles:

- A frames, seating and phone boxes create pinch points and effectively narrow the south-west junction corner pavement, despite this experiencing high footfall.

Opportunities for improvement:

- Rethink George St/St Andrew Sq junction to better prioritise pedestrian movement. This is particularly important given the high footfall between the bus station to the east and George St.
- Better connect George St and the east pavement/park entrance at St Andrew Sq so this is a smoother, less frustrating pedestrian experience. Shorten waiting times for pedestrians at signalised crossings, rethink junction layout to reduce the crossing distance for pedestrians (currently the junction is vehicle dominated with a wide expanse of area devoted to vehicle movement), widen pavements (particularly on the east side of St Andrew Sq), and replace multi-stage crossing infrastructure with single stage in all directions via widened pavements and increased pedestrian priority.

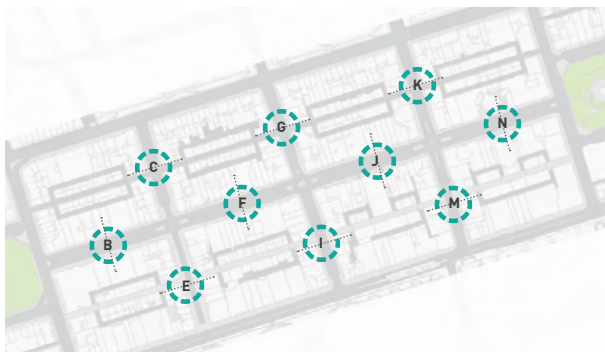
PEDESTRIAN COUNTS

OVERALL ANALYSIS

This section focuses in more detail on the pedestrian count studies conducted at 10 locations across the George St area. Pedestrian counts reveal footfall volume and direction at key locations throughout the George St area. Pedestrian counts spatially highlight these pedestrian movement dynamics and flow. They give quantitative information about the comparative numbers of pedestrians using different routes or going in different directions. This helps build a picture up as a whole of how pedestrians are moving around the area, and how this varies depending on time of day or day of week.

Pedestrian count studies were carried out at 10 locations across the George St area, for 10 minutes, at each of the 8am, 12.30pm, and 5pm research slots, on each of the three research days. At each location both the number of pedestrians passing on the near, and far, sides of the pavement were recorded, as well as the direction in which they were travelling.

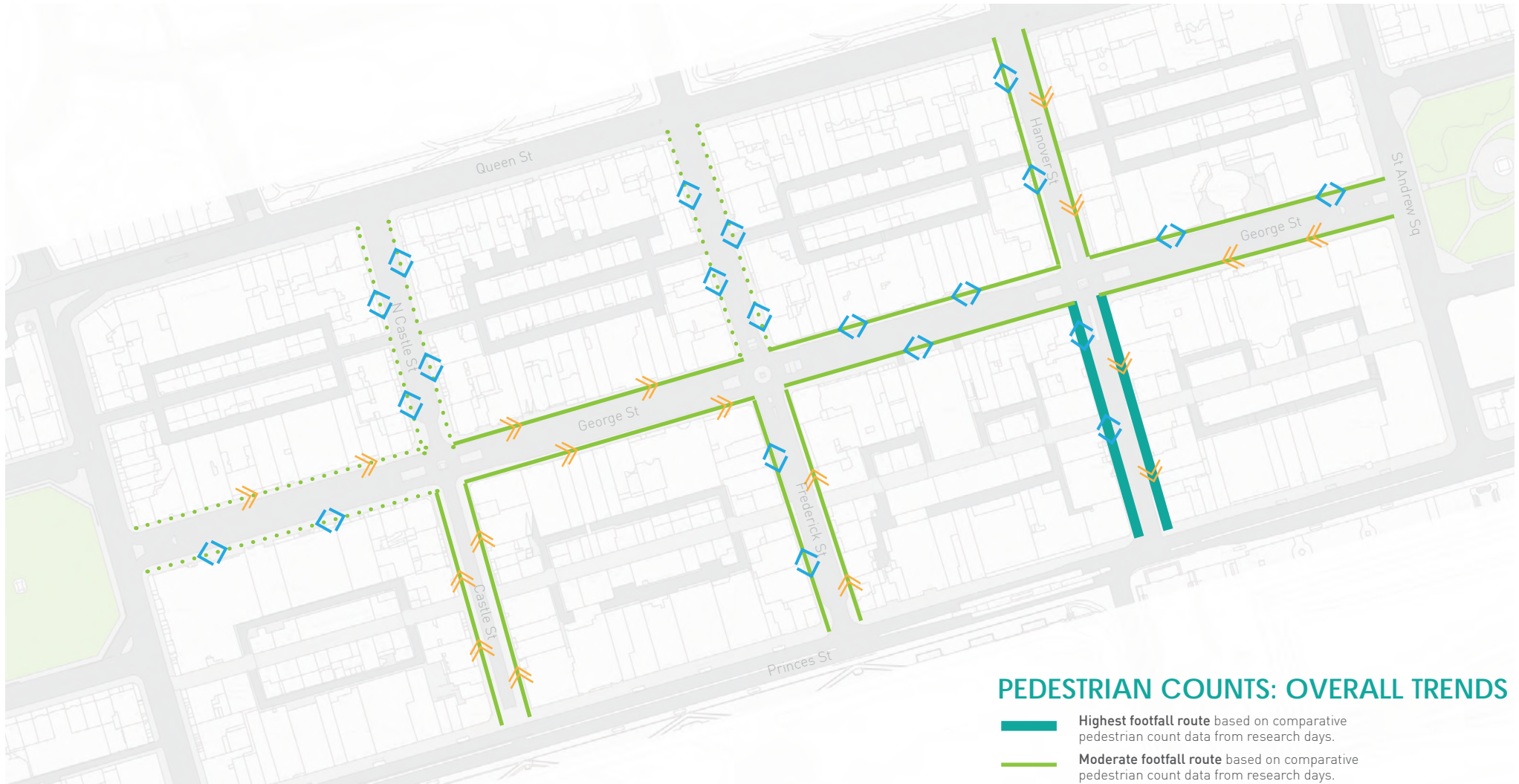
The results of pedestrian count studies are shown on the following pages for each specific location, to give more detail about these key movement nodes within the George St area. However, first we summarise overall findings and analysis of pedestrian movement based on the cumulation of pedestrian count data from across the whole area.








Locations pedestrian count studies were carried out.

KEY FINDINGS

- **High pedestrian volumes on both north and south sides of George Street, with the direction of travel from the east and west ends of George St towards the centre.** This correlates with high levels of recreational activity recorded in the behavioural mapping study across almost all George St locations. The high footfall and levels of public life along George St are likely due - in part - to the presence of active frontages, density of outdoor seating and opportunities for social exchange. Some of this high footfall from the east end of George St toward the Hanover St/Frederick St may also be due to commuters moving from the nearby bus station toward other bus interchanges or work locations to the south-west.
- **The quietest locations were to the north-west of the area at North Castle St (C) and Frederick St (north) (G).** North Castle Street had a significantly lower average number of pedestrians per minute than any other location on George St (5.5 people/minute). This is likely to reflect the lack of retail/restaurant frontages providing fewer opportunities to pause or interact on the street. Footfall was also low at Frederick St (north), however, with an average of 10.7 people per minute is nearly double that of N Castle St. This may be due to the higher number of active frontages (particularly on the east side) providing outdoor seating opportunities and more varied and active street life. The west end of George St at location B was the third quietest, supporting the trend that the north-west of the area experiences least footfall.
- **The east pavement of Frederick St south has a strong directional component to its pedestrian movement - in a northerly direction toward George St from Princes St.** Similarly at Castle St (south), the east side of the pavement showed more dominant movement in a northerly direction toward George St, as did the west pavement, to a lesser extent. This northerly movement may be due to pedestrians filtering off the main artery of Princes Street toward shops on George St.
- **Hanover Street (south) has the highest footfall, and shows a distinctly different pattern to Frederick St south and Castle St south due to its dominance as a vehicular and pedestrian through-route.** Footfall is primarily in a southerly direction on the east pavement of Hanover St, and roughly equitable in a north/south direction on the west pavement. This may be because Hanover St south serves as an important thoroughfare, point of transport exchange and connection for commuters on foot toward Waverley Station, bus services and the wider city, and routes between The Mound, Edinburgh Bus Station and other George St destinations. High footfall at this location is not sufficiently accommodated or prioritised via the existing street infrastructure, and is in need of improvement.



PEDESTRIAN COUNTS: OVERALL TRENDS

-  **Highest footfall route** based on comparative pedestrian count data from research days.
-  **Moderate footfall route** based on comparative pedestrian count data from research days.
-  **Low footfall route** based on comparative pedestrian count data from research days.
-  **Dominant direction of movement** where this was considerably more than any other.
-  **Roughly equitable directions of movement** where these were similar in both directions along the pavement.

PEDESTRIAN COUNTS

TOTAL + AVERAGE FOOTFALL

Overleaf, the total number of pedestrians passing each dotted 'invisible line' across each section of street (both sides of the road) during each 10 minute study is shown.

Pedestrian count studies were conducted at 3 times a day on 3 research days at 10 research locations. This enables comparison of how footfall volume varies between locations to give a sense of how busy each is at different times of day and on different days of the week.

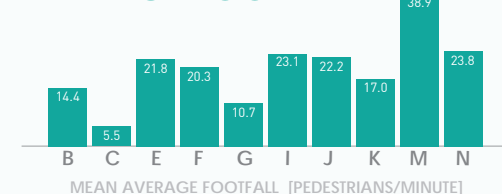
An average footfall is also shown in units of pedestrians/minute. This is the mean average number of pedestrians walking past the 'invisible line' per minute at each street location (both sides of the road) across all days and time slots. This figure gives an overview of generally how busy each location is as an average across the week.

As such, whilst this average figure is useful, the individual day/time slot data presented will better highlight the nuance of when and where there are particularly busy or quiet periods.

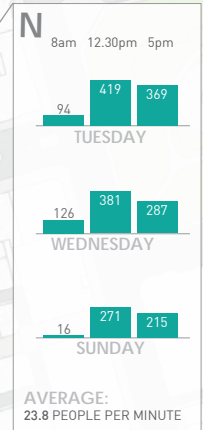
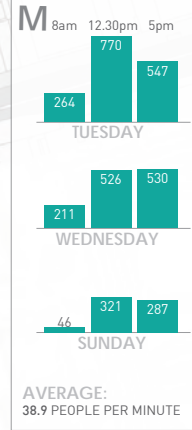
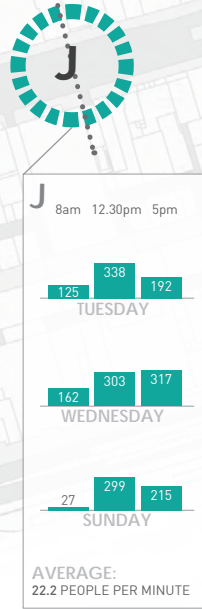
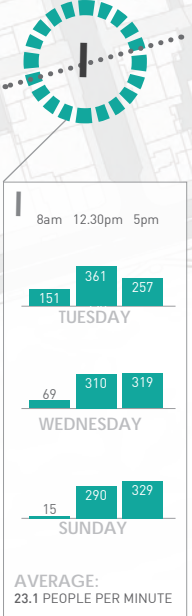
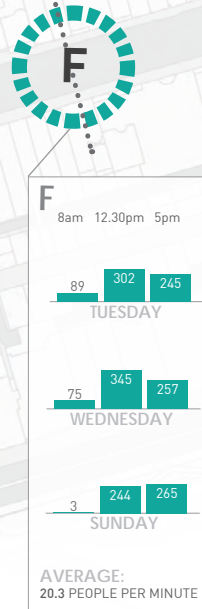
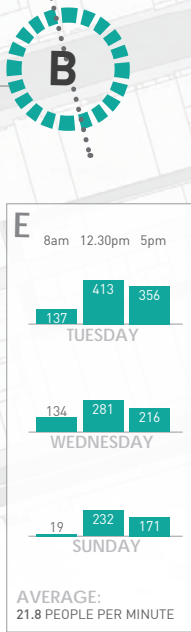
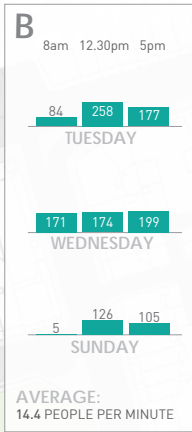
KEY FINDINGS

- **Hanover Street south (Location M) has highest footfall.** An average of 38.9 pedestrians/minute were observed passing this point. The location is busy throughout the day, but with considerably higher pedestrian numbers at lunch time and late afternoon. Lowest footfall was recorded here on Sunday morning (8am), when shops were closed and fewer commuters were en route to work (compared to weekday mornings).
- **North Castle Street (C) is the quietest street.** Footfall numbers remain low throughout the day and week, but are especially low at the weekend. This location comprises primarily passive office/residential/guest-house facades (no shops and few active frontages). This may explain why weekends are even quieter, with no workers passing through the street to bolster numbers.
- **The far west end of George St (B) has approximately half the weekend footfall of other locations along George St.** This may be due to fewer active facades and greater distance from transport hubs like the train and bus stations. Weekday footfall is more similar to other George St locations, though still reduced.
- **After N Castle St (C), the second lowest average footfall is at Frederick St (north) (G), followed by Hanover St (north) to the east.** Researchers noted that as you move east, each of these northern streets becomes busier with both traffic and pedestrian footfall.
- **Locations north of George St (C, G, K) and to the west (B) are have the lowest average footfall.** These were found to have a mean average footfall of 5.5, 10.7, 17, and 14.4 pedestrians/minute respectively.
- **Locations E and F show similar pedestrian footfall patterns, with peaks in activity at lunch time throughout the week.** This may be influenced by the pedestrianised public realm at Castle St, including temporary market over lunchtime, and public seating. Weekend mornings are much quieter at both locations.

AVERAGE FOOTFALL



TOTAL FOOTFALL



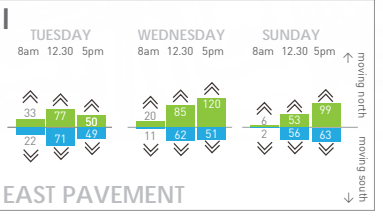
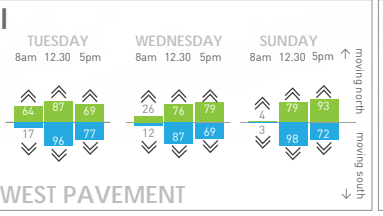
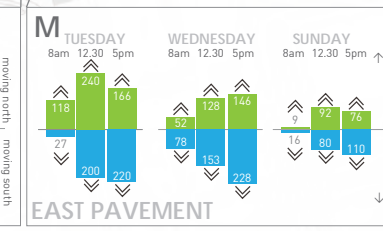
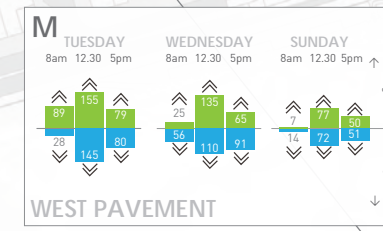
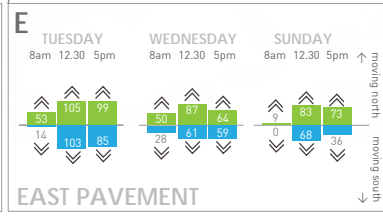
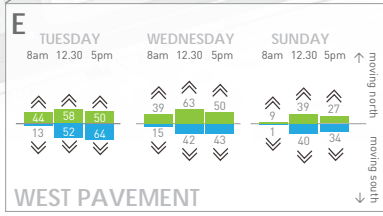
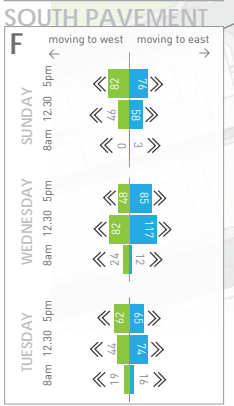
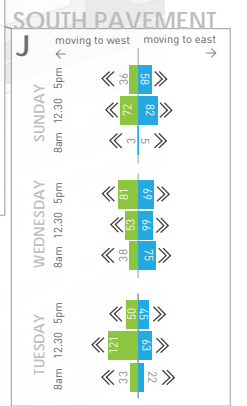
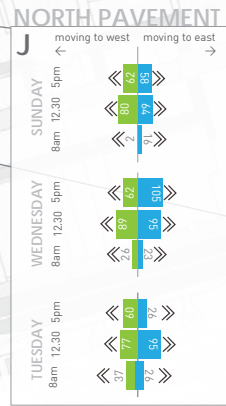
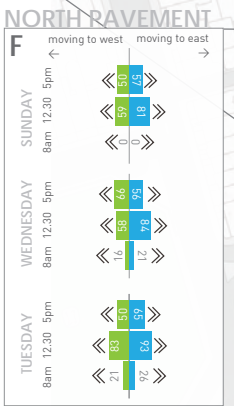
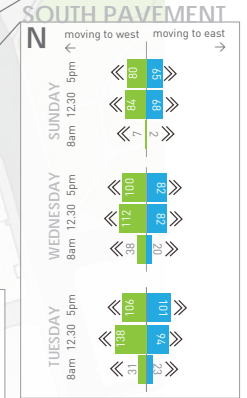
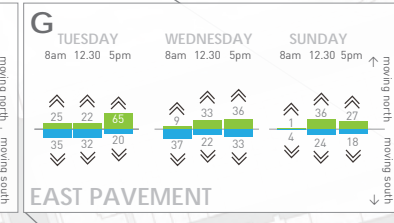
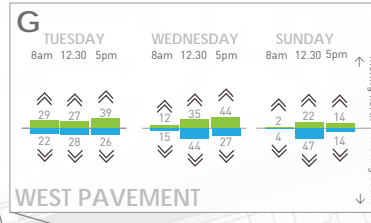
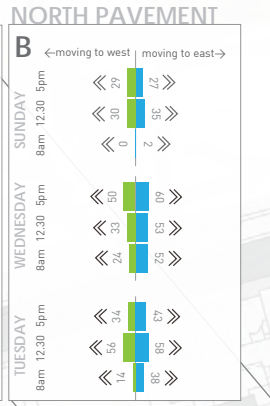
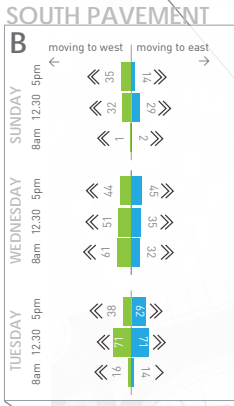
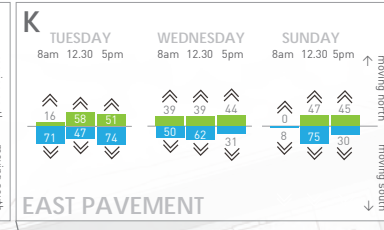
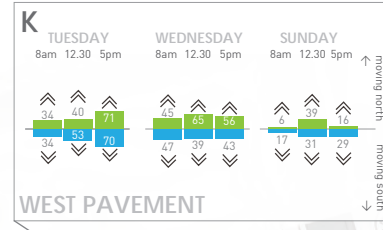
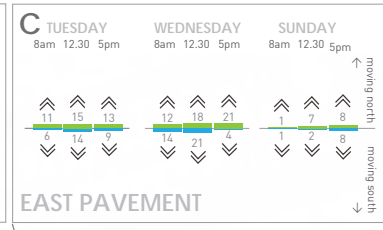
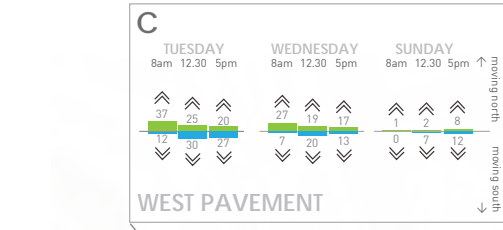
PEDESTRIAN COUNTS

Pedestrian counts were also recorded in terms of the number walking in each direction on either side of the street.

The directional footfall for all 3 research days is recorded overleaf, with footfall numbers for each side of the street separated for ease of comparison. This helps show any trends or patterns in directional movement by pedestrians, and if these occur on one side of the street or another. This adds more detail to the overall total footfall data.

KEY FINDINGS

- **The highest footfall was recorded at Hanover Street south (M). Specifically, travelling south from George St to Princes St on the east side of Hanover St south (across all days).** Footfall was highest on weekdays at this location, with higher volumes generally tending to be moving north (toward George St) during lunch time in peak periods. The highest individual instance of footfall was recorded at 12.30pm on Tuesday on the east side of the street in a northerly direction. At 5pm, more pedestrians were recorded moving south, presumably after work en route home.
- **Weekends were quieter than weekdays, with less footfall at all locations.** This disparity was largest at Hanover St south (M) and N Castle St (C) - the busiest and quietest street sections in the George St area, respectively. This may indicate these streets derive most of their footfall from weekday commuters.
- **The two locations furthest east on George St (J and N) were relatively busy in both directions throughout the week, but with slightly more people moving west on the south side of pavement on weekday lunch times and early evenings.** This is likely to be because the east end of George St is a key link from St Andrews Sq to destinations on George St/ Princes St.
- **Castle St south (E) showed slightly more people moving north on both sides of the street.** This is likely to be because it is a key connection from the west end of the city towards George St and New Town.
- **Very low numbers of pedestrians were recorded in both directions at North Castle St (C).** This is likely because the street is made up of fewer active retail/cafe frontages driving numbers through the area. Instead, those walking through were observed to primarily appear to be commuters walking to work or those visiting guest-houses/offices on the street.
- **At location F (George St between Castle St and Frederick St), more pedestrians move in an easterly direction at lunchtimes throughout the week.** This is true for weekdays and weekend days, and on both sides of the pavement.



BEHAVIOURAL MAPPING

OVERALL ANALYSIS

This section details findings from behavioural mapping studies conducted at 10 locations across the George St area. Behavioural mapping studies reveal what existing public life activities and behaviours are already taking place in the street environment. They spatially locate specific user activities occurring in the public realm, and their duration. Behavioural mapping studies also help feed into the current 'place function' of George Street and the intersecting streets. They do this by revealing where the existing street environment is already conducive to public life and staying activities. Researcher notes and observations can also help highlight and analyse the potential reasons this behaviour does / does not occur.

Behavioural mapping studies were carried out at 10 locations across the George St area. At each location a 10min study was conducted at 8am, 12.30pm, and 5pm on each of the 3 research days. Behavioural activities were split into categories of **activity type** such as: sitting, window shopping, waiting to cross the road, standing talking to others, talking on a mobile phone, or smoking.

Behavioural activities can also be classified in more detail according to whether they are 'recreational', 'optional' or 'necessary'. These terms are from Jan Gehl's book 'How to Study Public Life':

- **'Recreational' activities** are those that involve the presence of others. For example, talking in the street, sightseeing, socialising sat at outdoor cafe seating, or those sat people-watching. Presence of these activities indicates a public space that acts as a meeting point.
- **'Optional' activities** are those that involve choosing to spend more time in the public realm than needed, but without the social element. For example window shopping, stopping to take a seat to rest with heavy shopping bags, taking a phone call or smoking outside.

- **'Necessary activities'** are those activities that would happen regardless of the conditions of the public realm, such as walking to work, catching the bus, or going to the shops for groceries. Behavioural mapping focusses on stationary activities in the public realm, and so people waiting for the bus and/or pedestrians waiting to cross the road en route to their destination, were common examples of necessary activity observed. Many other necessary activities may have been present, but are movement related e.g. walking to work, which is captured by other studies (pedestrian count, tracing study) rather than behavioural mapping. Whilst necessary activities are not as strong an indicator of public life, these activities still have value in ensuring 'natural surveillance' or 'eyes on the street' that can promote feelings of safety that support more recreational or optional types of public life activity.

The results of the behavioural mapping studies are shown on the following pages for each specific location, to give more detail about these particular places within the George St area. However, first we summarise the overall findings and analysis of the behavioural mapping studies, based on the cumulation of behavioural mapping data from across the whole area.



KEY FINDINGS

- **Almost all stationary behavioural activity occurs at street edges** on the existing pavement. Few recreational/optional activities occur within the larger central road area of George St or the adjacent streets due to dominance of parking/moving traffic. Street edges also provide more pleasant microclimatic conditions for public life due to a lack shelter from wind/rain in the primarily linear and exposed current street layout (for example, no street trees, few sheltered nodal spots).
- **Necessary activities are more prevalent to the east of the George St study area.** Particularly Hanover St where large numbers of pedestrians wait to cross multi-stage crossings at George St, or building up on street corners and into the road at Princes St as they attempt to move east-west.
- **Castle St has the highest concentration of recreational activities and public life.** This is aided by a higher quality and more pedestrian friendly detail design (including some public seating). Partial pedestrianisation allows for markets, and activity within the central street area (not just at the edges as found on other streets due to traffic).
- **The Castle St/George St intersection operates as an important node for social exchange,** facilitated by the wider pavement corners, with groups stopping to talk/take photos on the corners.
- **More public life observed on the east side of Castle St and Frederick St [north] than elsewhere in the study area.** These get afternoon/evening sun, creating positive conditions for their outdoor cafe seating in good weather.
- **George St between Frederick/Castle St, north side of George St between Frederick/Hanover St, North Castle St and Frederick St [north] on the west side have less recreational activity,** likely due to the lack of outdoor cafe/bar seating on these stretches.
- **Hanover St/George St junction has the highest concentration of necessary activities, resulting from pedestrians waiting to cross the street in all directions.** Long waiting periods and multi-stage crossings indicate a layout that favours vehicle movement over those on foot. Dominance of traffic also hinders public life, leaving limited space for optional/recreational activities. Junctions at Charlotte Sq, Frederick St/Princes St, Frederick St (crossing east-west at Rose St), Hanover St/Princes St, Hanover St [crossing east-west at Rose St], St Andrews Sq, and Hanover St (north) crossing east-west at Thistle St also reveal clusters of necessary activities due to long waiting times for pedestrians and street layouts that could be improved for walking.
- **The junction corners of Rose St and Thistle St where these intersect with Frederick St/Hanover St/Castle St are important nodes for social exchange and east-west direction crossings.** Currently these are poorly facilitated by the existing infrastructure [except at Castle St].
- **Steps/building entrances provide the vast majority of public seating/stopping opportunities.** These offer an informal space for smokers/small groups to wait/talk off the main thoroughfare.
- **Public benches are limited but popular. This indicates a lack of available public space for optional /recreational activities.** More public seating is in demand, and would provide new chances for social exchange/rest stops.

OVERVIEW: BEHAVIOURAL ACTIVITY

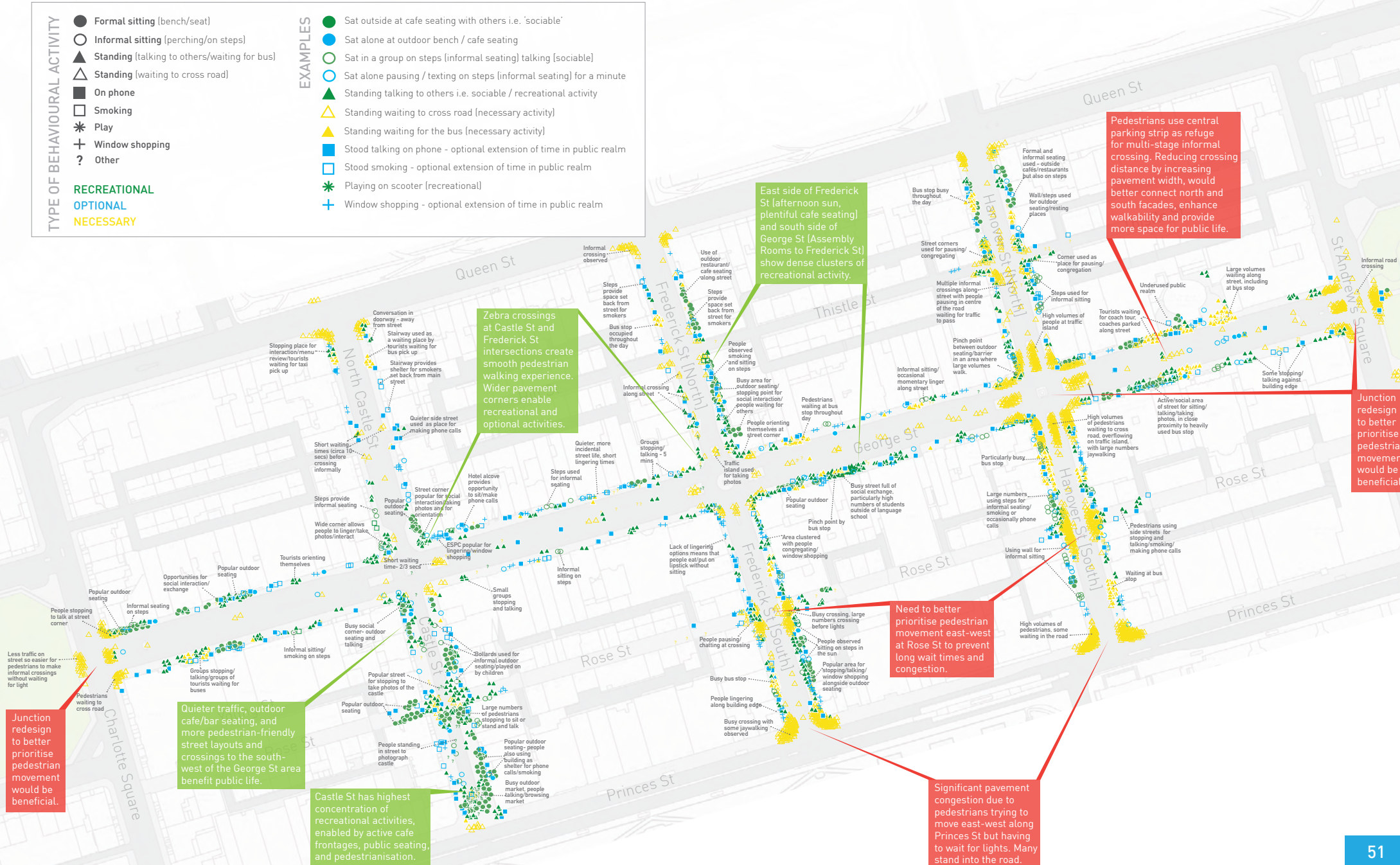
TYPE OF BEHAVIOURAL ACTIVITY

- Formal sitting (bench/seat)
- Informal sitting (perching/on steps)
- ▲ Standing (talking to others/waiting for bus)
- △ Standing (waiting to cross road)
- On phone
- Smoking
- * Play
- + Window shopping
- ? Other

RECREATIONAL
OPTIONAL
NECESSARY

EXAMPLES

- Sat outside at cafe seating with others i.e. 'sociable'
- Sat alone at outdoor bench / cafe seating
- Sat in a group on steps (informal seating) talking [sociable]
- Sat alone pausing / texting on steps (informal seating) for a minute
- ▲ Standing talking to others i.e. sociable / recreational activity
- △ Standing waiting to cross road [Necessary activity]
- ▲ Standing waiting for the bus [Necessary activity]
- △ Standing waiting for the bus [Necessary activity]
- Stood talking on phone - optional extension of time in public realm
- Stood smoking - optional extension of time in public realm
- * Playing on scooter (recreational)
- + Window shopping - optional extension of time in public realm



Pedestrians use central parking strip as refuge for multi-stage informal crossing. Reducing crossing distance by increasing pavement width, would better connect north and south facades, enhance walkability and provide more space for public life.

East side of Frederick St (afternoon sun, plentiful cafe seating) and south side of George St (Assembly Rooms to Frederick St) show dense clusters of recreational activity.

Zebra crossings at Castle St and Frederick St intersections create smooth pedestrian walking experience. Wider pavement corners enable recreational and optional activities.

Junction redesign to better prioritise pedestrian movement would be beneficial.

Need to better prioritise pedestrian movement east-west at Rose St to prevent long wait times and congestion.

Significant pavement congestion due to pedestrians trying to move east-west along Princes St but having to wait for lights. Many stand into the road.

Junction redesign to better prioritise pedestrian movement would be beneficial.

Quieter traffic, outdoor cafe/bar seating, and more pedestrian-friendly street layouts and crossings to the south-west of the George St area benefit public life.

Castle St has highest concentration of recreational activities, enabled by active cafe frontages, public seating, and pedestrianisation.

BEHAVIOURAL MAPPING

B: GEORGE ST [BETWEEN CHARLOTTE SQ + CASTLE ST]



TUESDAY



Notes, trends and observations:

- Most people were able to cross the road without pausing at this time of day due to low traffic volumes.
- Minimal stationary activity.

Notes, trends and observations:

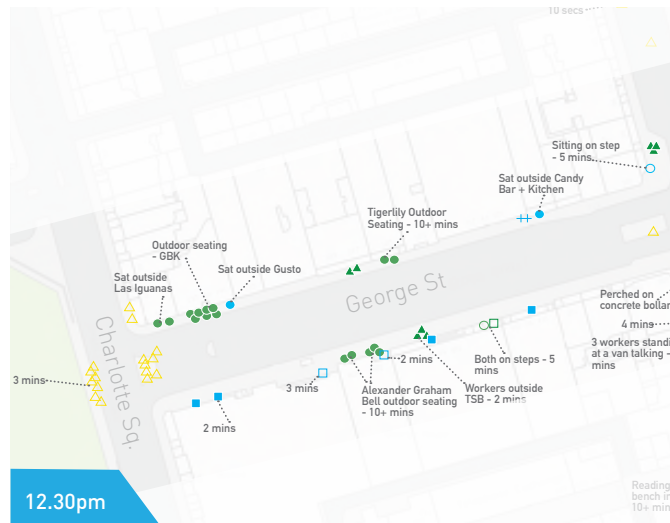
- Several people sat outside cafés/bars on the north side of the road.
- Minimal pausing at the zebra crossing at George St/Castle St.
- Large clusters of people stood waiting at Charlotte Square pedestrian crossing lights at multi-stage crossing points and corners.
- Short duration use of facade recesses and steps for phone use, conversations, smoking.
- Some pedestrians wait within central parking strip to cross the road mid street.

Notes, trends and observations:

- Despite numerous cafés and restaurants with outdoor seating, few people were using these facilities at this time.
- Few people pausing for long periods of time in this area. Most recreational activity recorded was standing and talking for shorter periods.
- No pedestrians waiting to cross Castle St/George intersection due to zebra crossing.
- Pedestrians wait for lights at Charlotte Sq pedestrian crossing.



WEDNESDAY



Notes, trends and observations:

- No pedestrians observed waiting at zebra crossing at George St/Castle St.
- Pedestrians waiting at lights at Charlotte Square multi-stage pedestrian crossing.
- Few stationary behaviours observed in the area.

Notes, trends and observations:

- Zebra crossing means little waiting at George St/Castle St intersection.
- Outdoor commercial seating used by several people. Particularly on the north side of the street (to west), and at one location (Alexander Graham Bell) on south side.

Notes, trends and observations:

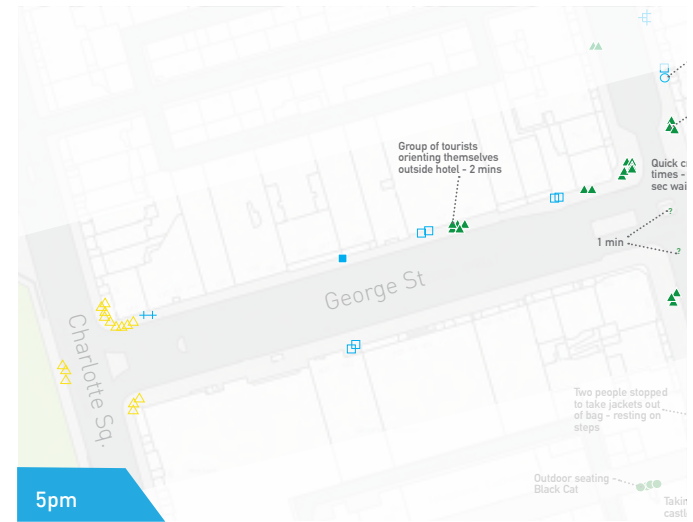
- Outdoor seating busier at key restaurants/bars (Las Iguanas, Tigerlily, Alexander Graham Bell).
- Informal seating on facade steps.
- Public seating/planter used for sitting.
- Homeless people sat on both sides of the eastern end of this section.

BEHAVIOURAL MAPPING

B: GEORGE ST [BETWEEN CHARLOTTE SQ + CASTLE ST]



SUNDAY



Notes, trends and observations:

- Most stationary activity located at hotel on south side of the road, with bus tours departing from outside.
- Use of street pavement corners for social interaction.

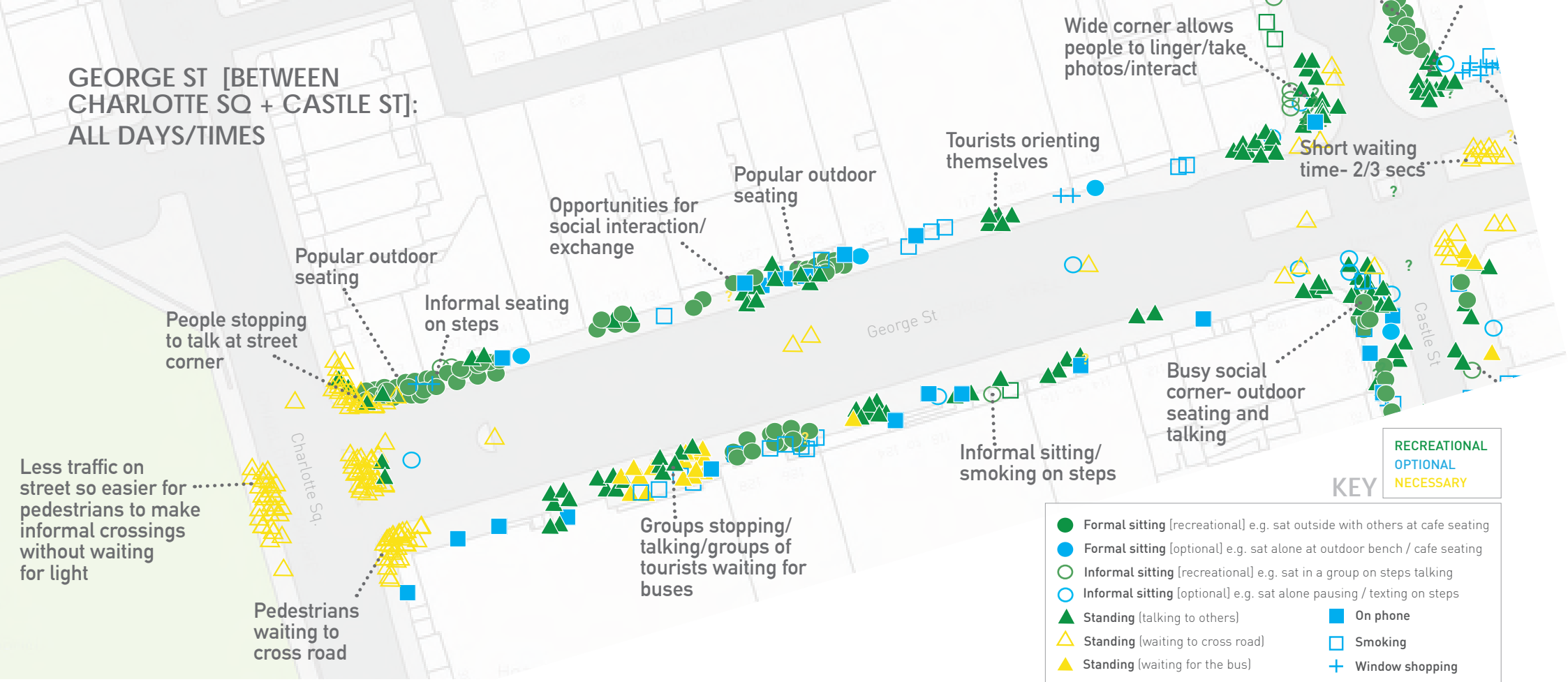
Notes, trends and observations:

- Outdoor seating busy at cafés/restaurants.
- Some clustering/waiting to cross the road at pedestrian crossing at George St/Charlotte Square.
- Hotel frontage remains busy with groups of tourists in clusters talking/waiting for tour buses.

Notes, trends and observations:

- Quieter street than previous time slots earlier in the day, some smokers standing against building facades.
- Small groups talking/orienting themselves at north eastern end of street.

GEORGE ST [BETWEEN CHARLOTTE SQ + CASTLE ST]: ALL DAYS/TIMES



OVERVIEW: KEY FINDINGS

Recreational activities:

- Clusters of activity and public life at restaurants/cafés/bars with outdoor seating.
- Most common recreational activities: outdoor seating and small groups talking in street.
- Outdoor commercial seating particularly busy at lunch time, although bars/pubs are also busy on Wednesday evening after work.

Optional activities:

- Smoking/phone use along entire street, particularly at edges. Building facades/steps provide shelter/space for these activities.

Necessary activities:

- Clusters of tourists waiting for tour bus outside hotel on south side of street.
- At Charlotte Sq junction, pedestrians observed waiting to cross road from central traffic island and on all corners, indicating the popularity of this route but frustrating wait experience.
- Zebra crossing at George St/Castle St junction prioritises pedestrian movement, with no pedestrians observed waiting to cross.

Other findings:

- Street was relatively quiet, with activity mostly centred at street edges where pavements allow pedestrian activity, and wider street corners at Castle St/George St junction.

- The most common activities were; waiting to cross the road, phone use, outdoor commercial seating, and groups stood talking or waiting for tour buses.

Opportunities for improvement:

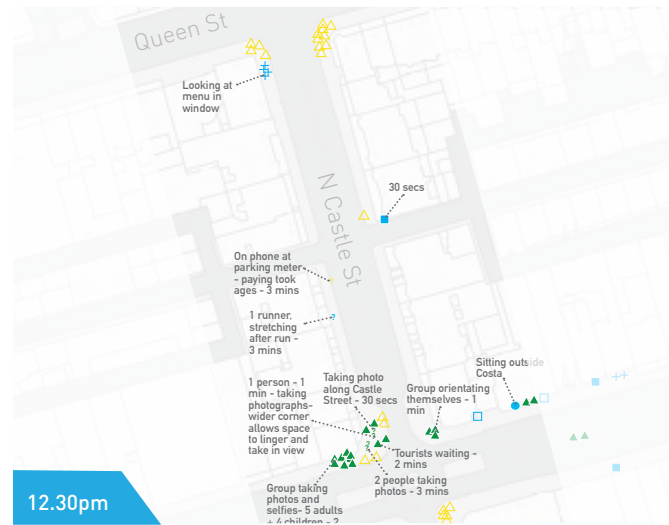
- Provision of additional seating and streetscape enhancement (pedestrian/cyclist prioritisation, trees and more public outdoor seating) would enhance opportunities for more optional and recreational activities, public life, and opportunities to rest and pause.
- Public life activities currently constrained to pavements skirting road carriageway. Reduce parking, increase space for pedestrians.

BEHAVIOURAL MAPPING

C: NORTH CASTLE STREET



TUESDAY



Notes, trends and observations:

- Zebra crossing at south end of N Castle St aids pedestrian flows, resulting in no pedestrians observed waiting to cross here.
- Signalised crossing and long crossing distance at N Castle St/Queen St junction results in many pedestrians observed waiting on corners at this point.

Notes, trends and observations:

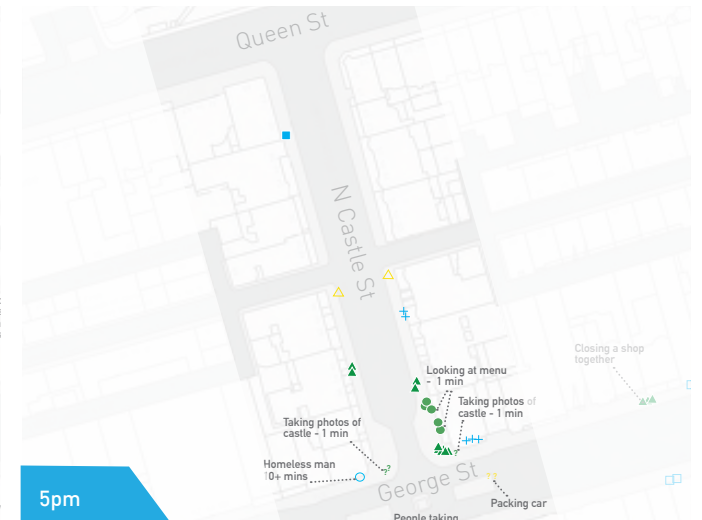
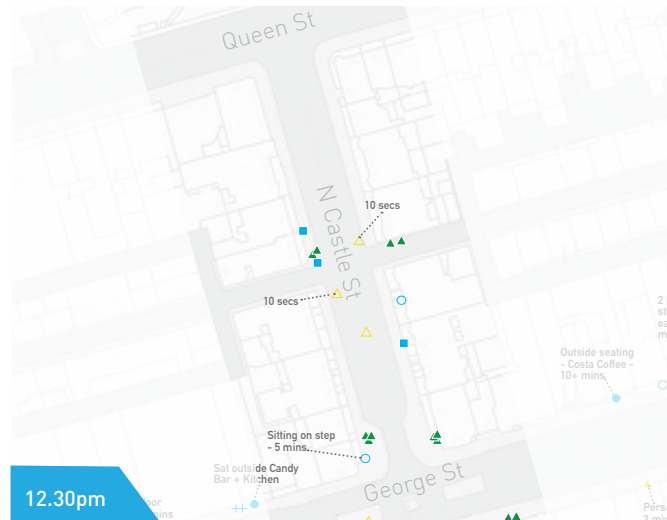
- Pedestrians noted stopping to take photographs from George St/N Castle St junction to views of the castle to the south. A popular view that should be maintained/enhanced, or supplemented with seating to build on views.
- Wider corners at southern end of street (intersecting with George St) allow people to linger/talk/take photos.

Notes, trends and observations:

- Once again the largest area of congestion was the junction of N Castle St/Queen St. This is particularly noticeable on the west side of the road by those waiting to cross to the east.
- Few recreational activities - all near street corners, with most due to groups pausing to talk to each other for short periods. Several people sat at Tonic's outdoor seating.
- Smokers/phone users often linger against building edges for shelter.



WEDNESDAY



Notes, trends and observations:

- Very quiet, some exchanges at the northern end of the street in doorways.
- People stop to take photos of castle from corner of George St/N Castle St.

Notes, trends and observations:

- Public life activity particularly noticeable at street corners, especially at Young/Hill St intersections with N Castle St, and on wider pavement corners with George St.
- Recreational activity is mainly small groups talking on these corners.
- No stationary public life activities observed closer to Queen St, where traffic noise and volume was observed to be louder, and footfall quieter.

Notes, trends and observations:

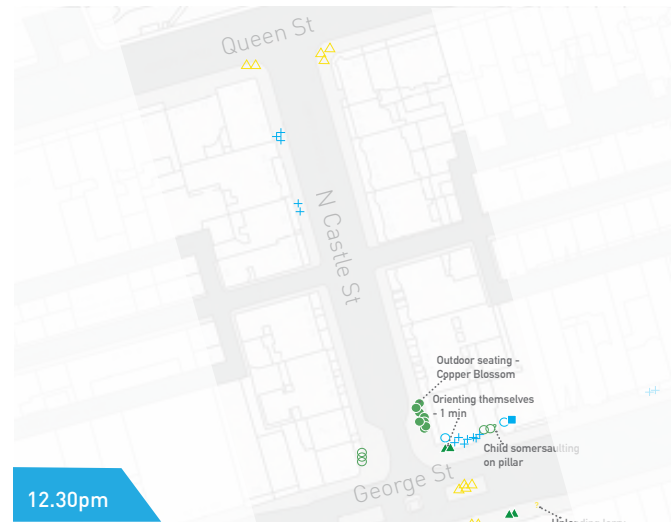
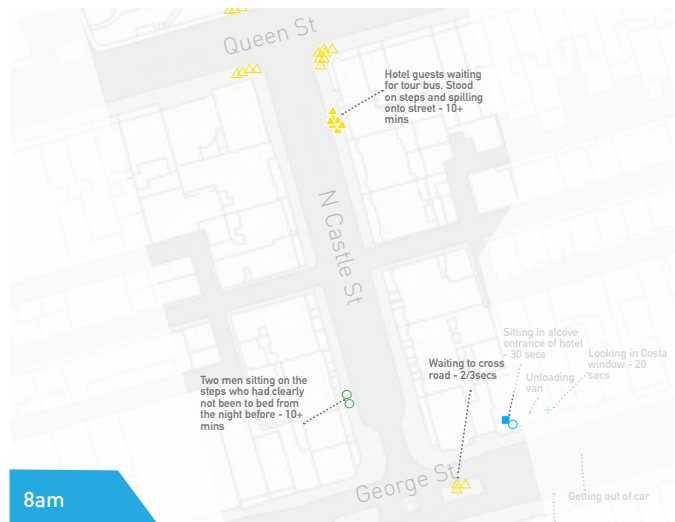
- Very quiet northern end of the street toward Queen St.
- More groups, stopping and talking, or sitting toward the south. Especially so on the south-eastern side of the street where there are wider pavements, good views and outdoor commercial seating at Copper Blossom.
- Groups/individuals stopping to take photos of the castle to the south.

BEHAVIOURAL MAPPING

C: NORTH CASTLE STREET



SUNDAY



Notes, trends and observations:

- Pedestrians moving freely at the N Castle St/ George St junction but forced to stop and wait at Queen St due to signalised crossing. Fast turning cars and large crossing distance/ road width between pavements at this point make crossing informally hazardous, so many pedestrians wait for the lights.
- Group of tourists observed waiting for tourist bus outside hotel at north eastern end of street.

Notes, trends and observations:

- Little stationary activity observed. No active facades along main central section of street (instead offices/residential/hotels), and no formal public seating/nodes for gathering. This results in little reason to pause except for informal rest spots on steps or at the more active facades at George St/N Castle St junction, and Queen St/N Castle St junction. Could be designed into a more engaging space.
- Some window shopping on western side of street at estate agent shop facades.

Notes, trends and observations:

- Fleeting activity: no-one stationary on the street for any significant amount of time.
- Small groups stop to talk for short periods, particularly closer to George St on wider pavement corners.

OVERVIEW: KEY FINDINGS

Recreational activities:

- South end of N Castle St (toward George St) has significantly more recreational activity than the north end towards Queen St.
- Outdoor commercial seating at Copper Blossom (south east corner) is popular.
- Wide pavements at south end of street provide opportunities for pausing and social engagement. Both widened corners at N Castle St/George St intersection popular with small groups stopping to talk or take photos.
- Some individuals use steps for informal seating on south-east side in particular.

Optional activities:

- Optional activities occur generally against building facades or on street corners where Hill/Young St meet N Castle St.
- Fairly high numbers of people stopping to use their phone in the street. Particularly around Hill/Young St where they can set themselves back from the noise/movement of the main street.

Necessary activities:

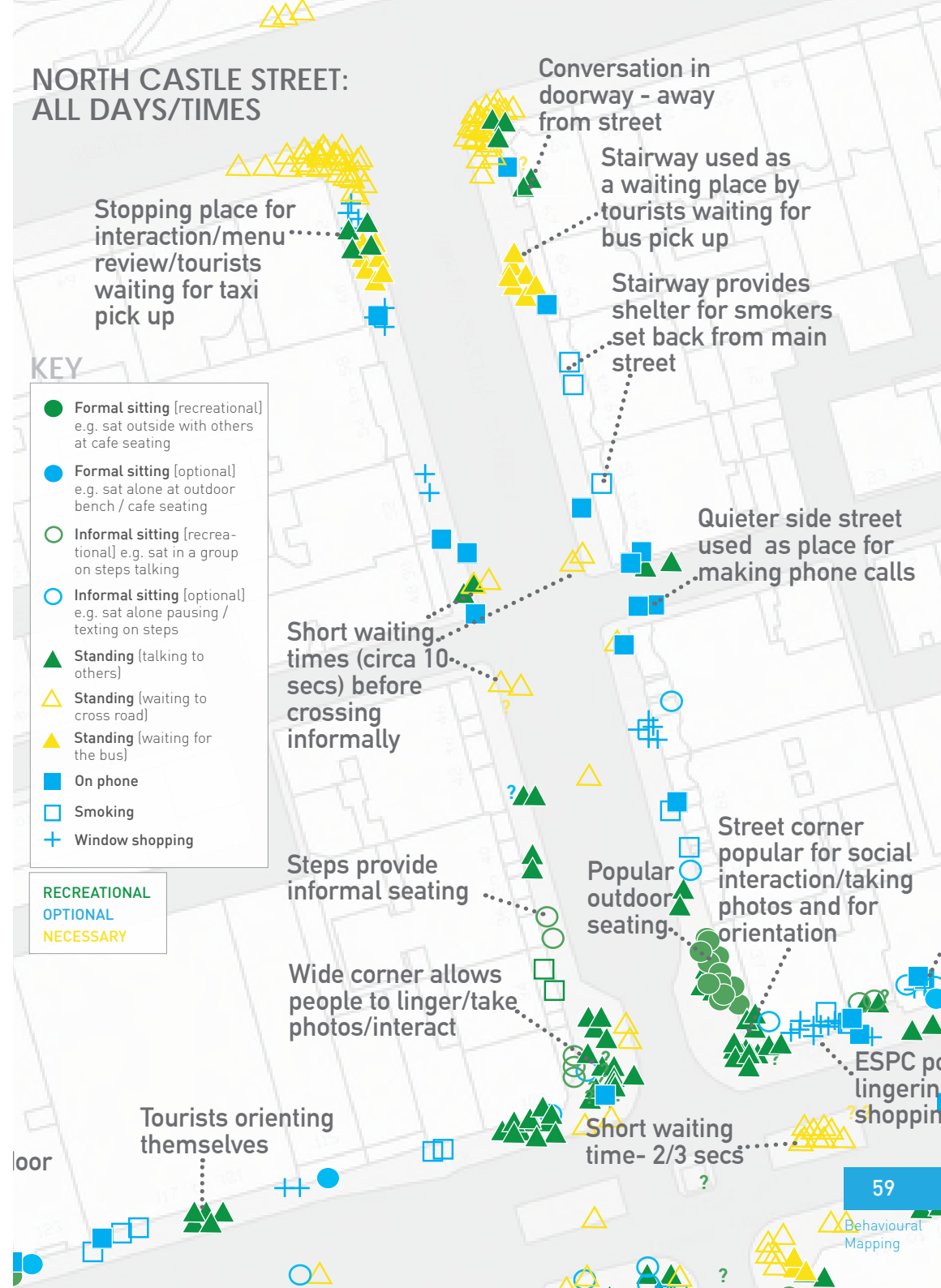
- People waiting to cross roads (informally crossing east-west between Hill/Young St) and at formalised Queen St crossing.
- Some groups of tourists observed waiting at north end of street for transport pick ups.

Other findings:

- Generally central/northern end of street are quiet with limited opportunities or incentive to pause or stop.
- Pavements at south end wide enough to promote lingering/social interaction. Short pedestrian crossing distance and zebra crossing beneficial.

Opportunities for improvement:

- Widen pavement corners to shorten crossing distance for pedestrians moving east-west over N Castle St at Queen St and between Hill/Young St in particular.
- Enhance public realm at south end of N Castle St to enhance as a nodal space for social exchange/taking photos etc with provision of public seating and trees.



BEHAVIOURAL MAPPING

E: CASTLE STREET



TUESDAY



Notes, trends and observations:

- Small groups of people collecting along the street but most people are passing through the area at this time.

Notes, trends and observations:

- High levels of recreational activity, likely due to pedestrianised lower half of Castle St creating good environment for social opportunities.
- Large groups cluster at the pavement intersection with Rose St to regroup and plan the next stage of their journey, sometimes stopping to take a seat on public seating/bollards.
- Much higher use of cafe outdoor seating here than anywhere else observed in the George St area. Presence of public benches and bollards enables more formal and informal seating here than elsewhere too.

Notes, trends and observations:

- Large collections of people congregating at the junction with Rose Street. Most people were standing and talking but groups were also using the benches provided.
- Unlike the junctions of Hanover St and Frederick St with Princes St, at the Castle St/Princes St junction there were no queues of people on corners waiting to cross east-west. Instead some recreational activity was recorded at this southern end of the street.



WEDNESDAY



Notes, trends and observations:

- People use the wide pavement space at the south end of Castle St where this meets Princes St to meet, talk, or use phones, stopping in the middle of the space. This activity builds on the heavy footfall east-west along Princes St, but is also facilitated by the conducive street environment at this point, with pedestrianisation of the lower section of Castle St and provision of some public seating.
- West wider pavement corner at Castle St/ George St forms nodal gathering point outside Starbucks.

Notes, trends and observations:

- Market provides a focal point at southern end of Castle St for people to stop/talk and browse the stalls.
- Benches used for formal seating but a number of people also observed resting/sitting on bollards along street. There appears to be demand for more public seating here, with several of those standing nearby to existing seating waiting for it to become free (particularly when the market is on).

Notes, trends and observations:

- South end of street (pedestrianised zone) remains most concentrated with recreational activity. Pedestrians observed stopping and talking, browsing market, resting on concrete bollards and taking photos of the castle.
- People noted taking photos along whole length of Castle St (up to George St junction).
- Outdoor seating along pedestrianised Rose St very popular, particularly outside pubs.

BEHAVIOURAL MAPPING

E: CASTLE STREET



SUNDAY



Notes, trends and observations:

- Early morning, several different groups and individuals observed photographing the castle from several different positions along street.
- Market stall holders setting up market for the day.
- Small groups observed stopping/talking/orienting themselves near junction of Castle St/Rose St.
- West corner of George St/Castle St popular meeting point (outside Starbucks).

Notes, trends and observations:

- Outdoor cafe seating popular. Used along length of street (especially on east side at facade edge, now in sun).
- Public benches and bollards provide stopping points.
- Some pedestrians pause to cross/stop to talk at Rose St junction. Those trying to cross wait for cars to drive into/out of Rose St before they can proceed.
- Vans/cars parked within central strip of pedestrianised section of street, even when disallowed according to traffic signs.

Notes, trends and observations:

- Quieter later in the day at 5pm.
- Small groups still stopping/talking particularly around Rose St junction.

OVERVIEW: KEY FINDINGS

Recreational activities:

- High density of recreational activities along length of street, particularly at south pedestrianised end of Castle St.
- Junction with Rose St popular for pausing/sitting or stopping to chat with friends.
- Public benches/seating/bollards frequently used, particularly on market days.
- Pedestrianised street may create a more welcoming and relaxed atmosphere in which pedestrians feel inclined to spend time.

Optional activities:

- People stop to smoke, use phones or opt to sit on benches/perch on bollards along the whole street length.
- Pedestrianised part of the street may encourage people to spend longer outside than they might usually.

Necessary activities:

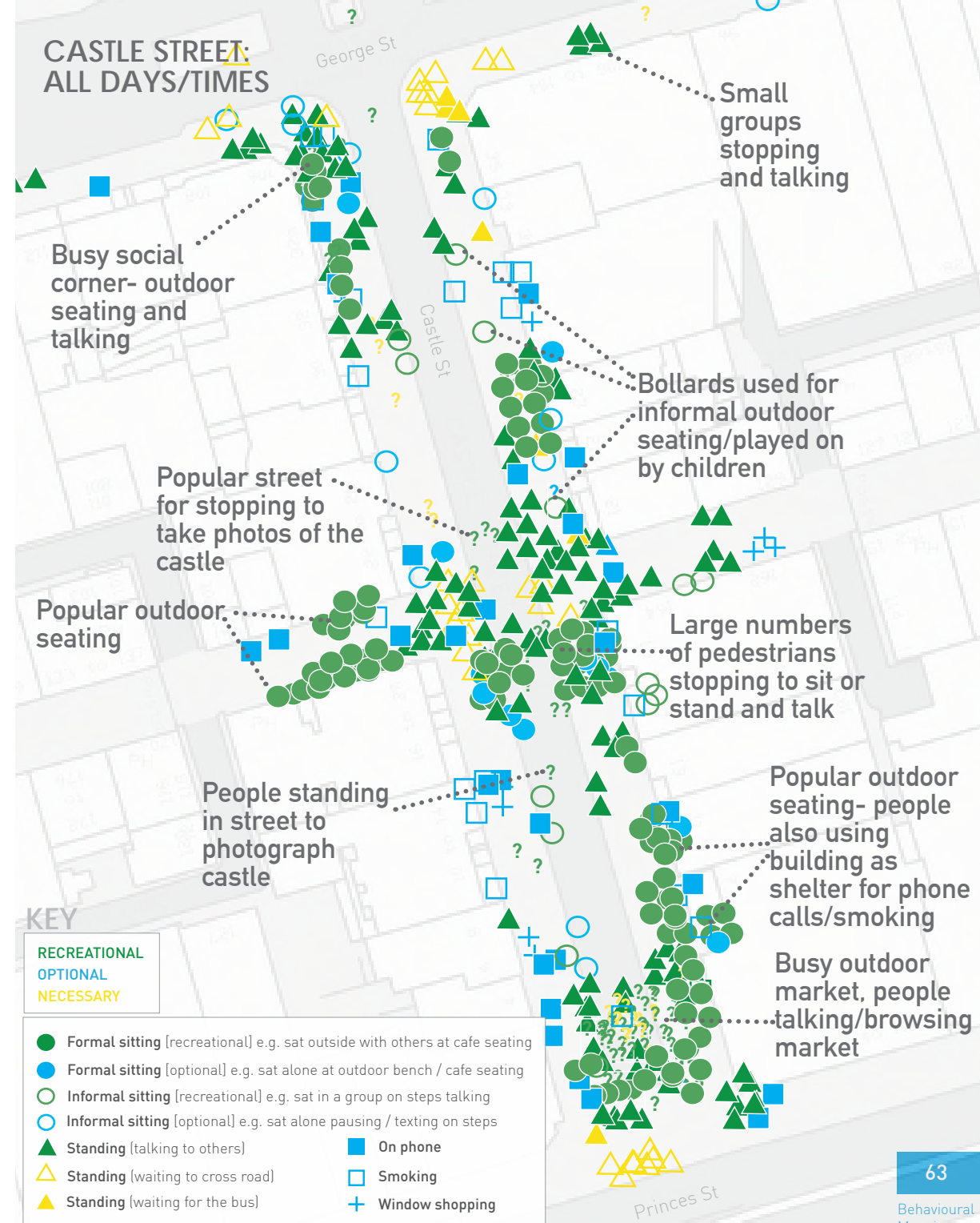
- Clusters of pedestrians observed waiting for others/waiting to cross at all junctions. Largest number waiting are those trying to cross Castle St east-west at Rose St (cars move into/out of Rose St at speed, and into/out of pedestrianised section to park).
- South end of street at Princes St does not experience build up of pedestrians waiting to cross Castle St due to continuous pavement east-west. Instead a small group were recorded waiting to cross south, over Princes Street.

Other findings:

- Market promotes public life and activity.
- Pedestrianisation appears to encourage dwell time.
- Activities primarily located within wide pavement sections on east and west sides, with central strip used by moving vehicles in north section of Castle St, and parked vans/vehicles in south (technically pedestrianised) section.

Opportunities for improvement:

- Using the success of Castle St (reduced parking, pedestrianised flush surfaces, public seating, zebra crossing at Castle St/George St junction) as a precedent to support additional pedestrianisation and public seating in the George Street study area to enhance public life.

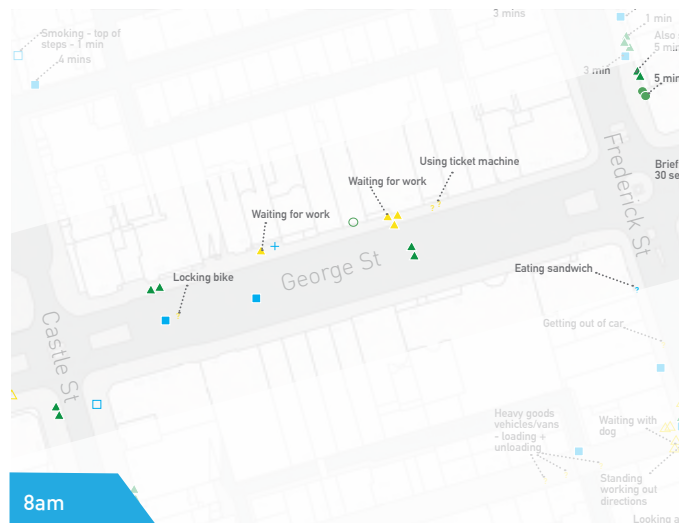


BEHAVIOURAL MAPPING

F: GEORGE ST [BETWEEN CASTLE ST + FREDERICK ST]



TUESDAY



Notes, trends and observations:

- No stationary activity was recorded on the southern side of the street. This is the shadier section in the morning.
- A few people were using the middle section of the road as a place to pause.
- Most activities recorded were fleeting, very few remained stationary in the space for a period of more than a few minutes.

Notes, trends and observations:

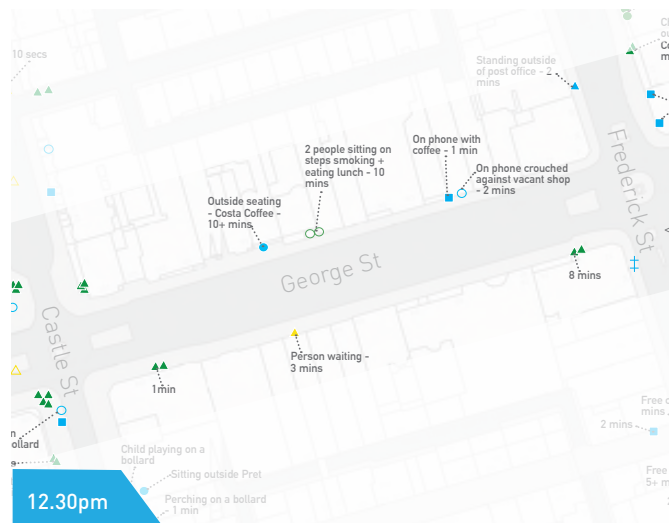
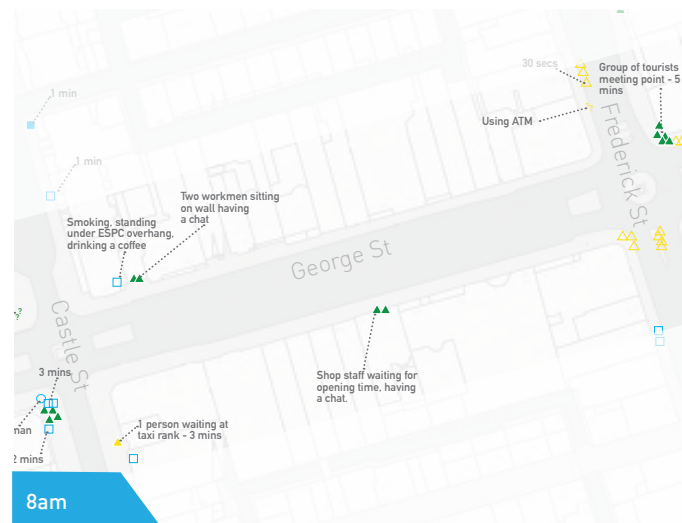
- Individuals pause briefly against facades to smoke, sit or talk on the phone (at steps and shop inlets). These areas off the main thoroughfare could be enhanced, or more suitable formal public seating / shelter created as part of a new street layout to improve public life.
- Largest points of recreation are outside cafés and restaurants. However, aside from these commercial spots there are very few destination points for people to pause in the public realm.

Notes, trends and observations:

- The only formal sitting observed was at the designated seating area outside Costa cafe. This is on the north side of the street, so experiences sun for much of the day.
- Other recreational activities included small groups standing and talking to each other for short periods. These occurred on both sides of the street, but were more prevalent on the north side.
- Throughout the day the north side of the street proved to be the most popular. This may be due to its more sunny microclimate.



WEDNESDAY



Notes, trends and observations:

- Very quiet with few pedestrians engaged in public life activity.
- Generally few opportunities/places to sit outside with coffees/waiting for people etc, and the majority of facades are shopfronts which are not open until 9am.

Notes, trends and observations:

- North side of street in full sun - one person at formal outdoor cafe seating (at Costa).
- Windy day, but dry and bright.
- Researchers noted that they expected more observable public street life to be present given the generally good weather conditions.

Notes, trends and observations:

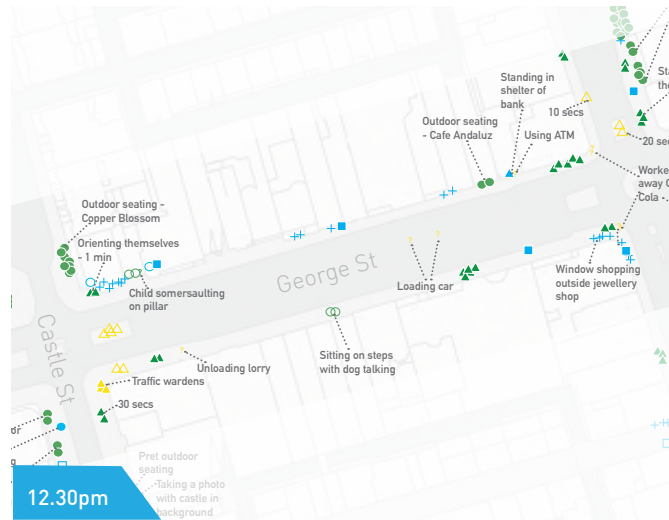
- Quiet with few people taking the opportunity to linger outside.
- Those activities that do occur are entirely along facade edges on the pavement. The large central section of road carriageway/parking spaces not contributing at all to public life at present.
- Some individuals observed smoking, window shopping and using phones

BEHAVIOURAL MAPPING

F: GEORGE ST [BETWEEN CASTLE ST + FREDERICK ST]



SUNDAY



Notes, trends and observations:

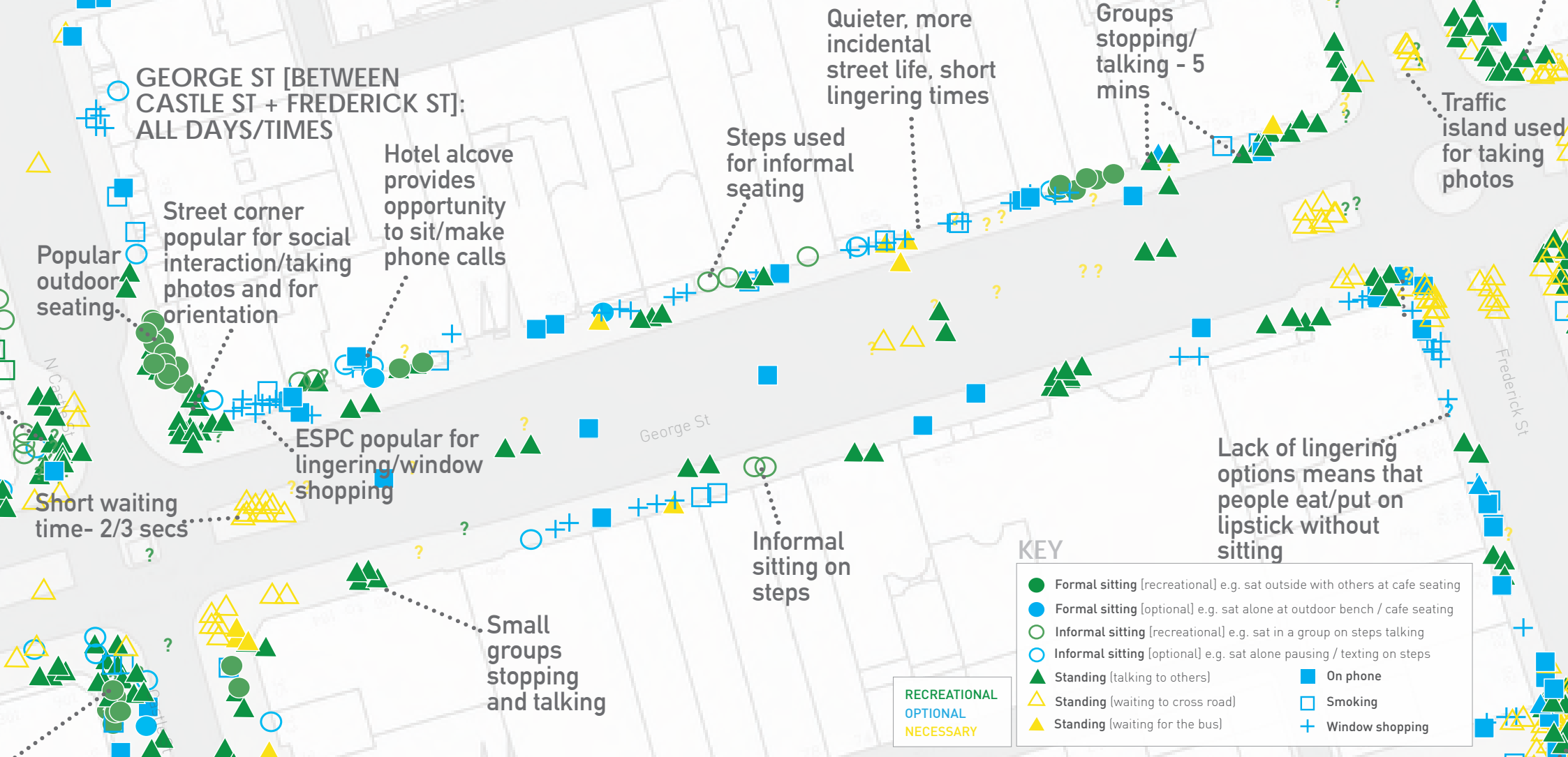
- Small numbers observed waiting very briefly to cross the road at either end of the street. Short wait duration due to zebra crossings at both these intersections working well to prioritise pedestrian movement.
- Hotel alcove on north (sunnier) side of the road is a popular place to pause, set back from the street. People perch sitting here or stand to use their phone.

Notes, trends and observations:

- Higher proportion of window shoppers observed on northern side of street. Particularly at the ESPC estate agent at the west end of this street section, and other active shop frontages on the north side of George St.
- Steps and doorways used as shelters from the street and main pedestrian thoroughfare in which to stand and sit.
- Small groups stop to talk along street.

Notes, trends and observations:

- Two people observed walking along central parking reservation.
- Two people using eastern traffic island to stop and take photos.
- Otherwise activity restricted to pavements at street edges.



OVERVIEW: KEY FINDINGS

Recreational activities:

- Small clusters of recreational activity along length of street. This includes those stopping/talking to one another in small groups, and some outdoor seating- though this is limited.
- Few opportunities to encourage lingering. This is due to a lack of street furniture, formalised restaurant/cafe seating or nodal/gathering spaces that could provide a more conducive public realm environment for public life.

Optional activities:

- People stopping to window shop, use phones or smoke along street. These people are choosing to extend their stay in the public realm (albeit for short periods on their own)
- Occur on both sides of the road and some in the central parking strip, however more optional activities observed on the (sunnier) north side of the street.

Necessary activities:

- Some loading/unloading of cars.
- Zebra crossings at junctions with Castle St and Frederick St reduce waiting times.

Other findings:

- North west and south east ends of street marginally busier with activity.

Opportunities for improvement:

- Opportunities for enhancement of public realm to create a more appealing environment for public life and longer staying times. Reduce domination of parked cars, creating more pavement and space for pedestrian activity.

BEHAVIOURAL MAPPING

G: FREDERICK STREET [NORTH]



TUESDAY



Notes, trends and observations:

- Several pedestrians wait on corners at the junction of Frederick St/Queen St at signal crossing.
- Activity largely recorded in a single area on the south-easterly side of Frederick Street. Part of the reason for this is due to the cafe outside seating which may encourage other people passing by to pause.

Notes, trends and observations:

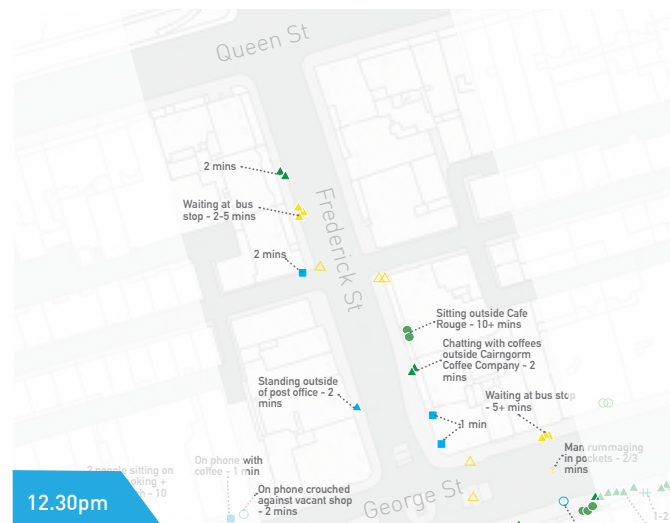
- Larger queues of people at the Queen St junction pavement corners waiting to cross.
- Pedestrians pause on pavement corners at Thistle St/Hill St junctions mid-street for cars to pass before informally crossing east-west or sides of the road.
- Most recreational activity was observed closer to the George St intersection.

Notes, trends and observations:

- Drop in stationary activity.
- Only one person observed to be sitting, with most people not staying in the area for long periods of time.



WEDNESDAY



Notes, trends and observations:

- Very quiet.
- Zebra crossing at George St intersections results in no pedestrians waiting to cross.
- Several pedestrians making informal crossings along the street, standing for around 30 seconds whilst waiting for cars to pass.
- Those stood talking comprised groups of tourists observed meeting/waiting for others.

Notes, trends and observations:

- Optional and recreational activities clustered at south easterly end of the street near cafés (close to George St).
- North west side of the street also shows some optional and recreational activities.
- People using phones in building alcoves/street corners where they are more sheltered from the street and passing traffic.

Notes, trends and observations:

- Small numbers of pedestrians wait to cross the road - particularly at the Frederick St (North)/Queen St signalised crossing junction, and for shorter periods at the zebra crossing at George St.
- Some jaywalking observed across the length of the street.
- Some restaurant/cafe outdoor seating in use on eastern side of street.

BEHAVIOURAL MAPPING

G: FREDERICK STREET [NORTH]



SUNDAY



Notes, trends and observations:

- Pedestrians cross the road east-west informally along the length of the road.
- People use stairways/doorways to stand away from street and smoke/use phones.

Notes, trends and observations:

- Busy outdoor seating along eastern side of street, particularly within the mid/south section of the street. This coincides with the most active facades and cafe frontages.
- Western side of the street quieter (less active facades) though some people observed waiting for short periods to cross the road, and waiting for the bus.
- Clusters of people talking at street corners or near busy cafe area, perhaps encouraging lingering time.

Notes, trends and observations:

- Southern section of street (between Hill/Thistle St and George St) busier than northern end towards Queen St.
- Some pedestrians stop in central southern traffic island to take photos.

OVERVIEW: KEY FINDINGS

Recreational activities:

- Eastern side of Frederick St densest with recreational activity (particularly to south).
- Outdoor seating provides welcoming facade and opportunities for recreational activities. Vibrant atmosphere also potentially encourages others to stop and talk.
- Western side is quieter, though small groups still congregate at south end of this street section (between Hill St and George St).

Optional activities:

- Steps and door alcoves provide an informal semi-public space set back from street for smokers and people using phones.
- Some window shopping/menu browsing throughout street.

Necessary activities:

- Bus stop occupied throughout the day
- Northern end of street (at Queen St junction) is more congested with pedestrians waiting to cross street than elsewhere. Long waiting times due to fast turning cars from Queen St and a need to wait for the green man to cross.
- Informal crossing observed along full length of street, particularly to link east-west between Thistle St/Hill St. Pedestrians can be seen waiting on street corners at these junctions.
- Pedestrians stand in the road whilst waiting to cross informally to the other side.

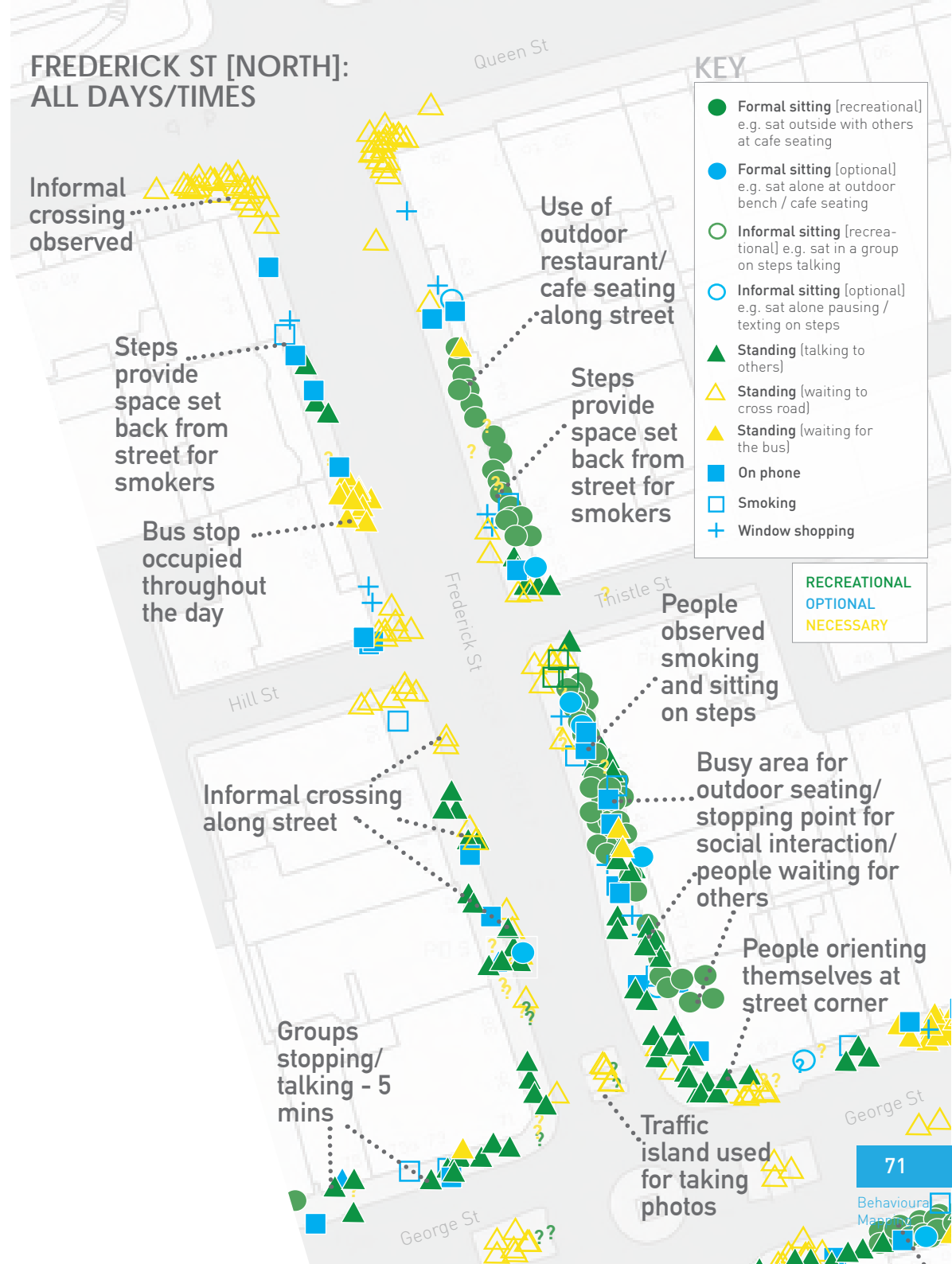
Other findings:

- Traffic island to south provides centred perspective long views north and south, from which people stop/take photos.
- Southern end of street (at junction with George St) popular congregation point.

Opportunities for improvement:

- Wider pavements with enhanced public realm may encourage more stopping along street.
- Better pedestrian priority and connection between Hill St/Thistle St, and over Frederick St (North) at Queen St.

FREDERICK ST [NORTH]: ALL DAYS/TIMES



BEHAVIOURAL MAPPING

I: FREDERICK STREET [SOUTH]



TUESDAY



Notes, trends and observations:

- Most activity was recorded in the central street section near the junctions of Rose St and Frederick St by those standing talking or waiting to cross the street east-west.
- Very few people recorded sitting at this time of day, with most standing for shorter periods instead.

Notes, trends and observations:

- Larger clusters of people stand around talking or waiting for the bus.
- Few people sitting along the street. A result of little outdoor public seating, and researchers noting high footfall resulting in the pavements becoming busy as a thoroughfare.
- Window shopping prevalent along street length on both sides.
- Street corners at Princes St congested with pedestrians waiting to cross east-west.

Notes, trends and observations:

- Pedestrians recorded waiting at the three different junctions along the street, causing congestion and restricting pedestrian flow in places (particularly near Rose St and Princes St).
- Less recreational activities recorded. Mostly necessary activities relating to crossing the street. Most people moving through the space, with researchers noting many appear to be walking home from work.



WEDNESDAY



Notes, trends and observations:

- Clusters of pedestrians waiting to cross at all junctions

Notes, trends and observations:

- Crossing with very little waiting time at north crossing (due to zebra crossing).
- Enormous groups of students observed on street..

Notes, trends and observations:

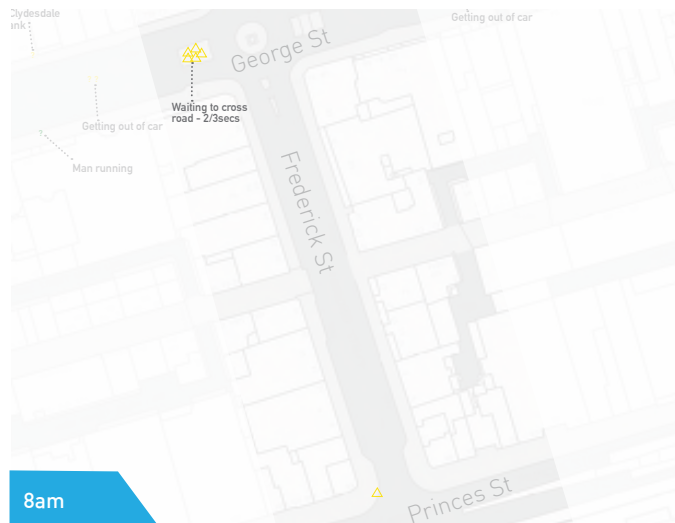
- Barely any waiting on northern end of street.
- Limited recreational activity with most people seemingly passing through.

BEHAVIOURAL MAPPING

I: FREDERICK STREET [SOUTH]



SUNDAY



Notes, trends and observations:

- Very quiet, almost complete lack of activity early in the morning.

Notes, trends and observations:

- Small groups along street edges engaged in recreational and optional activities - sitting, standing and talking adjacent to facades.
- Necessary activities relate almost exclusively to clusters waiting to cross Frederick St east-west at Rose St and Princes St junctions.
- Rose St junction serves as a clustering point to stop and talk or break away for phone calls/smoking away from crowded main streets.
- Corners of George St/Frederick St busy with recreational activities due to temporary CocaCola marketing product give-aways.

Notes, trends and observations:

- Pedestrians predominantly observed waiting at bus stops or waiting to cross at junctions.
- Jaywalking observed east-west at Rose St thoroughfare, as well as other points on southern half of the street.
- People observed informally sitting on steps in the sunshine on south eastern side of road.
- Some window-shopping on south-west side of street.

OVERVIEW: KEY FINDINGS

Recreational activities:

- Overall, south eastern side of Frederick St has highest concentration of recreational activity observed: people sitting on steps in the sun/using outdoor seating/or clustering around to stop and talk or window shop.
- Rose St creates an appealing pedestrianised offset from the main street thoroughfare, at which people stop to have conversations, or sit at outdoor seating.
- Groups of people stand talking at facade edges.

Optional activities:

- Optional activities occur at facade edges along full length of street, with large numbers window shopping or stopping to smoke.
- Rose St used as a sheltered place from which to make phone calls or smoke away from busier main street and traffic.

Necessary activities:

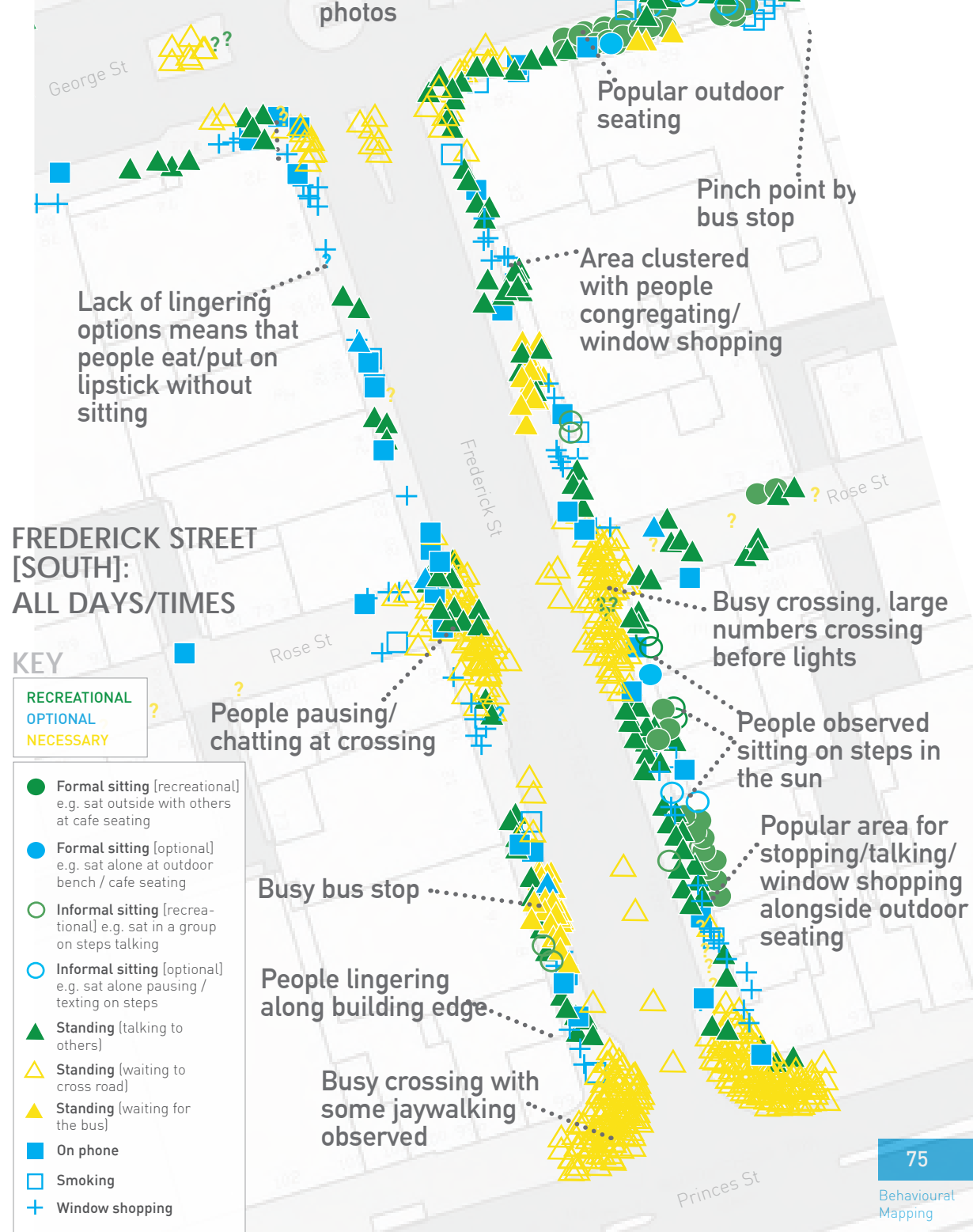
- Large groups of pedestrians wait to cross at intersections of Frederick St with Princes and Rose St. This creates congestion on the pavement, and pedestrians frequently stand in the road whilst waiting to cross..
- Bus stops busy throughout the day, particularly the stop on the south-west side of the road.

Other findings:

- Overall, lack of opportunity for lingering for longer time periods on the street (busy pedestrian thoroughfare, no wider pavement spaces for public seating etc). Instead people go about activities like eating whilst standing.

Opportunities for improvement:

- Narrow pavements and lack of seating prevent people from spending long periods lingering on the street. Wider pavements with seating that better prioritise pedestrians and public life activities may encourage people to spend longer in the area.



BEHAVIOURAL MAPPING

J: GEORGE STREET [BETWEEN FREDERICK ST + HANOVER ST]



TUESDAY



Notes, trends and observations:

- Brief interactions from people asking for directions.
- Quiet with only a few individual instances of activity.
- A small number of workers doing tasks such as window cleaning, construction. Others wait in branded white vans.

Notes, trends and observations:

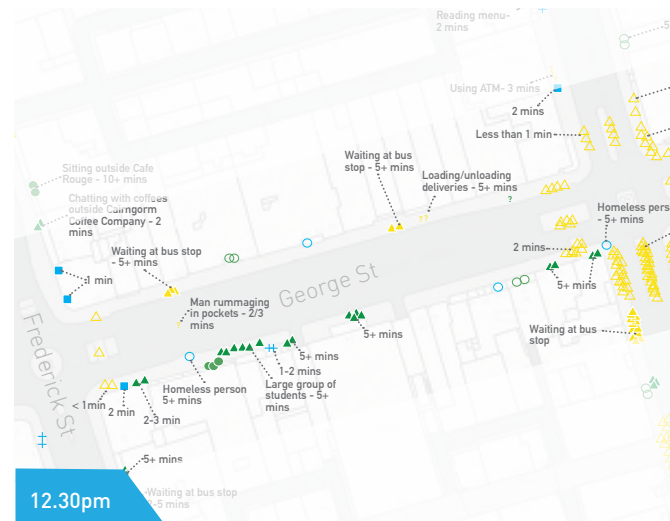
- Pinch point created outside Standing Order pub due to people waiting for the bus or stood talking, combined with outdoor seating. Wider pavement and space for pedestrians would be beneficial to accommodate all these uses.
- Small clusters of people talking along road length, increasing in density toward the west. Less further east toward Hanover St.
- Dominance of necessary activities at east end of street at signalised intersection with Hanover St with large numbers of pedestrians waiting to cross the road.

Notes, trends and observations:

- Groups of people stop and talk in small groups on south side of the street, close to the Standing Order, Assembly Rooms and shop frontages.
- Activity on the north side of the street predominantly made up of people waiting for the bus.
- Large numbers of pedestrians waiting for green man on pavement corners and at traffic island at Hanover St junction. This indicates interrupted pedestrian walking experience.



WEDNESDAY



Notes, trends and observations:

- Large group of students talking on south side of George Street close to the language school and near the Standing Order.
- Some clustering of recreational activity at the eastern end of the street. This includes a large group of students talking outside Starbucks and large numbers of pedestrians waiting to cross at the Hanover St multi-stage crossings.

Notes, trends and observations:

- South west side of street is busiest with recreational activity. Groups of people stand around talking for 5+ mins including a large group of students.
- Informal sitting in building doorways/stairs along length of street and on both north and south sides of road.
- Few pedestrians waiting at Frederick St/George St junction to west (zebra crossing), but large numbers visible waiting to east at Hanover St/George St multi-stage signalled pedestrian crossing.

Notes, trends and observations:

- Bus stops particularly crowded on both sides of the road, creating some obstruction to pedestrian flows.
- South side of street to west is most busy with recreational activity: people stopping and talking, smoking and sitting outside Standing Order. This creates a quite crowded section of the street. Wider pavements would better facilitate this activity whilst smoothing pedestrian flows.

BEHAVIOURAL MAPPING

J: GEORGE STREET [BETWEEN FREDERICK ST + HANOVER ST]



SUNDAY



Notes, trends and observations:

- Quiet, very few cars about.
- Pedestrians do not wait for green man to cross the road at Hanover St, and cross informally along the length of the street.
- Researchers noted the street becomes busier from 8.30am onwards.
- 5 people observed parking and getting in/out of cars in the middle of the road.

Notes, trends and observations:

- No pedestrians wait at zebra crossing to west (at Frederick St/George St junction) indicating smooth pedestrian flows.
- Large numbers of necessary activities to east near Hanover St intersection. Many pedestrians wait to cross the road along mid-section of George St and on Hanover St corners.
- Small groups waiting at bus stops.
- Clusters of people sit outside/talking engaged in recreational activities on south side of street only, particularly to west.

Notes, trends and observations:

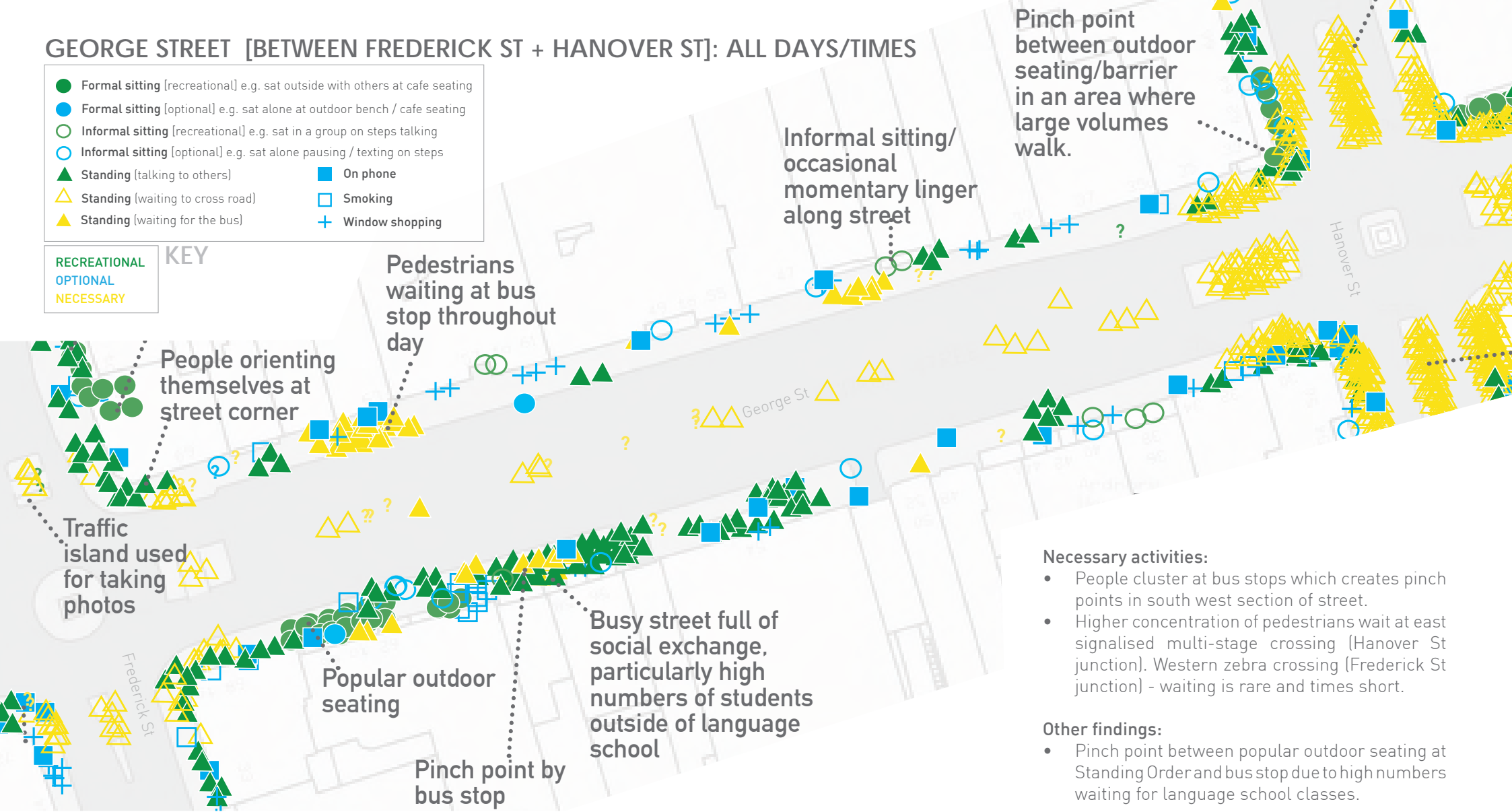
- Most optional and recreational activity occurs on south side of street. Some pausing to window shop on north side of street.
- Groups cluster and talk under building overhang at Assembly Rooms/Jamie's Italian, looking at menus, whilst others use the shelter to make phone calls.
- Area around Standing Order pub remains busy with people using outdoor seating and standing smoking.
- Some pedestrians wait to cross road in two stages using central parking as traffic island.

GEORGE STREET [BETWEEN FREDERICK ST + HANOVER ST]: ALL DAYS/TIMES

- Formal sitting [recreational] e.g. sat outside with others at cafe seating
- Formal sitting [optional] e.g. sat alone at outdoor bench / cafe seating
- Informal sitting [recreational] e.g. sat in a group on steps talking
- Informal sitting [optional] e.g. sat alone pausing / texting on steps
- ▲ Standing (talking to others)
- ▲ Standing (waiting to cross road)
- ▲ Standing (waiting for the bus)
- On phone
- Smoking
- + Window shopping

KEY

RECREATIONAL
OPTIONAL
NECESSARY



OVERVIEW: KEY FINDINGS

Recreational activities:

- Recreational activities clustered around south west end of street. In particular people use outdoor seating at Standing Order, or stand to talk, particularly on wider pavement corners at Frederick St/George St junction and under building overhang at Assembly Rooms. The location of the language school on the south side

of the road (to west) also means large numbers of students cluster here and talk outside.

Optional activities:

- Optional activities observed along the full length of the street. Window shopping more frequently occurs on northern side of street, where there is a higher concentration of retail offer. Intermittent use of facade edges for phone use and smoking.

Necessary activities:

- People cluster at bus stops which creates pinch points in south west section of street.
- Higher concentration of pedestrians wait at east signalised multi-stage crossing (Hanover St junction). Western zebra crossing (Frederick St junction) - waiting is rare and times short.

Other findings:

- Pinch point between popular outdoor seating at Standing Order and bus stop due to high numbers waiting for language school classes.

Opportunities for improvement:

- Increased pedestrianised area would allow more room for public life. In particular, greater spill out space on south side of street would better accommodate pedestrian movement and stationary activities.
- Better connect north and south sides of the street and facades, reducing visual dominance and barrier of traffic and improving connectivity.

BEHAVIOURAL MAPPING

K: HANOVER STREET [NORTH]



TUESDAY



Notes, trends and observations:

- Largest point of congestion is at Hanover St/Thistle St junction.
- Much higher number of cars using Hanover St than George St, causing a disruption in the pedestrian flow and car dominated environment.
- East side of Hanover St shows individual instances of phone use at street edges and into Thistle St.

Notes, trends and observations:

- Largest area of recreational activity takes place around Hanover St/Thistle St junctions. Both junctions with Thistle St are particularly popular points for groups to pause and chat.
- Many pedestrians forced to wait to cross at all three junctions on this section of Hanover St. This is particularly apparent at the George St junction where significant volumes of pedestrians build up on traffic islands and street corners. Numerous pedestrians wait along the middle of the road to cross the road informally in two stages.

Notes, trends and observations:

- Groups stop along edges of Hanover St for conversations, particularly at Thistle St junction.
- Pedestrians wait to cross east-west between Thistle St.
- Informally crossing observed particularly at the southern end of street, with pedestrians cutting in between stationary queued traffic.



WEDNESDAY



Notes, trends and observations:

- Pedestrians at Hanover St/George St junction observed informally crossing in between cars when they can, rather than waiting for longer periods for the lights.
- Very quiet, no recreational/optional activities observed at this time. The only exception to this is a small group talking on the corner of George St/Hanover St.

Notes, trends and observations:

- Lack of substantial lingering activity even around lunch time. A few people stand against buildings whilst making phone calls.
- Pair observed using steps for informal seating for 5 mins, and three people at outside cafe seating to north, but otherwise few other social exchanges on street.
- Dominance of heavy traffic.
- Long waits for pedestrians trying to cross east-west at Queen St and George St junctions.

Notes, trends and observations:

- Clustering of people at northern end of street on west side. People socialise outside pub using outdoor seating and wait for bus.
- Some people using steps/doorways (particularly on east side in sunshine) or corners of Thistle St location for informal seating, smoking or to use their phones.
- Pedestrians observed waiting to cross east-west over Hanover St at George St junction.

BEHAVIOURAL MAPPING

K: HANOVER STREET [NORTH]



SUNDAY



Notes, trends and observations:

- Very quiet. Researchers noted the street started to become more busy after 8.40am.
- Two women observed sitting outside cafe Papii using formal cafe seating
- A couple observed waiting to cross Hanover St at George St junction with the lights.
- Occasional instances of informal seating on facade steps for smoking.



Notes, trends and observations:

- Heavy traffic and lots of parked cars - makes it hard for pedestrians to cross safely.
- Busy bus stops.
- Groups/individuals informally perched on steps/walls along street edges.
- Cafés provide outdoor seating and setting for (commercialised) public life - recreational activities observed at Wellington Cafe, Papii, Chez Jules Cafe. Corners of Thistle St/Hanover St also popular spot to stop and talk.



Notes, trends and observations:

- Shops closing / closed
- People stopping to look at restaurant menus.
- Optional activities visible around Thistle St/Hanover St junction, particularly on west side near Hendersons.
- Small groups stop to talk on pavement corners near George St, and within quieter Thistle St (away from busy traffic).

OVERVIEW: KEY FINDINGS

Recreational activities:

- Recreational activity observed on both east and west sides of the street.
- Corners of Thistle St/Hanover St junctions popular with people pausing and stopping to talk.
- Cafés/bars/restaurants on north section of Hanover St, on both east and west sides of the road, provide formal commercial seating and public life.

Optional activities:

- Optional activities observed all along street length.
- Many people observed using phones whilst stood on steps on against facade edges.
- People use doorways/stairways as a space set back from the main street to stop for various optional activities.

Necessary activities:

- Bus stops busy throughout the day
- High volumes of pedestrians use signalised multi-stage crossing at south end of street to move east-west. Clusters of pedestrians wait on the traffic island for traffic to pass/lights to change before crossing.
- Informal crossing popular, particularly moving in an east-west direction near Thistle St. People frequently cross in two stages, waiting precariously in centre of road for passing traffic.

Other findings:

- Steps provide rest stops set back from the main street.
- Significant numbers of pedestrians wait in road whilst waiting to informally cross central section of Hanover St near Thistle St.

Opportunities for improvement:

- Review of pedestrian crossing options to better prioritise movement east-west on foot, particularly near Thistle St. Currently a frustrating and hazardous experience for pedestrians during heavy traffic. Reducing crossing distance with extended pavement corners/build outs near Thistle St may be beneficial.
- Additional public seating to complement commercial outdoor seating options. This may offer more appealing stopping spaces along Hanover St (if more space given to pedestrians to accommodate this), and could be provided on quieter side streets.

HANOVER STREET [NORTH]: ALL DAYS/TIMES



BEHAVIOURAL MAPPING

M: HANOVER STREET [SOUTH]



TUESDAY



Notes, trends and observations:

- Limited stationary activity, although some individuals stopping to smoke/use phone against facade edges and within Thistle St.
- Dominant activity consists of pedestrians waiting to cross the street in an east-west direction at junctions near George St, Thistle St and Queen St, or waiting at busy stops.



Notes, trends and observations:

- Group using building steps and low walls at street edges as informal lunch time seating.
- Large numbers stood eating outside Subway. There may be potential to harness this existing activity through provision of public seating, to enhance public life and longer staying.
- Bus stops crowded, particularly bus stop on north-west side.
- Significant numbers of pedestrians wait to cross in east-west direction at northern crossing near George St, at Rose St, and Princes St.
- Some window shopping throughout street.



Notes, trends and observations:

- Pedestrians observed wanting to cross Hanover St east-west at Rose St and Princes St, keen to continue walking in an east-west direction without interruption. This results in several people waiting in the middle of the road or running between cars to try to avoid long waiting periods at the lights.
- Steps/wall on north west side of road at TSB building remain popular for informal sitting for short periods.
- Small groups using quieter Rose Street to talk/browse market stall/smoke etc.



WEDNESDAY



Notes, trends and observations:

- Heavy footfall and limited pavement space leaves limited opportunity or room for more diverse activities or staying behaviour.
- Primary pedestrian activities are movement on foot, waiting for the bus or waiting to cross the road east-west at Princes St, Rose St, George St.
- Very few public life activities present, and all short in duration.

Notes, trends and observations:

- This street is too densely packed with people and vehicles on the move to allow for many other activities.
- Dangerous numbers of pedestrians waiting on northern traffic island.
- Pedestrians step into the road to pass one another along the length of the street, and wait in the road at the Princes St corners.
- Better prioritising of pedestrian movement and public life needed.

Notes, trends and observations:

- Bus stop on west side of street (to north) is extremely busy and a major pinch point on the street.
- Limited recreational/optional activity. Some sitting on steps/ on north west side of road at TSB building. Some window shopping at facades to south.

BEHAVIOURAL MAPPING

M: HANOVER STREET [SOUTH]



SUNDAY



Notes, trends and observations:

- Small groups standing talking.
- Most activity is standing (not sitting). This suggests either people do not intent to stay on the street for long or there are limited seating opportunities at present.
- Street relatively quiet.
- Some pedestrians wait on street corners to cross east-west at Princes St junction.

Notes, trends and observations:

- Waiting times for buses seem very long (5 mins+, many over 10 minutes) causing build-up of pedestrians waiting on pavement.
- Not much activity on south-west side of street.
- Small groups talking along street, some using steps on north west side of road, or stood near central section of this stretch of Hanover St (near Rose St).
- Large numbers of pedestrians wait to cross road east-west at Princes St, Rose St, and George St junctions. Many stand in road.

Notes, trends and observations:

- Bus stop on north-west side is particularly busy.
- Pedestrians build up waiting to cross Hanover St east-west to continue along Rose St thoroughfare.
- Few recreational or optional activities. Those that do exist are located mostly close to Rose St junctions and adjacent facades.

OVERVIEW: KEY FINDINGS

Recreational activities:

- Steps and walls (particularly low wall on north west side of road at TSB Building) are used by groups for informal seating. These informal spaces provide somewhere to sit for short periods slightly set back from the main street and busy thoroughfare.
- Small groups stop to talk throughout the street, breaking away onto quieter Rose St too.
- No recreational activity at Hanover St/Princes St junction, due to congested pavements.

Optional activities:

- People use side streets/stairs/walls for informal sitting, smoking and using phones set back from main street with busy traffic and heavy footfall.
- Lack of formalised and/or public seating options. Additional pavement space would be needed to successfully incorporate these.

Necessary activities:

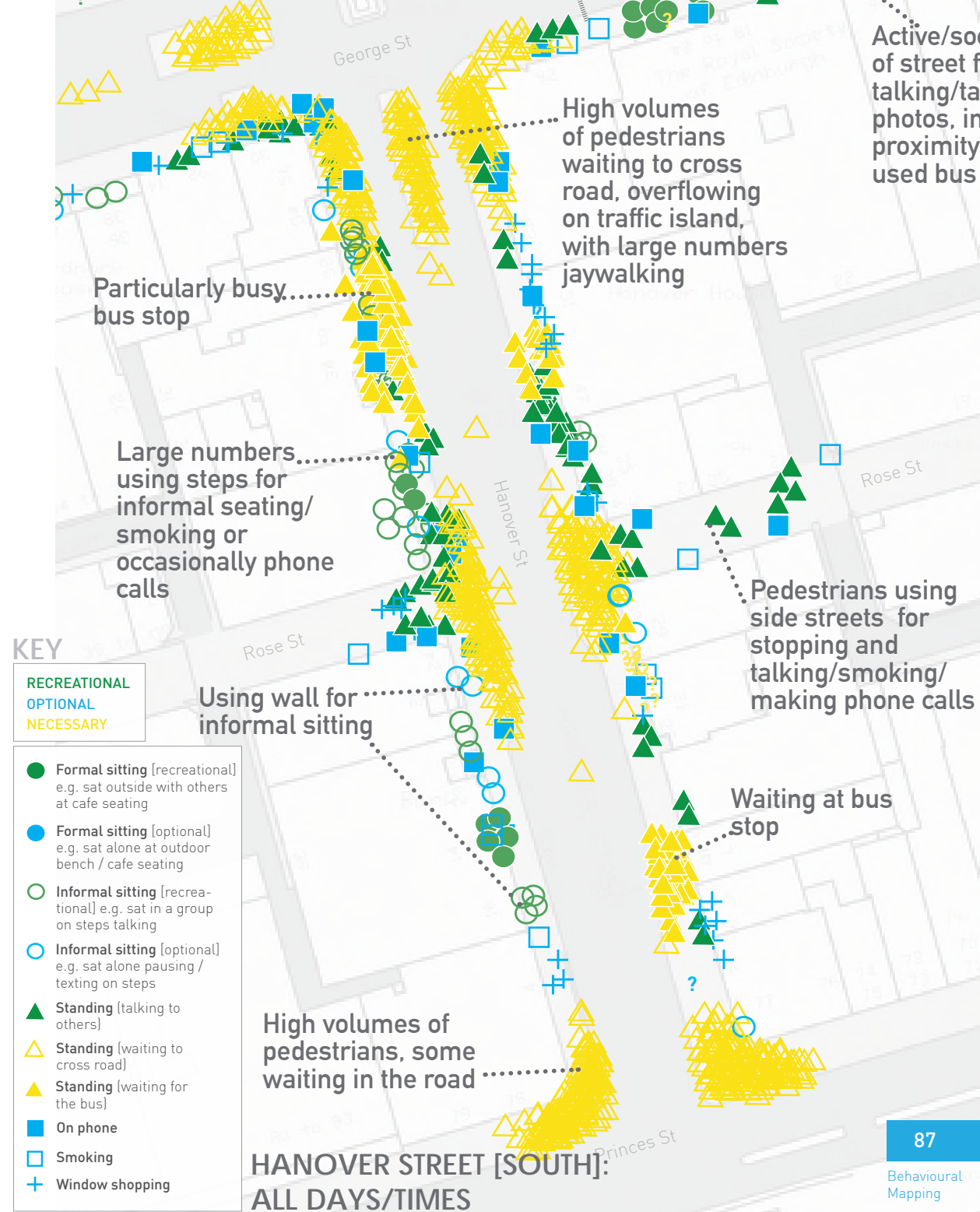
- High volumes of pedestrians waiting to cross at all 3 junctions. Traffic island at north end multi-stage pedestrian crossing frequently overflowing in busy periods.
- Heavy traffic along this key north-south route through the city makes it hard for pedestrians to follow their desire lines east-west. Instead pedestrians rely on waiting at signalised crossings or dangerously crossing when they can.
- Bus stops particularly busy. This creates pinch points which affect pedestrian flow and cause pedestrians to walk in the road in hazardous heavily trafficked conditions.

Other findings:

- Steps heavily used on north west side of street for sitting or optional activities like smoking or using phones. This indicates demand for more places to stop/stand to build on heavy footfall. To best achieve this, more space for pedestrians is needed.

Opportunities for improvement:

- Review of seating options, including provision of more public seating. Opportunity for public seating situated at edges of Rose St near Hanover St.
- Review of street layout to better prioritise pedestrian movement east-west.



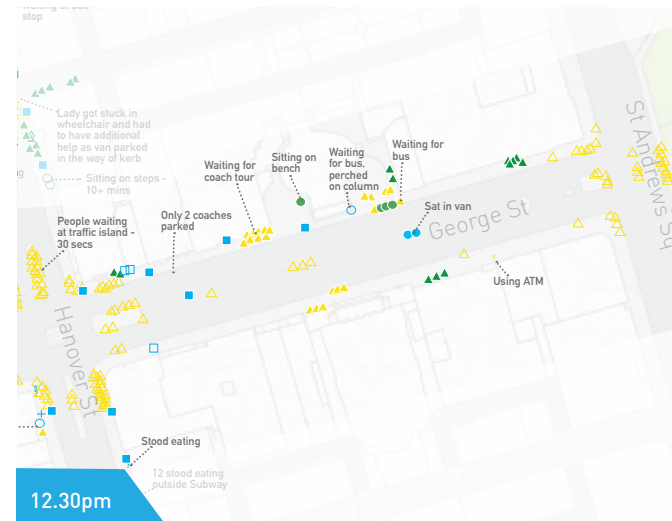
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BEHAVIOURAL MAPPING

N: GEORGE STREET [BETWEEN HANOVER ST + ST ANDREW SQUARE]



TUESDAY



Notes, trends and observations:

- High number of people sitting and socialising outside Burr & Co. for the time of day.
- Collections of people starting to build up at junctions (waiting to cross at signalised lights), particularly around St Andrew's Square and on the central island near Hanover St.

Notes, trends and observations:

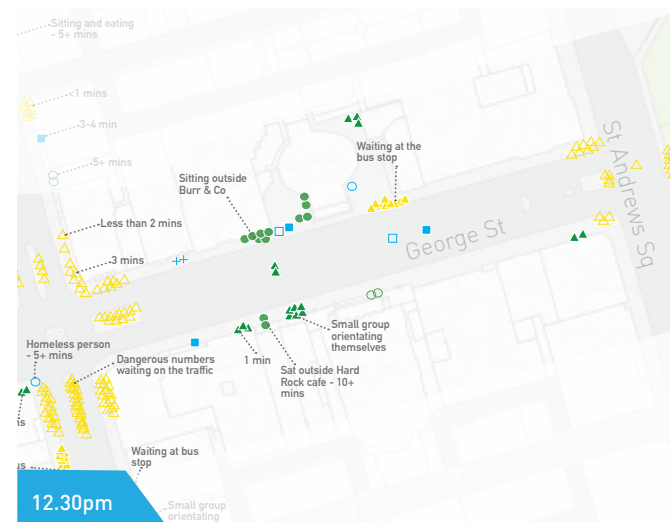
- Dominant activity observed is pedestrians waiting to cross the road. This could be improved by introducing single stage crossing at junctions (and/or zebra crossings), and widening of pavements to reduce crossing distance mid-street. This would reduce the number of people waiting in the road, emerging from parking to cross (hazardous) or having to wait on islands with limited space.
- Turning buses are potentially hazardous, particularly on corners where they swing close to passing pedestrians.

Notes, trends and observations:

- Groups of socialising people gather outside bars and restaurants. Most were standing and talking rather than making use of the seating opportunities.
- Significant numbers of people use the central part of the street to pick up bikes. A lack of sufficient numbers of bike racks to meet demand were observed.
- Large strain on the St Andrew's Sq crossing with large numbers waiting.
- Area dominated by necessary activity.



WEDNESDAY



Notes, trends and observations:

- Bus stop/tourist bus stops most active part of the street at this time.
- Small groups of tourists waiting/gathering on the street and talking.

Notes, trends and observations:

- Potential to enhance the space around the Church opposite the Dome. Primarily hard surface set back from street and includes tree shelter and one semi-public bench. As such used by some as a point of refuge from main thoroughfare. Currently bench against church wall provides only (semi) public seating opportunity on the street. Additional seating would enable better use of this space.
- West end of street generally busier with more groups sitting or standing and talking.
- Recreational activities clustered together.

Notes, trends and observations:

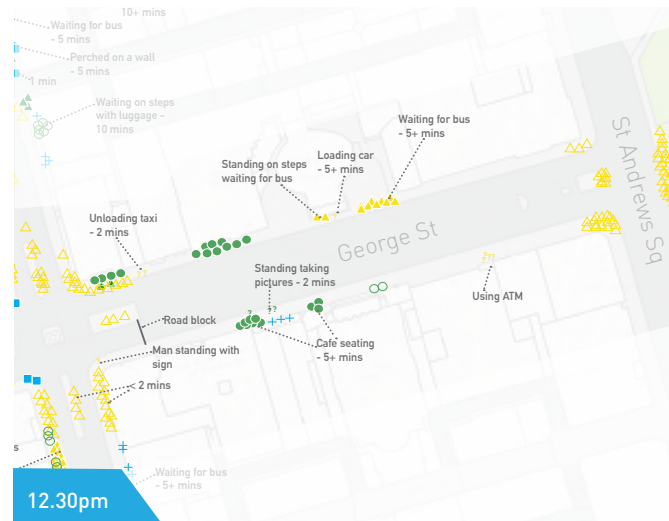
- Most social activity recorded at 5pm. Well positioned for after work socialising with high footfall observed.
- Outdoor commercial cafe/bar seating used along west end of street (north and south sides of the road).
- No recreational activity on north east side of street (passive facades prevalent).
- South side has more recreational activity than north side, mostly related to outdoor commercial seating at Le Monde and Hard Rock Cafe, and people stood talking in groups.

BEHAVIOURAL MAPPING

N: GEORGE STREET [BETWEEN HANOVER ST + ST ANDREW SQUARE]



SUNDAY



Notes, trends and observations:

- Most activity clustered around the Church on north side of street at 8am.
- Individuals waiting to cross at both ends of street.
- Generally very quiet.

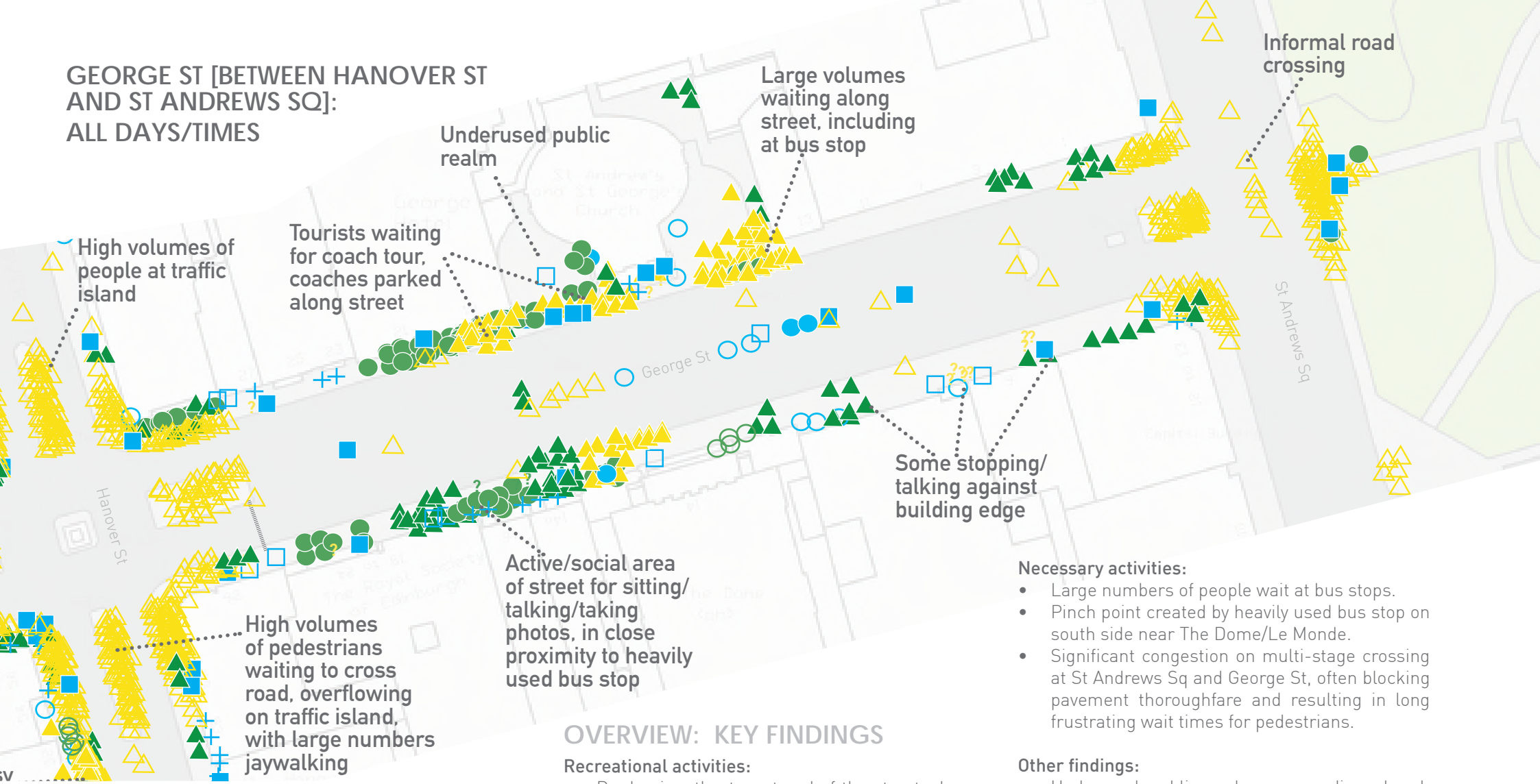
Notes, trends and observations:

- Busy outdoor cafe/bar seating at west end of street (at Le Monde, Hard Rock Cafe, Burr&Co., Printing Press and All Bar One).
- Bus stop by church remains busy.

Notes, trends and observations:

- Spots of light rain, some outdoor seating still occupied on northern side of street.
- Bus stop remains busy on northern side of street.
- Pedestrians waiting to cross road build up on corners of George St at Hanover St and at crossing points with St Andrew's Square.

GEORGE ST [BETWEEN HANOVER ST AND ST ANDREWS SQ]: ALL DAYS/TIMES



- Formal sitting [recreational] e.g. sat outside with others at cafe seating
- Formal sitting [optional] e.g. sat alone at outdoor bench / cafe seating
- Informal sitting [recreational] e.g. sat in a group on steps talking
- Informal sitting [optional] e.g. sat alone pausing / texting on steps
- ▲ Standing (talking to others)
- ▲ Standing (waiting to cross road)
- ▲ Standing (waiting for the bus)
- On phone
- Smoking
- + Window shopping

KEY

RECREATIONAL
OPTIONAL
NECESSARY

OVERVIEW: KEY FINDINGS

Recreational activities:

- Predominantly at west end of the street where active retail/cafe frontages encourage people to socialise and sit outside.
- Mix of people sat at outdoor commercial cafe/bar seating and stood talking. Only one semi-public bench (next to church).

Optional activities:

- A number of people use central parking strip to sit in cars, make phone calls or smoke.
- West end of street busier for optional activities, with people often opting to stand against building edges when smoking/using phones.

Necessary activities:

- Large numbers of people wait at bus stops.
- Pinch point created by heavily used bus stop on south side near The Dome/Le Monde.
- Significant congestion on multi-stage crossing at St Andrews Sq and George St, often blocking pavement thoroughfare and resulting in long frustrating wait times for pedestrians.

Other findings:

- Underused public realm surrounding church which could be enhanced to encourage more public life, in particular via public seating which is in short supply in the area.

Opportunities for improvement:

- Improve public realm around church to foster additional public life.
- Enhance public realm to better prioritise pedestrians (and public life), reducing the visual and physical barriers created by heavy traffic. Better connect north and south sides of the street for pedestrians.

PLACE FUNCTION: 12 QUALITY CRITERIA

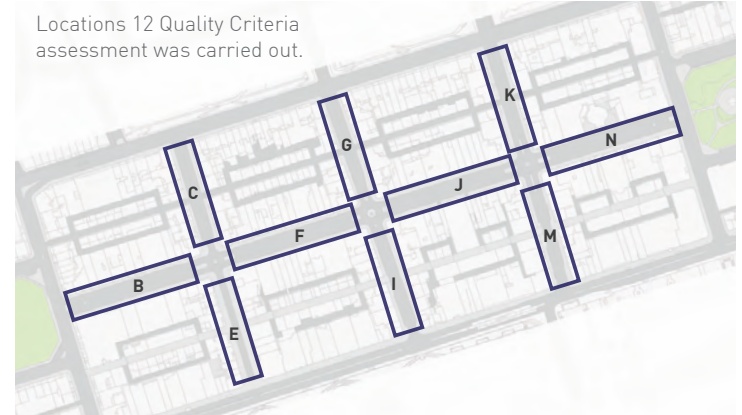
The overall place function and place quality of the 10 key street spaces within the George St area were also assessed using an evaluation structure based on Jan Gehl's '12 Quality Criteria' (Cities for People, 2010). The 12 Quality Criteria are listed below. We have included notes on what we consider each criteria to include for the purposes of the George St study:

1. **Protection from vehicular traffic** (accidents, fumes, noise, visible presence)
2. **Protection from crime** (feeling safe, natural surveillance, overlapping functions spatially and in day and night)
3. **Protection from unpleasant sensory experiences** (weather, climate, pollution).
4. **A place to walk** (room to walk, accessibility to all, interesting/active facades, no obstacles, quality surfaces)
5. **A place to stop and stand** (attractive and functional edges, opportunities to lean/stand, defined spots and room for staying).
6. **A place to sit** (defined places to sit, views/people-watching, good mix of public and cafe/commercial seating, frequency of seating for resting en route).
7. **Things to see** (interesting unhindered views, opportunities to people watch, lighting at night)
8. **Opportunities for conversations** (seating arrangements conducive to talking, low ambient noise levels conducive for listening)
9. **Opportunities for play, recreation and activity** (places for play and physical exercise, temporary markets/festivals, space for activity and interaction).
10. **Dimensioned at human-scale** (buildings and spaces observe importance of human scale for movement, senses, behaviour, and sizing).
11. **Opportunities to enjoy positive aspects of climate** (places to sit positioned in sunny spots, mitigation of wind)
12. **Aesthetic quality** (quality, design, detailing, rich sensory experiences, views/vistas)

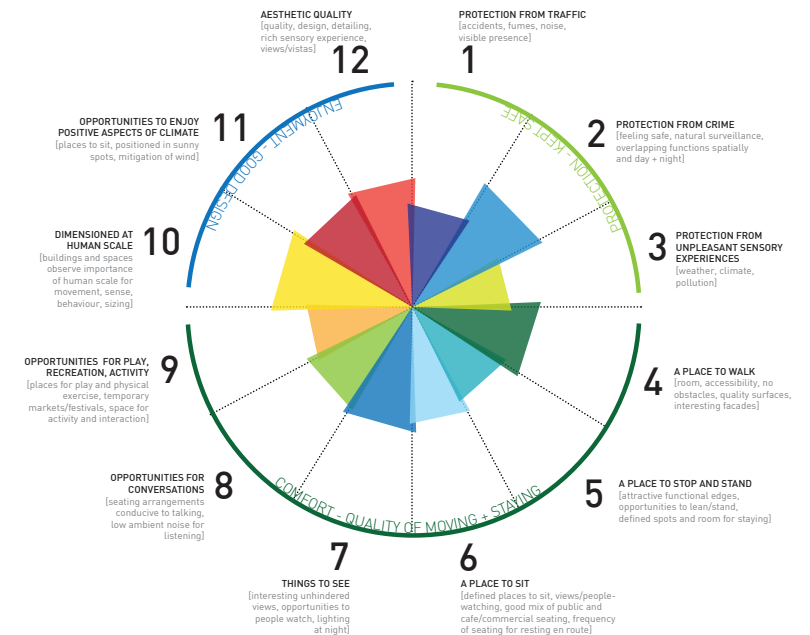
This place function assessment was carried out in early September 2017 independently of the other studies, and by an experienced Chartered Landscape Architect and Urban Designer. By assessing each street section according to these 12 criteria indicative of an environment conducive to public life, an understanding of the place function of each section of street is revealed, as well as patterns across the whole area.

Observations from research days and learnings from the other 3 studies for each location (tracing studies, behavioural mapping, pedestrian counts) are combined with this standalone assessment to give a score out of 10 for each of the 12 Quality Criteria. This enables a more holistic assessment of place function/public life for each location. This is displayed and summarised in a graphic wheel spider diagram on the map on the following page - showing each location's score for each criteria.

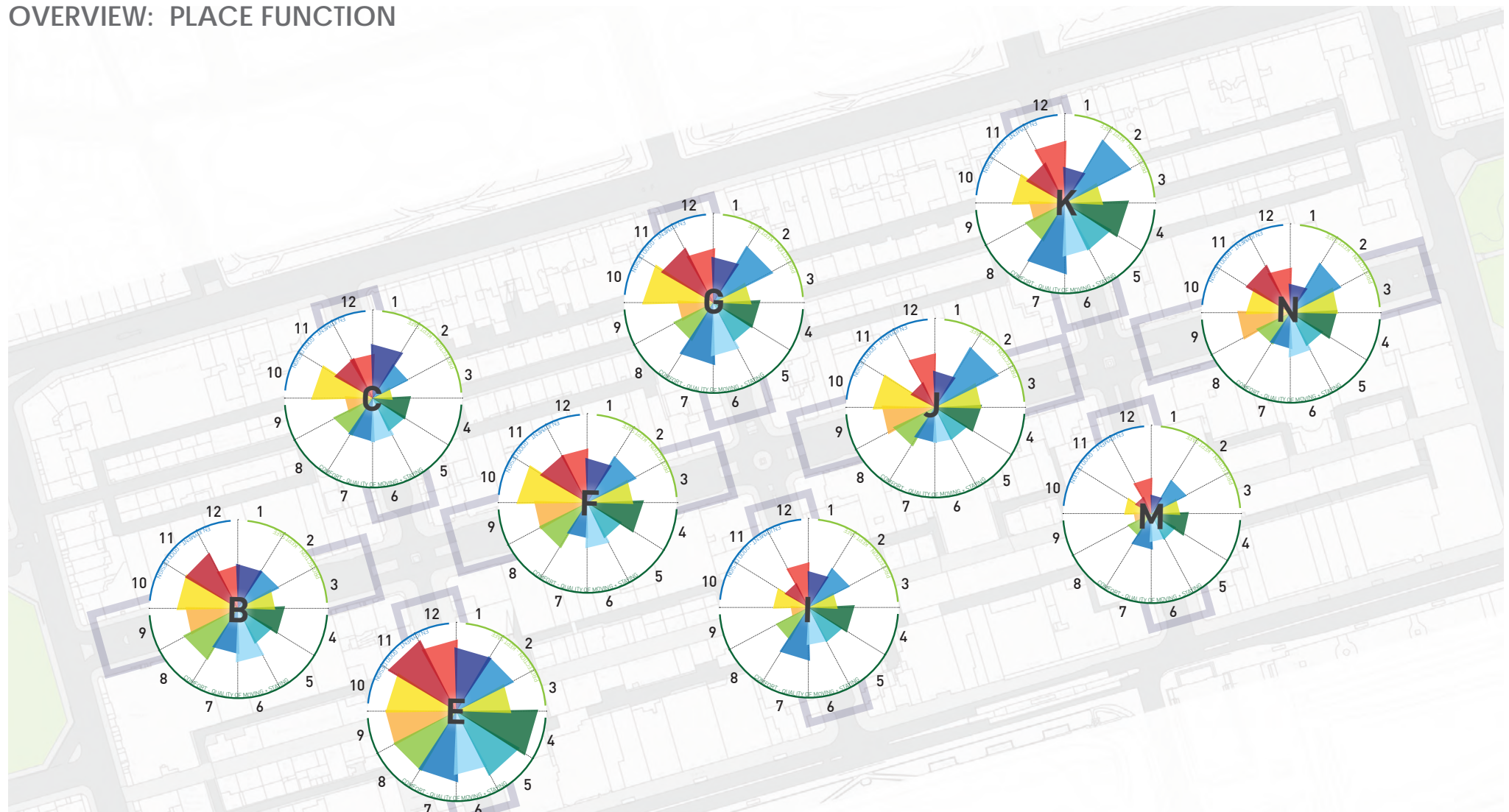
In addition, a mean average score was calculated for each of the 12 Quality Criteria across all locations. This gives an overall place function as an average across the area as a whole.



OVERALL PLACE FUNCTION FOR THE AREA



OVERVIEW: PLACE FUNCTION



12 Quality Criteria	Protection from vehicular traffic	Protection from crime	Protection from unpleasant sensory experiences	A place to walk	A place to stop and stand	A place to sit	Things to see	Opportunities for conversation	Opportunities for play, recreation and activity	Dimensioned at human scale	Opportunities to enjoy positive aspects of climate	Aesthetic quality	Average (mean) score out of 10
Location													
B George St (between Charlotte Sq/Castle St)	5	5	4	5	4	6	5	7	6	7	7	5	5.5
C North Castle St	6	4	2	4	4	5	5	5	3	7	5	5	4.6
E Castle St (south)	7	7	6	9	8	7	8	8	8	8	9	8	7.8
F George St (between Castle St/Frederick St)	5	6	5	6	4	5	4	6	6	8	6	6	5.6
G Frederick St (north)	5	7	4	5	5	6	7	5	4	8	7	6	5.8
I Frederick St (south)	4	5	3	5	4	4	6	4	2	4	3	5	4.1
J George St (between Frederick St/Hanover St)	4	8	5	5	4	4	4	5	6	7	3	6	5.1
K Hanover St (north)	4	8	4	7	6	6	8	5	4	6	5	7	5.8
M Hanover St (south)	2	4	3	4	3	3	4	3	2	3	2	4	3.1
N George St (between Hanover St/St Andrew Sq)	3	6	5	5	4	5	4	4	6	5	6	5	4.8
Average (mean) score out of 10	4.5	6	4.1	5.5	4.6	5.1	5.5	5.2	4.7	6.3	5.3	5.7	5.2

PLACE FUNCTION: 12 QUALITY CRITERIA

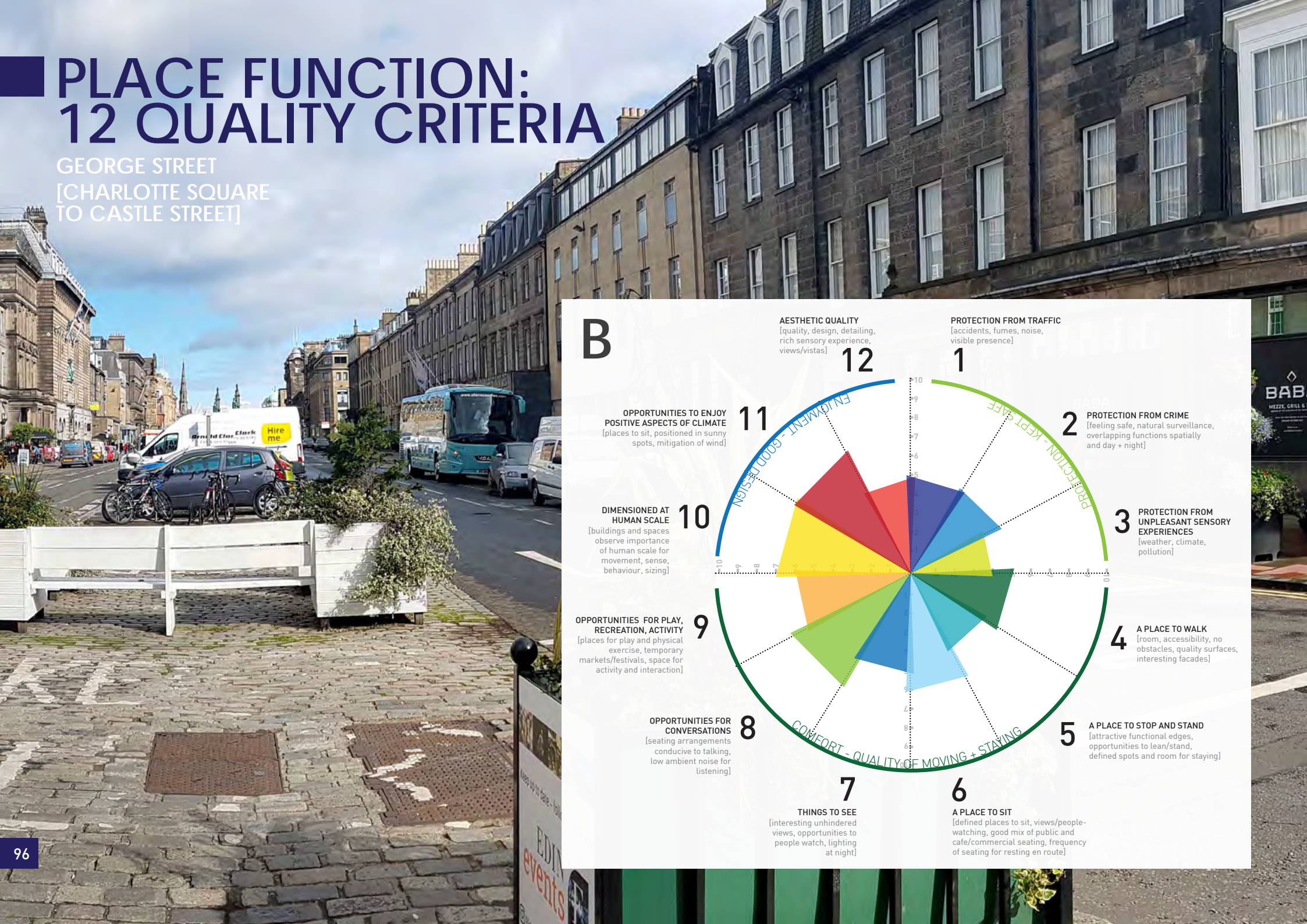
KEY FINDINGS

- **Castle St (south) had significantly higher place function scores than all other street sections** (7.8 out of 10, compared to the 5.2 average). There is a high quality pedestrianised realm allowing a wider range of activities and opportunities and less traffic. This pedestrian-priority approach could be emulated on other street sections, particularly to the west of George St. Castle St (south) received its lowest score for 'protection from unpleasant sensory experiences', notably a lack of street trees, or subdivided more clustered nodal spaces that could offer some mitigation of exposure to prevailing winds and/or protection from light rain. However, it scored extremely well as 'a place to walk' due to the limited traffic and pedestrianised and shared space design, which in turn helped support 'opportunities to enjoy positive aspects of climate'.
- **Hanover St (south) scored least well for place function** (3.1 compared to 5.2 average). This street section functions as an arterial thoroughfare for a range of vehicles (including frequent buses), as well as cyclists and pedestrians. There is little room for more optional and recreational activities due to limited pedestrian dedicated street space and the dominance of traffic, despite high footfall. Hanover St may need to maintain its functionality as a key vehicular route north-south, though there may be opportunities to further pedestrianise George St to the east and west of this thoroughfare to create a more conducive setting for public life nearby.
- **There are lower scores for 'protection from traffic' to the south-east of the area.** This is due to heavier traffic, especially buses, which are often queued (restricting views and connectivity between different sides of the street), increased traffic noise, and a larger scale street environment. .
- **Overall, across the area, the highest average scores were for being 'dimensioned at human scale' (6.3), and 'protection from crime' (6.0).** Particular exceptions to this were Frederick St (south) and Hanover St (south) which scored much lower for 'dimensioned at human scale' due to their vehicle-dominated street layouts and junctions with George St/Princes St. Most street sections scored well for 'protection from crime' due to a mix of daytime and evening overlapping land use functions and active facades. The main exception to this was North Castle St, which has both low footfall and limited active frontages for natural surveillance. Despite its high footfall (offering 'eyes on the street'), Hanover St south also scored poorly for 'protection from crime' due to limited evening surveillance.
- **Overall, across the George St study area, the lowest place function scores were for 'protection from unpleasant experiences' (average of 4.1) and 'protection from traffic' (4.5).** This particularly related to a lack of shelter from rain/wind, or protection from traffic fumes. Also heavy traffic causing noise, significant amounts of street space designated to parking, and a vehicle-dominated street layout that prioritises car/bus/taxi movement rather than pedestrians (particularly to the south-east).
- **'A place to stop and stand' also scored poorly overall (4.6).** Whilst George St has typically wide pavements, there are limited public seating opportunities or designated nodal spaces to stop and spend time. Instead, George St, and the other north-south oriented streets offer a highly linear pedestrian experience, and which operate more as movement route in most cases. On busier streets (such as Hanover St and Frederick St south), high footfall also makes stopping to stand for even brief periods a challenge without causing pedestrian congestion on the pavement thoroughfare. The semi-public wider pavement spaces adjacent to St Andrews & St George West church at the east end of George St create effective nodal points to stop and pause en route off the main thoroughfare and could further facilitate staying activities with provision of additional public seating.
- **Castle St is the exception to these typically more linear street layouts with pedestrian activity constrained to linear edge pavements.** The pedestrianised zone and shared space, combined with public seating helps create a wider pedestrian-priority space. This also subdivides the Castle St street section into the beginnings of different character or activity areas used for different functions (movement, markets, commercial cafe seating, public seating etc). Limited traffic and the spreading of footfall across the whole street width also aids stopping and standing activities here.

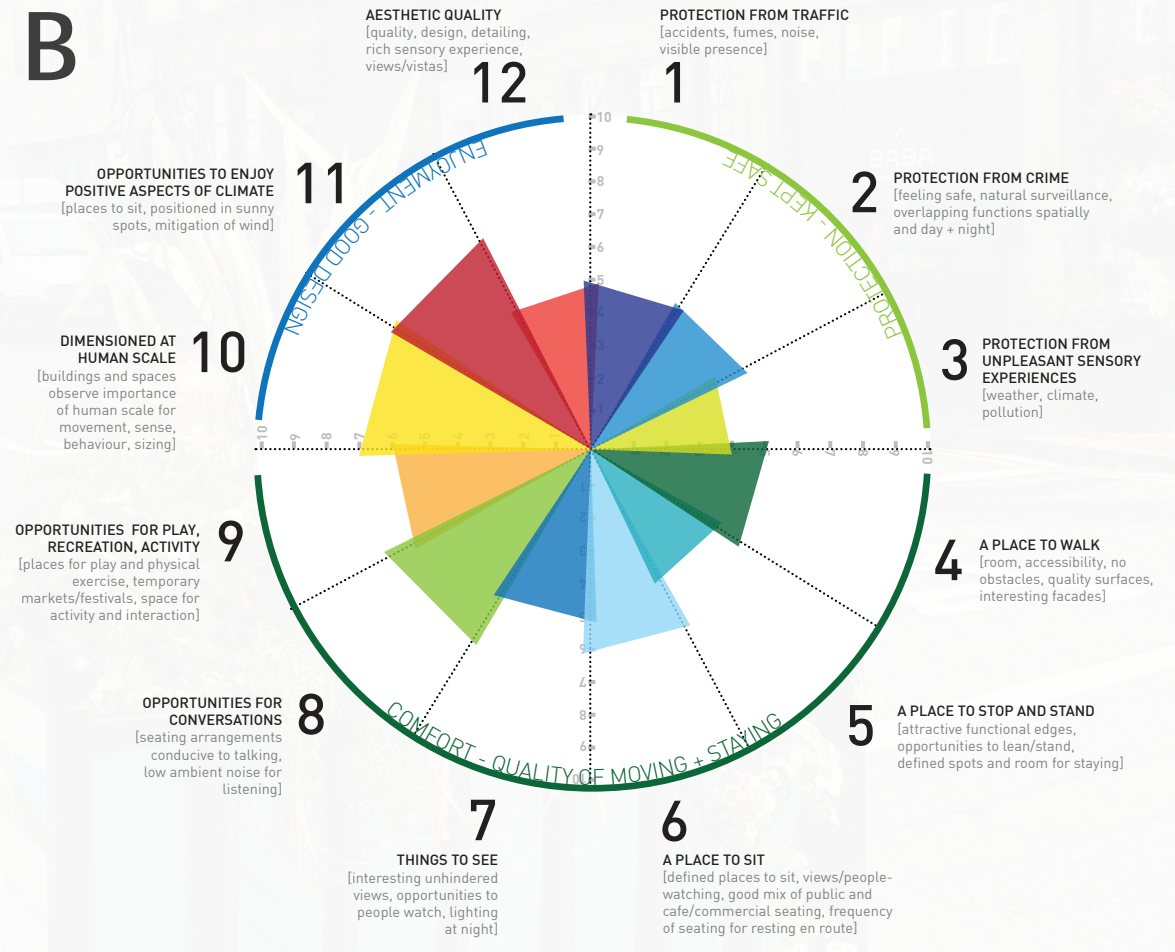


PLACE FUNCTION: 12 QUALITY CRITERIA

GEORGE STREET
[CHARLOTTE SQUARE
TO CASTLE STREET]



B



GEORGE STREET [BETWEEN CHARLOTTE SQUARE AND CASTLE STREET]



1. Protection from vehicular traffic

- ▶ Considerably fewer buses and other large vehicles than further east along George St.
- ▶ Wide pavements lined with parked cars buffer pedestrians from moving vehicles.
- ▶ Dominant visual presence of traffic due to large numbers of parked cars in three long strips down the street (centre, and adjacent to both pavements). In addition to two moving traffic lanes this creates 5 'lanes' of stationary/moving traffic. Noise from buses and coaches.
- ▶ Dashed cycle lane observed to be consistently driven in by cars, offering little perceived protection to cyclists.
- ▶ Hazardous crossing conditions for pedestrians mid-street (between parked cars) - poorly visible to drivers.
- ▶ Use of sunny north side of street primarily for parking rather than positive microclimate to benefit public life.

2. Protection from crime

- ▶ Mix of offices, shops (Anta), cafés/restaurants (Gourmet Burger, Hyde&Son, Starbucks), bars (Candy Bar&Kitchen, Gusto, Las Iguanas) with varied hours of activity provide overlapping functions during day/night.
- ▶ Whilst these functions overlap temporally, spatially this varied mix of uses occurs primarily on the north side of the street. Facades on the south side of the street are less diverse, and primarily office uses active only during the day.

3. Protection from unpleasant sensory experiences

- ▶ Awning at Las Iguanas provides shelter.
- ▶ Exposure to wind. Particularly prevailing south-westerly winds due to east-west street orientation creating wind corridor.
- ▶ Limited shelter. Only a few recessed doors offer short-term shelter from rain [at Hadeel, Browns, Anta].

4. A place to walk

- ▶ Wide pavements on both sides, and active interesting frontages on north side of street.
- ▶ Zebra crossing at Castle St/George St prioritises pedestrian movement, reducing waiting times.
- ▶ Obstacles (poles, A frames, parking meters) reduce effective pavement width. Hard to cross between cars.
- ▶ Some cracked concrete pavement slabs (particularly near road edge from vehicle loading) may cause trip hazard.
- ▶ Few active facades on south side.

5. A place to stop and stand

- ▶ Wide pavements accommodate stationary pedestrians without causing congestion.
- ▶ Intermittent semi-public steps create opportunities for short-term standing or pausing. These are located at 127 George St, Tigerlily, Hyde&Son, and Hadeel on the north side [sunnier, more conducive to stopping], and also south side at TSB, 112, 114 George St.
- ▶ Columns to lean against at Anta/Church of Scotland.
- ▶ Few public defined spots to stand or gathering spaces to stay. Only commercial outdoor seating or informal semi-public opportunities on steps/under building overhangs for shorter stays.

6. A place to sit

- ▶ Cafe/bar outdoor seating primarily on north i.e. sunniest side of street [at Slug&Lettuce, Hyde&Son, Las Iguanas, Browns, Gourmet Burger].
- ▶ Some seating on south side [at 'Alexander Graham Bell' Wetherspoons]. Receives some evening sun.
- ▶ Intermittent occasional steps offer some limited informal public seating.
- ▶ Public benches combined with planter at west end of George St near Charlotte Square junction offer more accessible formal public seating.
- ▶ Limited informal and formal public seating means few options to stop and rest en route for those with additional accessibility needs. In particular lack of formal public seating with arm/back support.
- ▶ Prevalence of outdoor private commercial seating on north side but limited seating of any kind to south.

7. Things to see

- ▶ Partial views of Charlotte Square green space to west give long views of trees. Positive views to Edinburgh Castle from east end of this street section at Castle St (people observed taking photos).
- ▶ Relatively busy footfall for people-watching.
- ▶ Multiple rows of parked cars/vans block views to Charlotte Square to west, create visual barrier between north/south sides of street.
- ▶ Limited public seating for people-watching.

8. Opportunities for conversations

- ▶ Fewer buses, coaches, traffic than further East along George St create quieter environment.
- ▶ Public benches at west end in central street section create cluster for conversation. Outdoor commercial seating at bars and restaurants especially on north side.
- ▶ Limited public seating. Noise from cars and traffic.

9. Opportunities for play, recreation and activity

- ▶ Adjacent Charlotte Square used for temporary activities/events.
- ▶ 2017 Edinburgh International Book Festival expanded to include this street section. Potential for more activities/events in this west end of George St if parking reduced/pedestrianisation.
- ▶ Limited outdoor activity at present.

10. Dimensioned at human-scale

- ▶ Steps offer more human-scale opportunities to sit away from road and noise, wide pavements accommodate pedestrian movement.
- ▶ Some larger scale facades and lack of interest at ground floor level on south side. Dominance of parked vehicles in street environment and use of majority of street for vehicles.

11. Opportunities to enjoy positive aspects of climate

- ▶ Public benches in central parking strip to west. Commercial outdoor seating esp. on north side.
- ▶ No public seating on sunny north side of street. Only one public planter-bench (to west).

12. Aesthetic quality

- ▶ Cobbles in good condition in central strip, interesting architectural features, public bench cluster to west.
- ▶ Less sensory interest and fewer active ground floor facades than other sections of George St. Broken concrete pavement slabs, visual and functional dominance of parked cars.

PLACE FUNCTION: 12 QUALITY CRITERIA

GEORGE STREET [BETWEEN CHARLOTTE SQUARE AND CASTLE STREET]



Outdoor commercial seating provides sunny spot to sit on north side of street.

Less active facades and less sensory interest on shady south side of street.

Mismatching patchwork of concrete slabs, lower quality finish than adjacent road.

Less busy with cars and buses than further west on George Street



Hazardous crossing conditions for pedestrians mid-street (between parked cars)

Dashed cycle lane with no coloured surface. Cars observed driving within. Cyclists not prioritised.

Well-maintained, high quality road surface and cobble setts.



Visual dominance of parked cars/vans/coaches (3 lanes) and traffic (2 lanes) obstructs views and creates disconnect between two sides of street.

Partial views of trees and Charlotte Square.

Outdoor cafe/bar seating in sunshine.

Sunny north side of street and wide pavements allow pedestrians to pause and stand.

A-frames and poles extend into the pavement. Rationalisation of these would aid pedestrian movement.

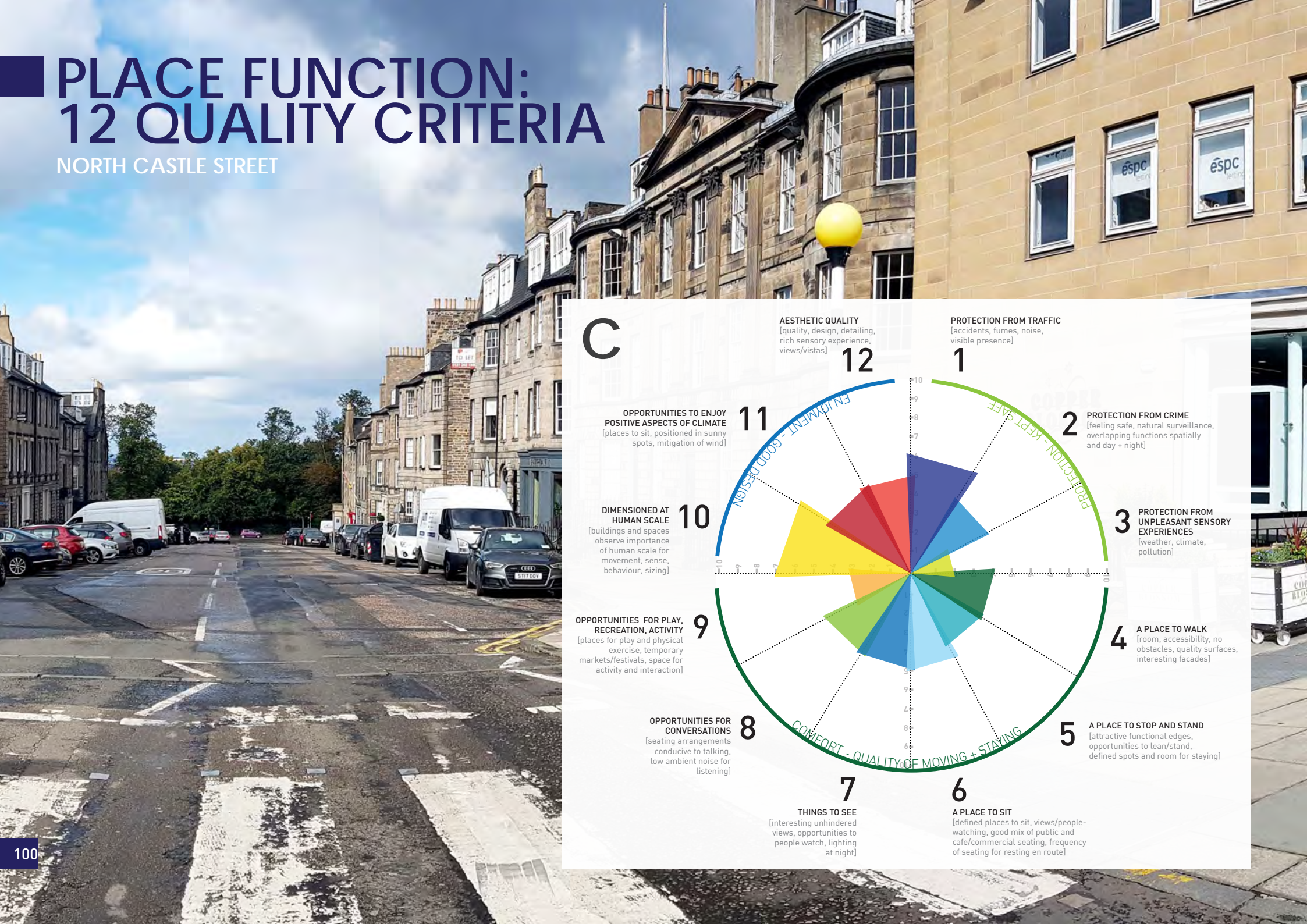


Street primarily used as car park. Suggest: reconfigure layout so better use of sunny northern side of street for public life/pedestrians/cyclists rather than vehicle parking.

Zebra crossing reduces pedestrian wait times and prioritises those on foot.

PLACE FUNCTION: 12 QUALITY CRITERIA

NORTH CASTLE STREET



C





1. Protection from vehicular traffic

- ▶ Zebra crossing at junction of North Castle St/George St prioritises pedestrian movement.
- ▶ Lower traffic volumes than at all other locations, reduces perceived threat from vehicles. Primarily cars.
- ▶ Parked cars on both sides of street buffer pedestrians from moving vehicles in road.
- ▶ Hazards for pedestrians crossing road in-between parked cars - poorly visible by drivers when stepping into road.
- ▶ Moving traffic lanes are wider than necessary. In combination with parked cars, increases distance to cross.
- ▶ Very wide crossing distance at North Castle St/Queen St that prioritises car movement. Opportunity to widen pavements and narrow road carriageway where North Castle St meets Queen St junction, and mid-section for those crossing east-west between Young St/Hill St.

2. Protection from crime

- ▶ Some overlapping functions. Mix of daytime uses for shops (Vogue Childrenswear, Murray&Currie and George Goldsmith's estate agents), cafés (Waka), and offices (e.g. 3D Reid, Caledonian Trust, Spanish Consulate etc), as well as uses into the evening/at wider times of day, including guest-houses, residential and restaurants (The Honours, Time4Thai, Mark Greenway).
- ▶ Fewer active frontages and natural surveillance than other street sections. More residential and office based uses.

3. Protection from unpleasant sensory experiences

- ▶ Reduced traffic volume reduces noise and pollution, though nearby Queen St busy traffic audible/visible.
- ▶ Exposed to westerly prevailing winds channelled along Young St, felt at Young St/North Castle St junction.
- ▶ No awnings/building overhangs offering protection from rain.

4. A place to walk

- ▶ Wide pavements facilitate pedestrian flows.
- ▶ Relatively quiet traffic makes it easier to cross the road.
- ▶ Zebra crossing at North Castle St/George St junction prioritises pedestrian movement.
- ▶ No drop kerbs at Young St or Hill St junctions with North

Castle St. Creates accessibility issues for some users, particularly those moving in north/south directions.

- ▶ Patchy uneven pavement with broken slabs. Road surface also heavily patched with tarmac and uneven to cross.
- ▶ Wide crossing distance and fast cars at Queen St junction.
- ▶ Very narrow pavements into Hill St / Young St. Pedestrians observed frequently walking in the road to pass each other.

5. A place to stop and stand

- ▶ Widened pavement corners at junction of North Castle St/George St offer nodal space to stop and stand. Observed to be in frequent use. Could be enhanced with trees/seating.
- ▶ Fairly wide pavements along North Castle St allow pedestrians to stop without blocking the pavement.
- ▶ Stepped entries to adjacent buildings provide opportunity to pause on steps off main pedestrian thoroughfare.
- ▶ Pavement corners at North Castle St/Queen St, and where Hill/Young Streets meet North Castle could be increased into the road carriageway to better facilitate pedestrian crossing (shortening crossing distance) and providing place to stop and pause.

6. A place to sit

- ▶ Outdoor commercial cafe/bar seating at Copper Blossom and Waka, and at basement level at Tonic.
- ▶ Frequent opportunities for informal public seating on semi-public steps at building entrances.
- ▶ Less outdoor cafe/bar seating opportunities than other streets in the area.
- ▶ No public formal seating at all. No provision of benches or seating with backs/arm-rests that help enable those with accessibility needs to use public realm.

7. Things to see

- ▶ Views to Edinburgh Castle from the southern end of North Castle St (closer to George St).
- ▶ Moderate levels of footfall for people-watching at south end of North Castle St (views of those on George St).
- ▶ Low footfall levels, particularly closer to Queen Street.
- ▶ Visual dominance of parked cars.
- ▶ Views foreshortened to north by railings/large trees.

8. Opportunities for conversations

- ▶ Moderate traffic volumes, but quieter than at other street sections assessed.
- ▶ Clustered seating arrangements at Copper Blossom.
- ▶ Frequent steps allow pausing for short conversations.
- ▶ No public seating or nodes accommodating longer chats (only commercial seating allows for this).
- ▶ Traffic noise. Particularly closer to Queen Street.

9. Opportunities for play, recreation and activity

- ▶ Proximity to George St (temporary activities for Fringe) and Castle Street (regular outdoor markets on pedestrianised street).
- ▶ Despite lesser traffic volume than other street sections, currently no play, recreation or temporary activities observed.

10. Dimensioned at human-scale

- ▶ Interesting architectural detail and character.
- ▶ At North Castle St/George St zebra crossing prioritises pedestrians, and active facades at Tonic and Copper Blossom.
- ▶ Fewer active facades or sensory interest along North Castle St toward Queen St, and more car-dominated scale street layout.
- ▶ Lack of drop-kerbs at Hill/Young St junctions.

11. Opportunities to enjoy positive aspects of climate

- ▶ Plentiful steps on both sides of street provide informal seating in morning sun (west side) and afternoon/evening sun (east side).
- ▶ Outdoor commercial seating at Copper Blossom, Tonic, and Waka provides sitting opportunities for people watching/in the sun.
- ▶ No formal public seating available (only informal steps or commercial). This restricts seating opportunities outside in the sunshine for some users (i.e. those unable to pay to sit at a cafe/bar, or those requiring arm rests/seat backs for support which steps do not provide).

12. Aesthetic quality

- ▶ Wide pavements accommodate existing levels of footfall.
- ▶ Steps to facade entrances and architectural detail provides interesting edge character, even where these are passive.
- ▶ Few active facades at ground level reduces sensory experience.
- ▶ No drop kerbs at Hill/Young Street restrict accessibility.
- ▶ Wide road carriageway distance to cross as pedestrians despite low traffic volumes. Patched tarmac surface. Feeling of car dominance and scale at junction with Queen Street.

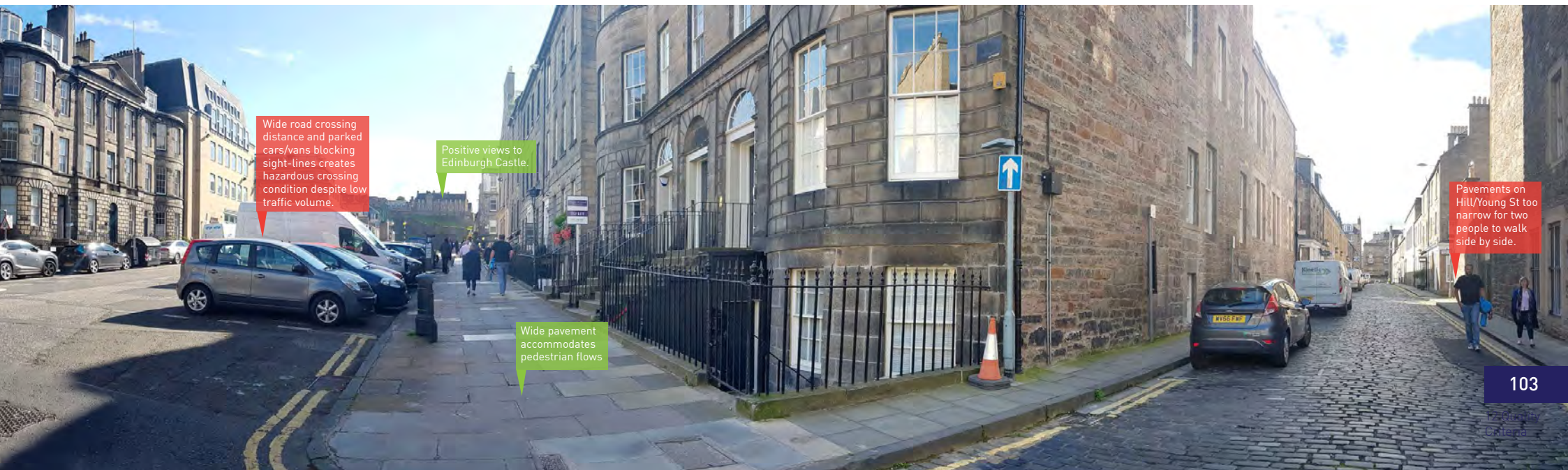
PLACE FUNCTION: 12 QUALITY CRITERIA

C: NORTH CASTLE STREET





Outdoor commercial seating in sun at Copper Blossom.



Wide road crossing distance and parked cars/vans blocking sight-lines creates hazardous crossing condition despite low traffic volume.

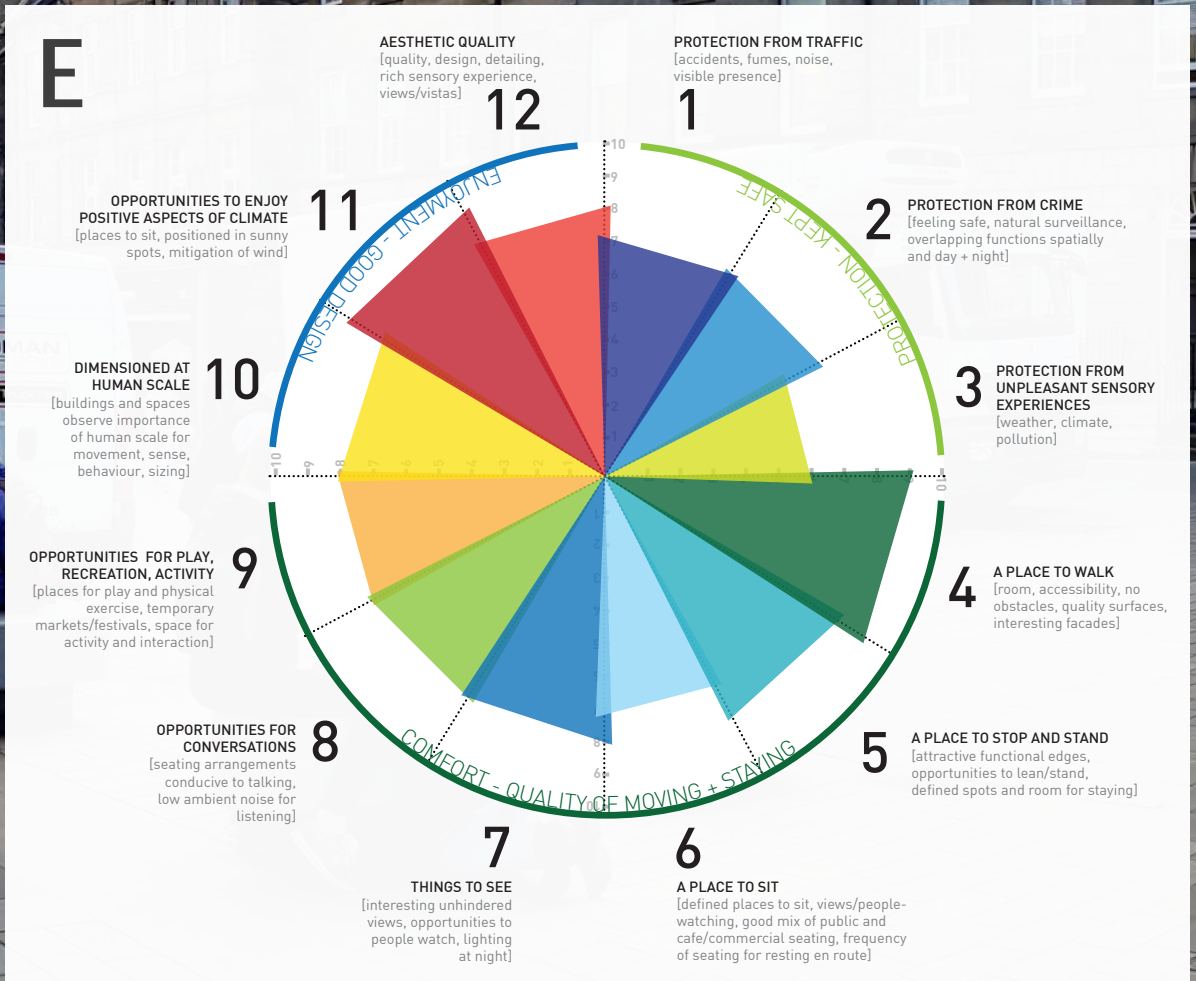
Positive views to Edinburgh Castle.

Wide pavement accommodates pedestrian flows

Pavements on Hill/Young St too narrow for two people to walk side by side.

PLACE FUNCTION: 12 QUALITY CRITERIA

CASTLE STREET





1. Protection from vehicular traffic

- ▶ Shared space (pedestrians and vehicles) in north part of this section of Castle St (closest to George St), and pedestrianised zone (except loading 11pm-10.30am) in south section closest to Princes St, reduces impact of traffic on the space. Also reinforces driver awareness of pedestrians.
- ▶ Fewer moving cars than other streets, less fumes and noise. More pedestrian priority street environment.
- ▶ Vans and lorries frequently turn into/out of Rose St, sometimes at speed. This surprises pedestrians, who consider themselves within a pedestrian zone.
- ▶ Loading lorries/vans/cars park within the pedestrianised zone throughout the day (including outwith loading hours). For example, 7 cars/vans were parked within the pedestrian zone at 12noon on the Tuesday research day.

2. Protection from crime

- ▶ Mix of overlapping functions provide natural surveillance, with most active during the daytime, but some evening uses too. These include cafés (Pret A Manger, Costa Coffee, Cau, Starbucks), and shops (Day Today Express Newsagents, Fired Earth, Viyella, Pink, Virgin Money, Vodafone, The Treasure Trove, Harvey Jones, H.Robertson, Trail Finders, HSBC, High+Mighty, Jessops) active in the daytime. Also offices/hotels (Edinburgh Castle Apartments, Thompsons, Global Design Source, Temporis Wind, Watts etc) and restaurants (Badger&Co., Golden Dragon Chinese Restaurant, TFI Fridays) with a mix of daytime and evening use, and pubs (The Amber Rose) with primarily evening use.
- ▶ Temporary daytime market provides additional public life and natural surveillance on some days.
- ▶ Researchers noted there is potential for cafés/restaurants to use more of the pedestrianised space for outdoor seating. This could be further encouraged, to provide additional public life and natural surveillance into the evening.

3. Protection from unpleasant sensory experiences

- ▶ Fewer cars and moving traffic than adjacent streets. This reduces experiences of fumes and noise.
- ▶ Street orientation north-south offers some limited wind protection from prevailing westerlies.
- ▶ Awnings at Costa Coffee and building overhang at 7 Castle St provide some protection from inclement weather.

4. A place to walk

- ▶ High quality surfaces and material palette provide flat flush surfaces that are good for walking/accessibility.
- ▶ Many active facades provide sensory interest whilst walking. Few obstacles.
- ▶ Some passive and/or vacant facades detract from visual character (e.g. key corner unit on east side of Castle St where this meets the south side of Rose St). Some office uses of ground floor facades create passive facades. HSBC and Vodafone facades also passive.

5. A place to stop and stand

- ▶ Wide, mostly pedestrianised or pedestrian-priority surface makes it easy to stop and stand.
- ▶ Steps provide informal additional spaces to pause away from pedestrian thoroughfare and people-watch.
- ▶ Mix of active and passive edges with mix of functions and uses provide opportunities to stop.
- ▶ Loading vehicles, parked and turning cars/vans within pedestrian zone and moving traffic within shared street section to the north mean pedestrians need to remain aware of vehicles. Conflict observed between pedestrians stopping/standing, then having to move for cars, even within the pedestrianised zone outwith of loading hours.

6. A place to sit

- ▶ Presence of some public seating, views of the castle, high footfall for people-watching, and a lack of buses/coaches/heavy traffic creating noise and blocking these views make a pleasant, quiet, place to sit.
- ▶ With the exception of one planter-bench at the Charlotte Sq end of George St, this is the only street assessed that provides any truly public formal seating.
- ▶ Cafe/restaurant commercial seating present.
- ▶ Small bollards double as places for short sitting opportunities, or to rest en route. Concrete seats at Princes St end of Castle St frequently in use.
- ▶ Demand for additional public seating, particularly on market days. Improvements to materiality to be more comfortable for longer sitting stays in cold weather (e.g. wood tops), and seating with backs may increase accessibility and duration of stays.

7. Things to see

- ▶ Views of castle to south - many people stop to take photos. Pedestrianised zone makes it easier to stop and

appreciate view.

- ▶ Active facades, cafe seating, markets provide sensory interest.
- ▶ Loading vans/cars block views to the south of Castle St.

8. Opportunities for conversations

- ▶ Pedestrianised zone and shared space with no through-route to Princes St (only Rose St), reduces traffic and associated noise, making it easier to stop for conversations.
- ▶ Two clusters of stone public seating to north of pedestrianised zone (near Rose St) provide place to stop and talk. Public seating to south in bench format (less conducive to group conversations), or typically some pedestrians observed sitting and some stand facing them to enable conversation.
- ▶ Noise from traffic on Princes St and some loading vans reduces ability for conversations. Seating more conducive to short conversations due to materiality, and lack of seat backs for older users or those in need of this support for accessibility reasons.

9. Opportunities for play, recreation and activity

- ▶ Pedestrianised zone to south used for temporary markets, and provides wide surface within with to walk/run/play.
- ▶ Bollards provide some opportunity for informal play/climbing within a relatively safe environment.
- ▶ Main limiting factors to more recreation/play/activity are the presence of loading vans/unexpected moving traffic, and a need for more public seating and edges.

10. Dimensioned at human-scale

- ▶ High quality, pedestrian-scale materiality and bollard/seating elements. Active frontages, outdoor seating and markets create human scale and sensory interest.
- ▶ Car parking in two lines within shared space, lorries/vans loading within pedestrianised zone create a more vehicle-dominated scale and visual dominance. No trees/planting providing sensory interest.

11. Opportunities to enjoy positive aspects of climate

- ▶ Public and cafe seating in sun with views of Edinburgh Castle.
- ▶ Little shelter from wind, no trees for shade in summer.

12. Aesthetic quality

- ▶ Views of castle, high quality materiality and pedestrian priority design, flush surfaces for accessibility, active frontages.
- ▶ No trees or planting (provide shade/cover from light rain, sensory interest). A need for more public seating, including with backs.

PLACE FUNCTION: 12 QUALITY CRITERIA

E: CASTLE STREET



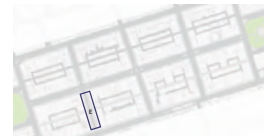
Outdoor commercial seating and active frontages.

A-frames positioned against facades means less of an obstacle.

Prominent corner unit vacant, resulting in inactive facade.

Change to lower quality materiality on entering Rose St.





Outdoor seating with good views of castle and people-watching.

People use public seating to eat lunch and food from the market.

Large vehicles park within the pedestrianised zone for long periods, obstructing views and meaning pedestrians need to watch for moving traffic. This photo was taken outside of loading hours.

East-west movement over Castle St down Rose St popular. Pedestrians sometimes surprised by fast turning traffic into/out of Rose St have sense this is pedestrian priority.

Smooth surface for popular east-west route along Rose St.



Large vehicles block views and reduce impact of 'pedestrianised' zone.

Market further activates the space and aids public life.

Good views to castle, and people-watching.

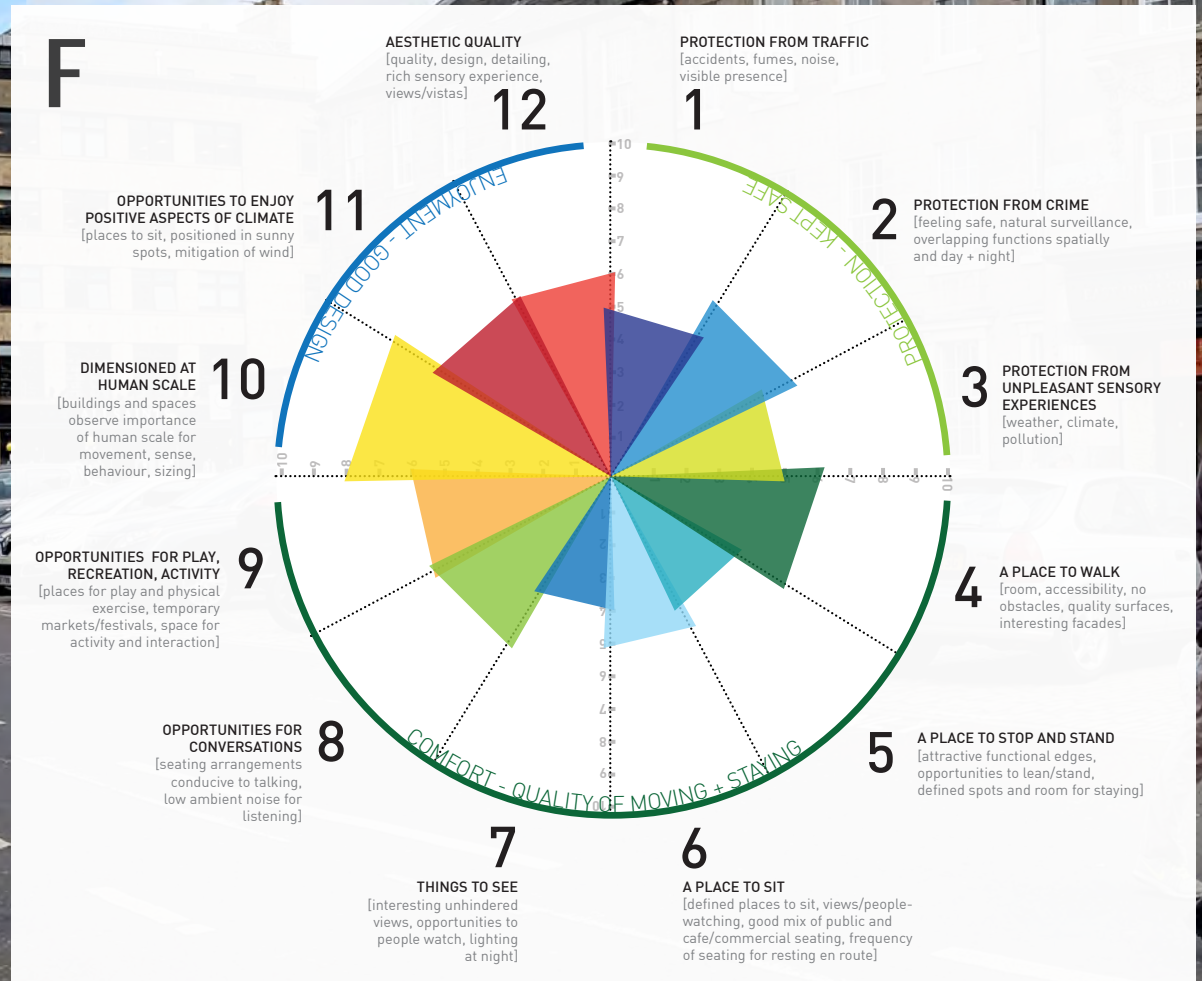
Bollards used for informal seating.

Steps provide semi-public stopping/seating opportunities

Some more passive facades including office uses at ground floor.

PLACE FUNCTION: 12 QUALITY CRITERIA

GEORGE STREET
[CASTLE STREET TO FREDERICK STREET]





1. Protection from vehicular traffic

- ▶ Less frequent buses and other large vehicles than further east along George St.
- ▶ Wide pavements lined with parked cars buffer pedestrians from moving vehicles.
- ▶ Dominant visual presence of traffic due to large numbers of parked cars in three long strips down the street (centre, and adjacent to both pavements). In addition to two moving traffic lanes this creates 5 'lanes' of stationary/moving traffic. Noise from buses and coaches.
- ▶ Cars and vans observed parked for long periods in 'loading only' bays.
- ▶ Dashed cycle lane observed to be consistently driven in by cars, offering little perceived protection to cyclists.
- ▶ Hazardous crossing conditions for pedestrians mid-street (between parked cars) - poorly visible to drivers.
- ▶ Use of sunny north side of street primarily for parking rather than positive microclimate to benefit public life.

2. Protection from crime

- ▶ Mix of overlapping functions. A range of offices (ESPC, Commissioners of Northern Lighthouses), banks (Nationwide, Bank of Scotland), multiple shops and several cafés (Costa, Cafe Andaluz) that provide vibrant daytime use. Contini and Cadiz bar restaurants provide some evening activity.
- ▶ Together these provide good natural surveillance, particularly due to outdoor seating at Contini, Costa and Cafe Andaluz (both daytime and evening).
- ▶ Limited evening uses as part of the land use mix, and some passive facades reduce natural surveillance.

3. Protection from unpleasant sensory experiences

- ▶ Several recessed doorways offer shelter from impromptu rain (at ESPC, Space NK, Contini, Freemasons Hall, Hollister, Bank of Scotland).
- ▶ Awnings at Hamilton&Inches and Cafe Andaluz provide shelter to pedestrians in rain.
- ▶ Exposure to wind. Particularly prevailing south-westerly winds due to east-west street orientation.
- ▶ No trees offering light shelter from rain or localised protected spots within the public realm itself.

4. A place to walk

- ▶ Wide pavements and active interesting frontages along majority of both sides of street.
- ▶ Zebra crossings at Castle St and Frederick St prioritise pedestrian movement, reducing waiting times.
- ▶ Obstacles (poles, A frames, parking meters) reduce effective pavement width. Hard for pedestrians to cross with clear sight lines between rows of parked cars.
- ▶ Some cracked concrete pavement slabs (particularly near road edge) may cause trip hazard.
- ▶ Some passive or inactive facades (Freemasons Hall, Slaters, Nationwide, Hollister, Bank of Scotland, Nationwide, Commission of Northern Lighthouses) reduce interest whilst walking for pedestrians.

5. A place to stop and stand

- ▶ Wide pavements accommodate stationary pedestrians without causing congestion.
- ▶ Occasional semi-public steps create opportunities for short-term standing or pausing (e.g. at 91 George St).
- ▶ Few public defined spots to stand or gathering spaces to stay except the pavement. Only intermittent informal semi-public opportunities to stand on steps/under building overhangs for shorter stays.

6. A place to sit

- ▶ Commercial outdoor seating available at Contini bar/restaurant on north (sunniest) side of street.
- ▶ Intermittent occasional steps in building doorways offer some limited informal public seating (at 91, 103 and 108 George St on north side of the street, and 74, 76, 96 George St to south side), .
- ▶ Limited informal and formal public seating means few options to stop and rest en route for those with additional accessibility needs. In particular lack of formal public seating with arm/back support.

7. Things to see

- ▶ Positive views to Edinburgh Castle from Castle St at west end of this street section (people observed taking photos).
- ▶ Relatively busy footfall for people-watching.
- ▶ Multiple rows of parked cars/vans block long views. Create visual barrier between north/south sides of street.
- ▶ Limited public seating for people-watching. .

8. Opportunities for conversations

- ▶ Fewer buses, coaches, traffic than further east along George St creates slightly quieter environment.
- ▶ Commercial cafe seating outside Costa, Cafe Andaluz, Contini provides clustered opportunities for conversations (on purchase).
- ▶ No formal public seating. Noise from cars and traffic.

9. Opportunities for play, recreation and activity

- ▶ Adjacent Charlotte Square used for temporary activities and events. Potential for this activity to be extended down west end of George St if parking reduced/pedestrianisation.
- ▶ Limited everyday outdoor activity at present. None observed.

10. Dimensioned at human-scale

- ▶ Wide pavements accommodate pedestrian movement, and some steps provide refuge to pause away from thoroughfare.
- ▶ Variety of shops at ground floor provide sensory interest and opportunities to window shop. Commercial seating in sunshine.
- ▶ Zebra crossings at Castle St and Frederick St improve walkability, prioritise pedestrians and create human-scale.
- ▶ Some larger scale passive facades and lack of interest at ground floor level (at banks and offices).
- ▶ Dominance of parked vehicles in street environment and use of majority of street for vehicles.

11. Opportunities to enjoy positive aspects of climate

- ▶ Commercial outdoor seating opportunities (Costa, Contini, Cafe Andaluz), and some informal stepped seating (esp. at 91 George St) positioned on north sunnier side of street.
- ▶ No formal public seating at all. Only commercial opportunities.

12. Aesthetic quality

- ▶ Cobbles in good condition in central strip, interesting architectural features.
- ▶ Some broken concrete pavement slabs. Mismatching colours.
- ▶ Visual and functional dominance of parked cars and allocation of the majority of street space to moving vehicles/parking.

PLACE FUNCTION: 12 QUALITY CRITERIA

F: GEORGE STREET [BETWEEN CASTLE STREET AND FREDERICK STREET]



Steps at 91 George St provide an informal place to sit or pause in the sun.

Some long views possible in direction of pavement (not blocked by cars).

Some more passive frontages.

Rows of parked cars block views between the south and north sides of the street.



Large glass-fronted shop facades provide opportunity for window shopping.

Wide pavements allow pedestrians to easily walk, and pause without causing congestion.

Three lanes of parked cars and vans block views and make a dominant use of George St as a car park.

More bike racks required to match existing demand.

Dashed cycle lane with no colouring does not imply cyclists are prioritised here.



Pedestrians crossing mid-street need to navigate through 3 lanes of parked cars and 2 lanes of traffic.

Interesting architectural character and detail.



Some poles and A-frames, create obstacles for pedestrians.



Long views partially obstructed by cars and vans.

Outdoor seating at Costa, Contini and Cafe Andaluz on the north, sunnier side of the street.



Awnings provide some shelter during rain.



High quality, sensory rich shop frontages at human scale.

Cracked and mismatching paving slabs.

PLACE FUNCTION: 12 QUALITY CRITERIA

FREDERICK STREET [NORTH]





1. Protection from vehicular traffic

- ▶ Zebra crossing at Frederick St/George St junction enables short wait times and prioritises pedestrians.
- ▶ Frederick St (north) is cobbled (visually pleasant) but poorly maintained with uneven setted surfaces and tarmac patches. This causes noise from vehicle tyres.
- ▶ Parked cars create buffer to moving traffic, but also create a vehicle dominated views with a visual barrier between the two sides of the street.
- ▶ Large vehicles, including buses, coaches and vans use Frederick St as a through-route, visually dominating the street, and are a source of noise and fumes. Though they are less prevalent than on Hanover St.
- ▶ Pedestrians struggle to cross east-west over Frederick St at Thistle/Young St. Long wait times at signalised lights for those crossing Frederick St east-west at Queen St, large crossing distance, and presence of fast-turning cars.

2. Protection from crime

- ▶ Generally good mix of overlapping functions and uses of ground floor facades. Mix of offices, residential, shops, cafés, restaurants and bars (e.g. Queen's Arms, Cafe Rouge, E-Teaket, Auld Reekie Tiki Bar, Cote Brasserie, Rabble Grill&Bar, Real Scottish Burger Co., The Wee Restaurant). These provide natural surveillance at a variety of times of day and night.
- ▶ However, the widest mix of uses is present on the east side of Frederick St (where cafés, restaurants and bars are located, including use into the evening). The west side of Frederick St is primarily residential/office uses, with a couple of shops, the passive side frontage of Nationwide bank and a hairdresser. These provide primarily daytime natural surveillance only.

3. Protection from unpleasant sensory experiences

- ▶ Bus stop on north-west side of Frederick St provides some shelter.
- ▶ Some building overhangs (at Toni&Guy, Frederick St Dental Care), large recessed doorways (at Frederick House Hotel, Brora) and some awnings (at Cote Brasserie) provide shelter from rain in inclement weather.
- ▶ No shelter from the wind. This may impact the desirability of outdoor seating.
- ▶ No trees present, which could provide a partial rain shelter in light rain.
- ▶ Noise and visibility of cars, vans and buses makes you feel close to traffic pollution and fumes.

4. A place to walk

- ▶ No drop kerb for those moving north-south along Frederick St over the Hill St junction. This makes it inaccessible for some users, who have to go a long way out of their desired route to avoid this obstacle.
- ▶ Plentiful obstacles on the east pavement of Frederick St (A-frames, poles, bins) create very narrow effective pavement. There is also outdoor cafe seating here (a positive), but the presence of street clutter combined with narrow pavements (especially in peak periods) make this problematic. Many pedestrians step into the road to avoid.
- ▶ Fewer active facades and interest on west side of street.

5. A place to stop and stand

- ▶ Steps to buildings provide informal places to stand or sit away from the main pavement thoroughfare.
- ▶ Wide pavement on the west pavement allows stopping and standing without causing pedestrian congestion.
- ▶ Cafés and restaurants provide commercial formal seating outside.
- ▶ Stepped spaces are only semi-public, and feel part of the building they are attached to. There is a need for more public stopping places for pedestrians.

6. A place to sit

- ▶ Outdoor seating provided commercially at E-Teaket, Cafe Rouge, Queen's Arms, Rabble, Cote Brasserie.
- ▶ Public seating provided only informally on building steps. This is cold and not suitable for all users. No formal seating.
- ▶ Good views and people-watching possibilities from seating, adds interest.

7. Things to see

- ▶ Good views to north and Fife.
- ▶ Opportunities for people-watching from commercial cafe seating.
- ▶ Traffic (moving and parked) detracts from views and can partially or fully block these.

8. Opportunities for conversations

- ▶ Outdoor commercial cafe seating on east side of Frederick St provides clusters of seats and tables for conversations.
- ▶ Some steps for informal short conversations.
- ▶ Noise from frequent traffic driving past on poorly maintained setted cobbles.
- ▶ No public seating provided for conversations. Have to pay to utilise commercial seating if wanting to sit and talk.

9. Opportunities for play, recreation and activity

- ▶ Outdoor seating on east side of Frederick St creates lively atmosphere into evening. This also promotes opportunities for chance social interactions in the street and high natural surveillance.
- ▶ West side of the street has much less activity at all times of day.
- ▶ Few other opportunities for play, recreation or temporary activities. Outdoor seating is commercial and not available to all.

10. Dimensioned at human-scale

- ▶ Architectural detail of building facades, informal step seating, and facade details (particularly shops with glass fronts and cafés with outdoor seating) offer smaller human-scale features.
- ▶ Some larger scale and passive facades, particularly on the west side of Frederick St (for example Nationwide bank).
- ▶ Narrow pinch points along east side in particular due to A-frames, poles and street clutter. This hinders pedestrian movement.

11. Opportunities to enjoy positive aspects of climate

- ▶ Outdoor cafe seating on the west side of Frederick St is in the sun in the afternoon/evenings. Steps providing a space for informal sitting/ stopping on the east side of the street experience morning sun.
- ▶ Street orientation north-south means that both east and west sides of the street get the sun at various points during the day.
- ▶ No wind mitigation. No public formal seating.

12. Aesthetic quality

- ▶ Cobbles, active facades and views to north provide pleasant character.
- ▶ Dominance of moving and parked vehicles obstructs long views, visual connection between east and west sides of street and restricts people-watching.
- ▶ Wide street with large crossing distances. Poor detailing and maintenance of existing setted street and pavement concrete flags results in noise from vehicles and trip hazards for pedestrians.
- ▶ No drop kerbs at Hill St/Frederick St crossing, and pinch points on east side of street due to street clutter.

PLACE FUNCTION: 12 QUALITY CRITERIA

G: FREDERICK STREET [NORTH]





Pleasant long views to north and Fife.

Outdoor cafe seating and active facades provide natural surveillance and sensory interest

Inefficient use of road carriageway. Could better utilised as wider pavement for pedestrians (if space redistributed), bike parking, seating or trees.



Dominance of parked/loading vehicles partially obstruct views and reduce connection between sides of street.

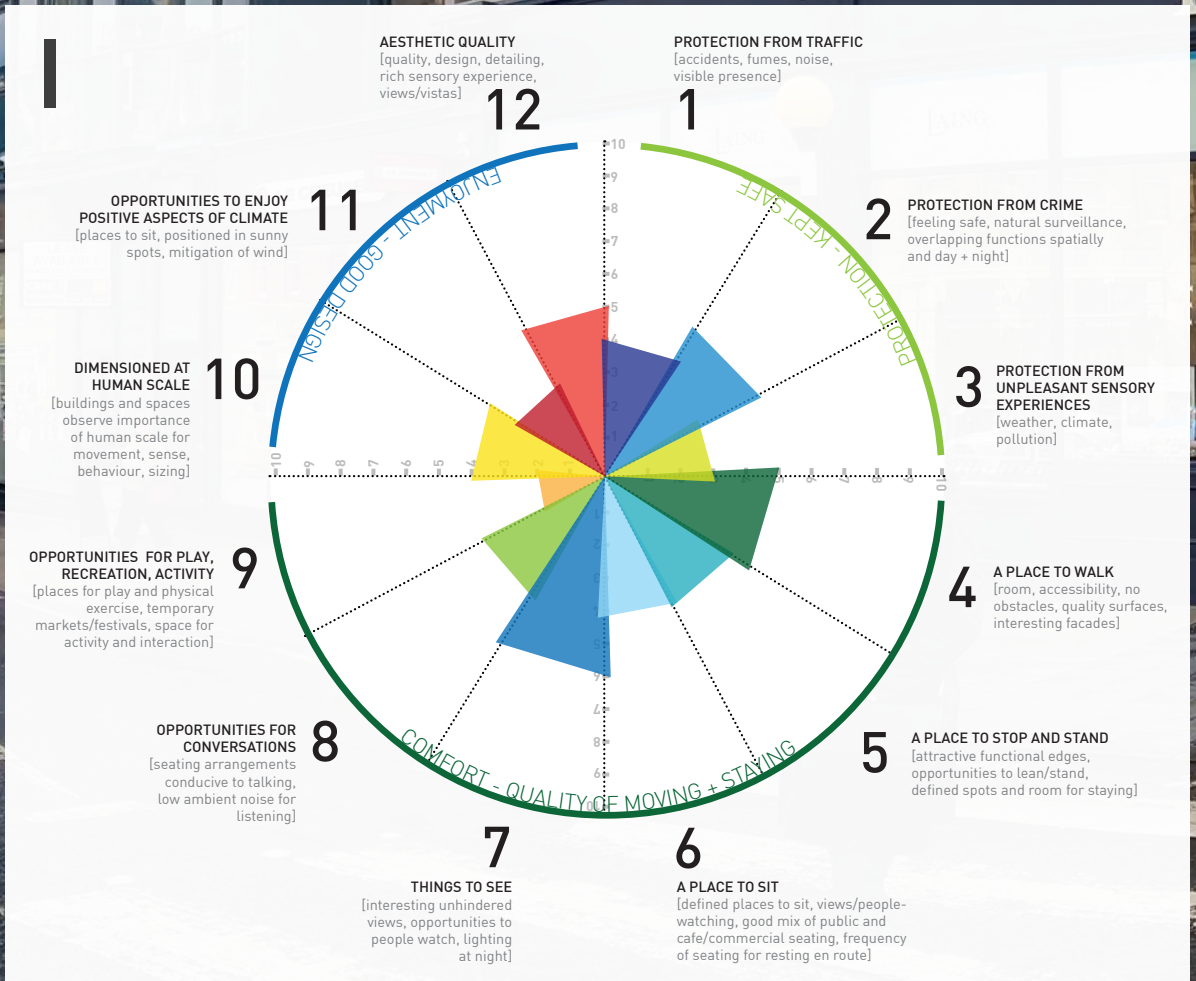
Outdoor cafe seating allows for people watching, social interaction, and creates vibrant street life.

Very narrow pavements result in pedestrians walking in the road.

A-frames, poles and bins create obstacles on the pavement resulting in frequent pinch points on east side and people stepping into the road to pass.

PLACE FUNCTION: 12 QUALITY CRITERIA

FREDERICK STREET [SOUTH]





1. Protection from vehicular traffic

- ▶ Zebra crossing at Frederick St/George St junction to north reduces pedestrian wait times.
- ▶ Quieter than Hanover St to the east, but still dominated by vehicles as a through-route between George St to the north and Princes St to the south.
- ▶ Noise and fumes from buses, and visual dominance of buses, cars and traffic.
- ▶ Pedestrians vulnerable to turning vehicles or passing traffic at Princes St/Frederick St and Rose St junctions, with many waiting in the road or crossing on the 'red man' at these points due to long waiting times east-west.

2. Protection from crime

- ▶ Mix of overlapping functions and busy footfall provide natural surveillance mostly during the day but also into the evening. Shops are particularly dominant (Trespass, All Saints, Laing, Barbour, Hotel Chocolat, Size?, Thorntons, Radley, Chisholm Hunter, Schuh, Dune, North Face, Loake, L'Occitane, Black+Lizard, Pretty Green, Vision Express, Co-op Food, Le Creuset), as well as banks open during the day (Skipton Building Society). Some restaurants/bars provide natural surveillance into the evening (Miller+Carter Steak House, Frederick's Coffee+Wine, Five Guys, The Boozy Cow).
- ▶ On the whole natural surveillance and 'eyes on the street' limited to daytime activity from facade uses, however bus stops frequently have people waiting into the evening.

3. Protection from unpleasant sensory experiences

- ▶ Two bus stops present on Frederick St (south) have roof cover and side protection from wind/rain.
- ▶ Recessed doorways provide shelter from rain (at Size?, Radley, Trespass, Pretty Green and 14, 26 and 33 Frederick St). Awning at Hotel Chocolat provides some refuge.
- ▶ Scaffolding currently provides shelter from rain at south-west end of Frederick St near Princes St (temporary).
- ▶ No formalised public sheltered spots provided for those not waiting for buses. No trees for shelter from light rain.

4. A place to walk

- ▶ Active shop facades provide interest whilst walking.
- ▶ Relatively wide pavements, and relatively smooth walking surface, including drop kerbs.
- ▶ Three crossing opportunities (at Princes St, Rose St, George St) including pedestrian priority zebra crossing at George St junction.

- ▶ Long waiting times and long crossing distances to cross east-west at Rose St and Princes St junctions with Frederick St. Resultantly, pedestrians frequently wait in the road to shorten the crossing distance, hazardously cross between traffic on the 'red man' or cause congestion on the pavement as numbers of those waiting build up.
- ▶ Pinch points due to bus stops, phone boxes, bins, poles and the outdoor seating at Boozy Cow pub. Rationalising street clutter and widening the pavement to better accommodate high footfall and positive public life attributes such as outdoor seating would be beneficial.

5. A place to stop and stand

- ▶ Steps at building facades provide informal places to stop and stand for short periods away from thoroughfare (e.g. at Skipton Building Society, Coro Chocolate Cafe).
- ▶ Shop facades provide sensory interest and opportunities to window shop when pavements not congested.
- ▶ Rose St entrances provide wider points off main north-south pedestrian route to stop and stand.
- ▶ Busy footfall and street clutter obstacles can make it hard to stop on the main north-south pavements along Frederick St without causing an obstruction.
- ▶ No defined spots for stopping and staying at present.

6. A place to sit

- ▶ High footfall means Frederick St is good for people-watching. Current sitting opportunities are at the two bus stops, perched on informal steps at building facades, or at commercial seating at the Boozy Cow pub.
- ▶ Limited sitting opportunities at present. No formal public seating at all. Limited commercial outdoor seating. A lack of places to stop and sit for short periods for a rest, which can reduce accessibility for older/less mobile users.

7. Things to see

- ▶ Pleasant views to Edinburgh Castle to the south. Views to the north from the junction of Frederick St/George St. Glimpse views down Rose St as pedestrians pass.
- ▶ High footfall for people-watching.
- ▶ Few opportunities to people-watch or appreciate views from (limited stopping/sitting options). Pedestrians taking photos of views often block the pavements due to a lack of room and high footfall.
- ▶ Moving traffic (including large buses) and parked vehicles often fully or partially block views.

8. Opportunities for conversations

- ▶ Seating at the Boozy Cow pub provides some opportunity for longer conversations. Steps at building facades facilitate some shorter conversations.
- ▶ No public formal seating (e.g. benches) that would provide opportunities to stop in the street for longer conversations.
- ▶ Loud buses and traffic and dominance of the road in the street setting deter longer conversations.

9. Opportunities for play, recreation and activity

- ▶ Rose St off Frederick St may offer more opportunities for play, recreation and activity, due to high footfall and limited pedestrian space on Frederick St making this more of a movement corridor.
- ▶ Frederick St would need significant street redesign in favour of allocating more space to pedestrians, and reducing the noise/fumes/visual presence of traffic to make this a conducive environment for more recreational activity and play.

10. Dimensioned at human-scale

- ▶ Interesting architectural character of facades. Sensory interest of shops at ground level, provide human-scale interest and opportunities for window-shopping. Mainly active facades.
- ▶ Dominance of large vehicles (buses, vans) and cars, and the large road infrastructure accommodating them, create obstacles to pedestrians due to high footfall becoming congested on pavements that cannot adequately facilitate them.
- ▶ Pedestrians struggle to cross Frederick St/Princes St junction in particular, which is designed at vehicular scale.

11. Opportunities to enjoy positive aspects of climate

- ▶ Outdoor seating at the Boozy Cow pub is in the sun in the afternoon.
- ▶ No opportunities to enjoy morning sun on street's west side, except very limited doorways with steps. A small number of steps on the east side used to enjoy the sun whilst standing/sitting for short periods on the east side (afternoon sun). Otherwise opportunities very limited.

12. Aesthetic quality

- ▶ Active frontages provide sensory interest, and views of the castle.
- ▶ Zebra crossing at Frederick St/George St junction and relatively flat walking surface with drop kerbs provides well for pedestrians.
- ▶ Issues with Princes St/Frederick St junction designed to prioritise vehicle movement. Large amount of Frederick St/George St roundabout space still used for vehicles in comparison to a more pedestrian-priority design.
- ▶ Pavements not wide enough to accommodate high footfall. Street clutter presents obstacles. Cracked slabs and poor materiality.

PLACE FUNCTION: 12 QUALITY CRITERIA

I: FREDERICK STREET [SOUTH]





Pleasant views to the south.

Active frontages provide sensory interest and window shopping.

Window shopping at shop facades.

Zebra crossing aids pedestrian movement and reduces waiting times.



Large volumes of traffic, including buses and taxis obstruct views and access between east and west of Frederick St.

Additional space for stopping/standing on Rose St.

Frederick St dominated by vehicles (moving and parked)

Phone boxes, poles, bins, bus stops create obstacles to pedestrian movement.

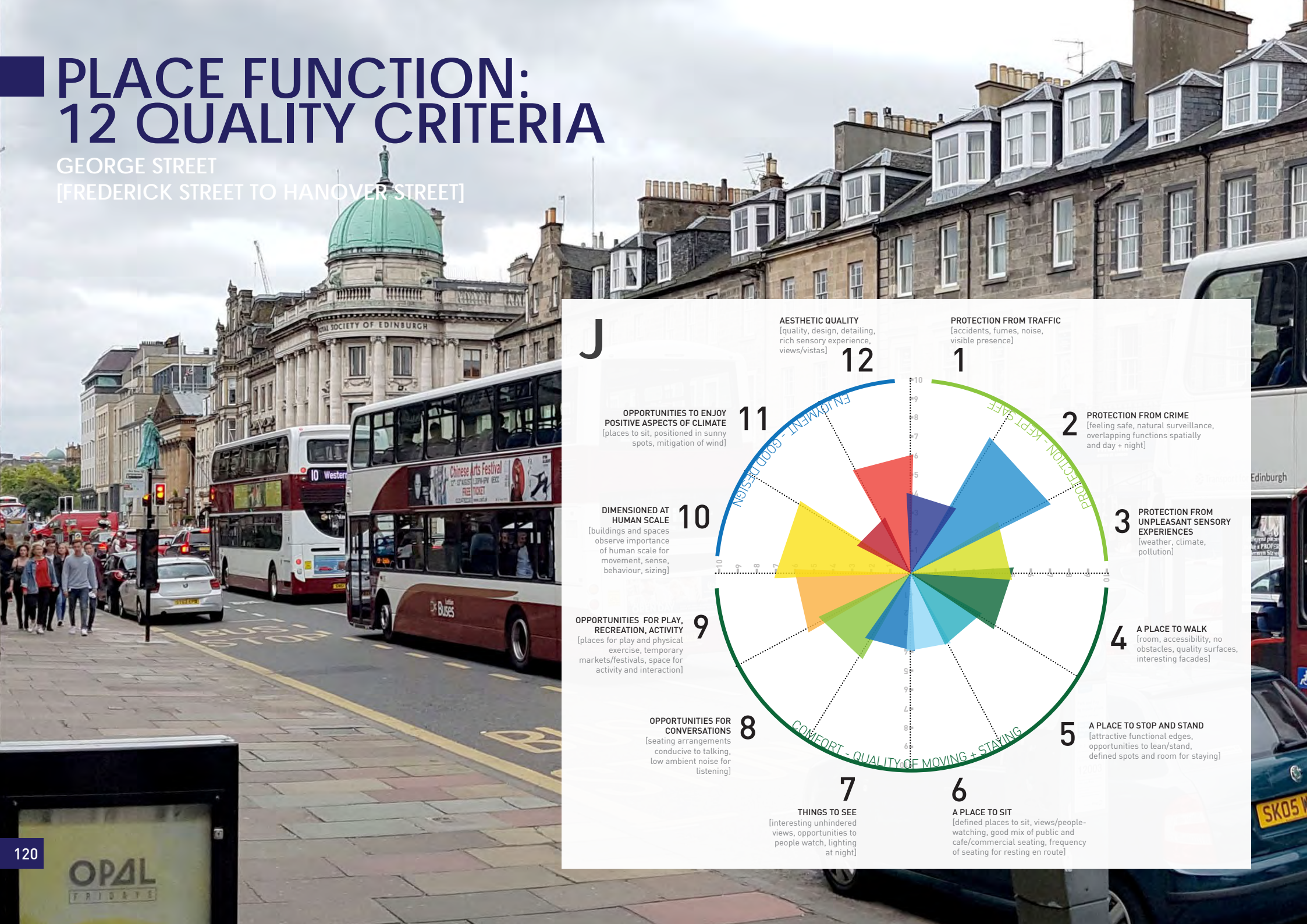
Need for more bike parking.

Human-scale interest at shop facades.

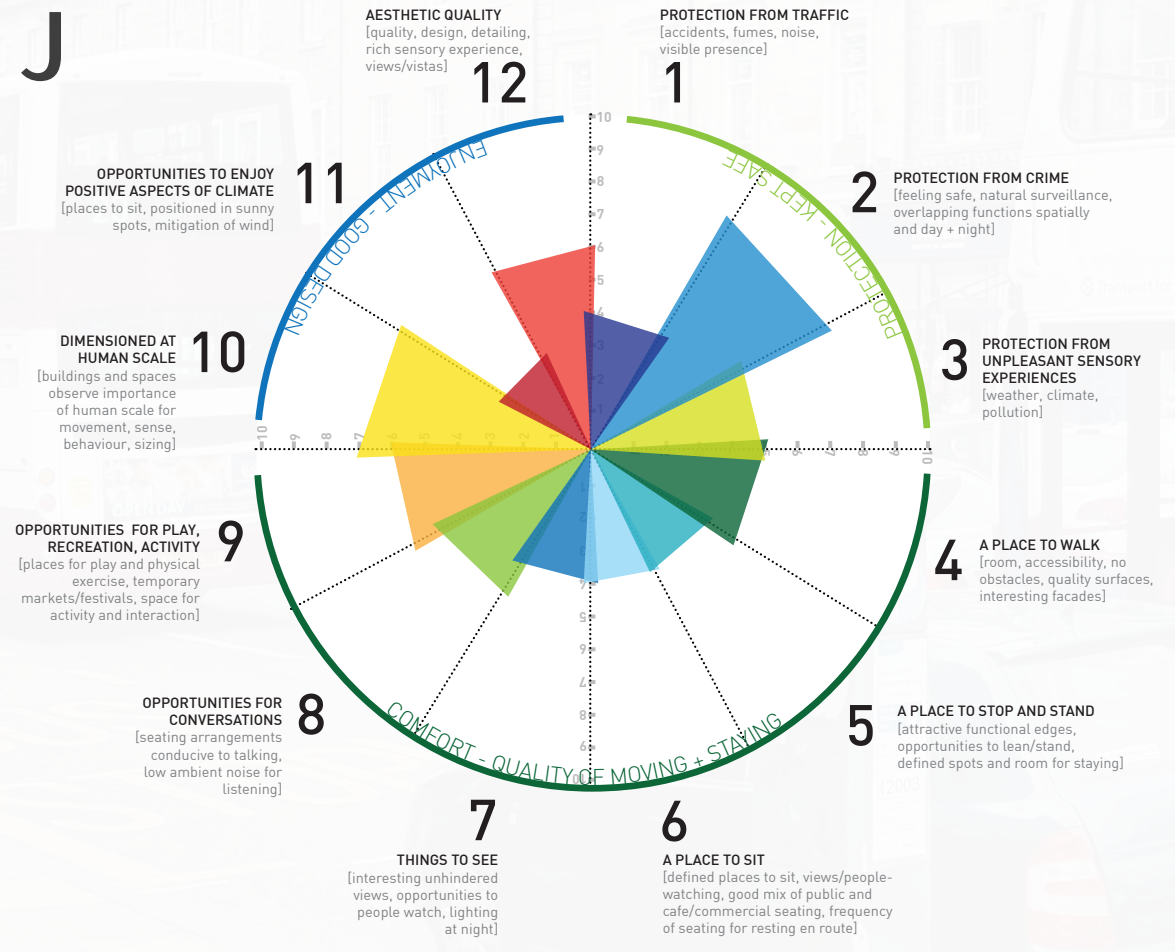
Poor quality pavement materiality

PLACE FUNCTION: 12 QUALITY CRITERIA

GEORGE STREET
[FREDERICK STREET TO HANOVER STREET]



J



GEORGE STREET [BETWEEN FREDERICK STREET AND HANOVER STREET]



1. Protection from vehicular traffic

- Wide pavements lined with parked cars buffer pedestrians from moving vehicles. An alternative buffer (e.g. trees/seating could also be used).
- Dominant visual presence of traffic due to large numbers of parked cars in three long strips down the street (centre, and adjacent to both pavements), in addition to two moving traffic lanes. Frequently blocked with stationary buses and cars queuing for the lights, this creates 5 'lanes' of stationary/moving traffic.
- Cars and vans observed parked for long periods in 'loading only' bays. Inefficient, car-focussed use of street space.
- Dashed cycle lane observed to be consistently driven in by cars, offering little perceived protection to cyclists.
- Hazardous crossing conditions for pedestrians mid-street (between parked cars) - poorly visible to drivers.
- Use of sunny north side of street primarily for parking rather than positive microclimate to benefit public life.

2. Protection from crime

- Mix of overlapping functions, including a range of offices and shops in daytime use, as well as restaurants (Jamie's Italian), bars (The Standing Order, Opal Lounge) and entertainment venues (Assembly Rooms, SuperCube Karaoke) that promote natural surveillance and activity into the evening.
- Presence of late night clubs and bars may also pose potential issues relating to drinking or anti-social behaviour in the street at night.

3. Protection from unpleasant sensory experiences

- Generous building overhang at Assembly Rooms provides cover from rain and a natural meeting point.
- Doorway porches also provide some limited shelter at 43 George St, the Standing Order, Lululemon Athletics and Anthropologie.
- No trees in public realm for shelter from light rain.
- Exposure to wind. Particularly prevailing south-westerly winds due to east-west street orientation creating wind corridor.

4. A place to walk

- Wide pavements on both sides, and active interesting frontages on north side of street.
- Zebra crossing at Frederick St/George St prioritises pedestrian movement, reducing waiting times.
- Active shop facades and frontages on both north and south side of street provide attractive sensory features.
- Obstacles (poles, A frames, parking meters) reduce effective pavement width.
- Hard for pedestrians to cross between parked cars.
- Cracked concrete pavement slabs (particularly near road edge) may cause trip hazard.
- Crossing layout at Hanover St/George St prioritises vehicles over pedestrians. Limited pavement space, railing barriers, frustrating crossing for pedestrians.

5. A place to stop and stand

- Wide pavements accommodate stationary pedestrians without causing congestion.
- Intermittent semi-public steps on both north and south sides of street create opportunities for short-term standing or pausing.
- Interesting facades and edges for window shopping, with multiple pedestrians observed stopping to pause and look in windows.
- No designated public spots for standing/staying or clear nodal places to gather.

6. A place to sit

- Intermittent occasional steps offer some limited informal public seating on the sunnier north side of the street at 59 George St, Laura Ashley, LIC Bennett, and on the south side at Cath Kidson, Cheynes, Trotters, Cafe Centro and 36 and 56 George St.
- Commercial cafe seating outside Standing Order pub.
- Limited informal and no formal public seating means few options to stop and rest en route for those with additional accessibility needs. In particular lack of formal public seating with arm/back support.
- Infrequent informal steps, no designated rest spots.
- Dominance of traffic reduces potential long views.

7. Things to see

- Long views north to Fife, south to Royal Scottish Academy from Hanover St/George St junction (though limited by traffic). Views north to St Stephen's Stockbridge church/Fife from Fred. St.
- Busy footfall for people-watching, especially during day.
- Multiple rows of parked cars/vans partially block long views and create visual barrier between north/south sides of street.
- Limited public seating for people-watching from.

8. Opportunities for conversations

- Outdoor commercial seating in clusters at Standing Order bar.
- Steps recessed from main pedestrian thoroughfare offer informal spots for short stays/conversations further from traffic/noise.
- No public seating and very limited commercial seating (only at Standing Order pub) limits places for longer conversations.
- Noise from cars, buses and busy traffic. Engines often idling whilst in queues waiting for the lights, particularly on north side of road heading east. Creates poor environment for conversations.

9. Opportunities for play, recreation and activity

- Wide pavements allow for running/stopping for chance meetings.
- Existing temporary use during August for Fringe. Potential for more year-round activities/temporary events if parking reduced to give more space to pedestrians/events/public realm/market uses.
- Limited year-round outdoor events/activity at present.

10. Dimensioned at human-scale

- Steps offer more human-scale opportunities to sit away from road and noise, wide pavements accommodate pedestrian movement, interesting human-scale facades at ground level.
- Dominance of vehicles in street environment (moving or parked). Frequent queues of large buses. Large scale street layout at Hanover St/George St junction, favours vehicles.

11. Opportunities to enjoy positive aspects of climate

- Steps on north side provide informal seating in daytime sun.
- No formal public or commercial seating on sunniest north side.

12. Aesthetic quality

- Cobbles in good condition in central strip, interesting architectural features and facades, active frontages.
- Broken concrete pavement slabs, views limited by vehicles, visual and functional dominance of parked cars.

PLACE FUNCTION: 12 QUALITY CRITERIA

J: GEORGE STREET [BETWEEN FREDERICK STREET AND HANOVER STREET]

Building overhang provides shelter and a place to pause out of inclement weather.

Considerable street used as a car park. Vans particularly prevalent in early morning.





Interesting, human-scale active facades and interesting architectural character.

Recessed steps providing informal stopping point.

Use of differentiating yet flush materiality to denote driveway prioritises pedestrians whilst facilitating car access.

Dashed cycle lane with no colouring does not imply cyclists are prioritised here.



Difficult for pedestrians to cross the road mid-street section due to parked cars and traffic.

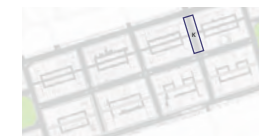
Some partial long views to Charlotte Square

Mismatched and cracked concrete slab pavement.

PLACE FUNCTION: 12 QUALITY CRITERIA

HANOVER STREET [NORTH]





1. Protection from vehicular traffic

- ▶ Wide pavements (some pinch points) generally enable pedestrians to walk without needing to step into road.
- ▶ 4 lanes of moving traffic (5 near junction with Queen St) plus 2 lanes of parked cars (parked in loading areas, on single and double yellow lines), mean typically 6 lanes of traffic. This creates a large vehicle-dominated scale, with wide crossing distances and implication of vehicle priority.
- ▶ Noise and fumes from buses, coaches, vans and cars.
- ▶ Pedestrians find it difficult to cross Hanover St east-west at Thistle St. Long crossing distance, no formal pedestrian crossing, busy traffic.

2. Protection from crime

- ▶ Shops and cafés open and active during the day, restaurants (Grand Cru, Cha Cha Laca, Bar Napoli, La Rustica, Soba, The Dogs) into the evening and pub (Hanover Tap) and club (Garibaldi's) into the night. This overlapping of activity in combination with high footfall allows natural surveillance throughout the day and night.
- ▶ Some passive facades on both sides of Hanover St near the junction with George St offering little/no surveillance.
- ▶ Clubs and bars result in people stood outside at night. This may be intimidating to walk past for some pedestrians.

3. Protection from unpleasant sensory experiences

- ▶ Awnings (at Garibaldi's, 99 Hanover St) and buildings with porches (e.g. 71 Hanover St) provide some semi-public shelter during rain. Some cafés have stairs over basement outdoor seating that provides shelter for commercial customers.
- ▶ Otherwise, no public shelter in non-commercial spaces. This can be a problem given the wide street channel exposed to wind.
- ▶ Pollution and fumes from buses, coaches and cars. In peak periods long queues of traffic build up in front of outdoor cafe seating.

4. A place to walk

- ▶ Relatively wide pavements. High quality cobble setts at Thistle St (west) junction with Hanover St provides smooth flush walking surface that is highly accessible.
- ▶ Mostly active facades along Hanover St that provide sensory interest. Only exceptions are the passive facades on east and west sides closest to George St.
- ▶ Smoother surface needed to cross Thistle St (west), consider matching Thistle St (east) junction.

- ▶ Pinch points due to bus stops, poles, phone boxes and A-frames (particularly the north section of the street).

5. A place to stop and stand

- ▶ Intermittent steps to building facades provide informal seating and stopping points.
- ▶ Interesting facades and edges (active, outdoor seating).
- ▶ Wide pavements mostly allow stopping/standing on the pavement without causing congestion. Though less so in busy peak periods or near pinch points to the north.
- ▶ There is a need for more formal, public, designated places to stop/stand. For example, widened pavements would enable space for formal public seating plus trees to provide some shelter and buffer from the road.

6. A place to sit

- ▶ Plentiful steps for informal public seating. Cafés/bars provide outdoor commercial seating. High footfall means these offer good people-watching.
- ▶ No public (non-commercial) formal seating at present. This is necessary to provide frequent rest stops. Reallocating some vehicle designated space to wider pavements/build outs incorporating seating would be needed to achieve this, so as not to cause pedestrian congestion on the existing pavements.

7. Things to see

- ▶ Long views to Fife to the north.
- ▶ Cafés, restaurants and bars provide interesting active frontages and activity.
- ▶ High footfall gives potential to people-watch.
- ▶ Views disrupted by large volumes of traffic (including large buses and coaches) and noise distracts.

8. Opportunities for conversations

- ▶ Steps and cafe seating allows small group conversations.
- ▶ No public formal seating means conversations need to be standing, informally sat on steps or at cafés.
- ▶ Significant noise from traffic, including coaches, buses and cars along this busy traffic-heavy thoroughfare.

9. Opportunities for play, recreation and activity

- ▶ A small number of runners observed. The pavements are generally wide enough for this activity outside of peak footfall periods.
- ▶ Cafés/bars with outside seating provide localised spaces for activity and interaction. Seats on the street allow for chance meetings (e.g. Wellington's Cafe).
- ▶ No opportunities for play, and busy road and presence of traffic restricts desirability for recreational activity.
- ▶ George St perhaps a better location for temporary activities, markets etc, due to lower traffic volume than Hanover St and flatter topography.

10. Dimensioned at human-scale

- ▶ Mostly interesting facades at a human scale. Some have glass frontages that enable views of people inside, providing sensory interest and increased natural surveillance.
- ▶ Some larger passive facades (e.g. HSBC on south-west side).
- ▶ Road carriageway feels like it prioritises vehicles (moving and parked) and is at a larger scale. Wide road with lengthy crossing distances for pedestrians and scaled to suit buses and coaches.

11. Opportunities to enjoy positive aspects of climate

- ▶ Some outdoor seating at cafés (Chez Jules, balcony at Papii, Wellington Cafe, Urban Angel and Hendersons basement seating) provides opportunity to sit outside in good weather.
- ▶ Informal seating on facade steps provides public opportunity to sit or stand outside in good weather, though for shorter periods.
- ▶ Less outdoor seating to south - closer to where Hanover St (north) meets George St (with the exception of Wellington Cafe).
- ▶ Many outdoor seats are positioned in basements rather than on the street itself (less visible public life, and less able to catch the sun).
- ▶ No public formal seating, or wind mitigation present.

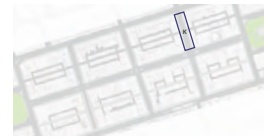
12. Aesthetic quality

- ▶ Pleasant long views to north. Interesting facades and sensory interest from active cafe/restaurant frontages with outdoor seating.
- ▶ High quality, attractive cobble setts on Thistle St (west).
- ▶ Uneven and patchy road surface on Hanover St (north). Tarmac road surface also gives less visual interest than cobble setts (present on Frederick St north), and is arguably less attractive.
- ▶ Concrete pavement flags broken due to loading on pavements. Patchy uneven crossing surface in north-south direction over Thistle St east reduces accessibility.

PLACE FUNCTION: 12 QUALITY CRITERIA

K: HANOVER STREET [NORTH]





Narrow pavements and uneven road surfaces. Car parking prioritised over sufficient pavement space and pedestrian priority.

Outdoor seating, views to Scott Monument to south, and active frontages.

Wide pavements help accommodate high footfall.

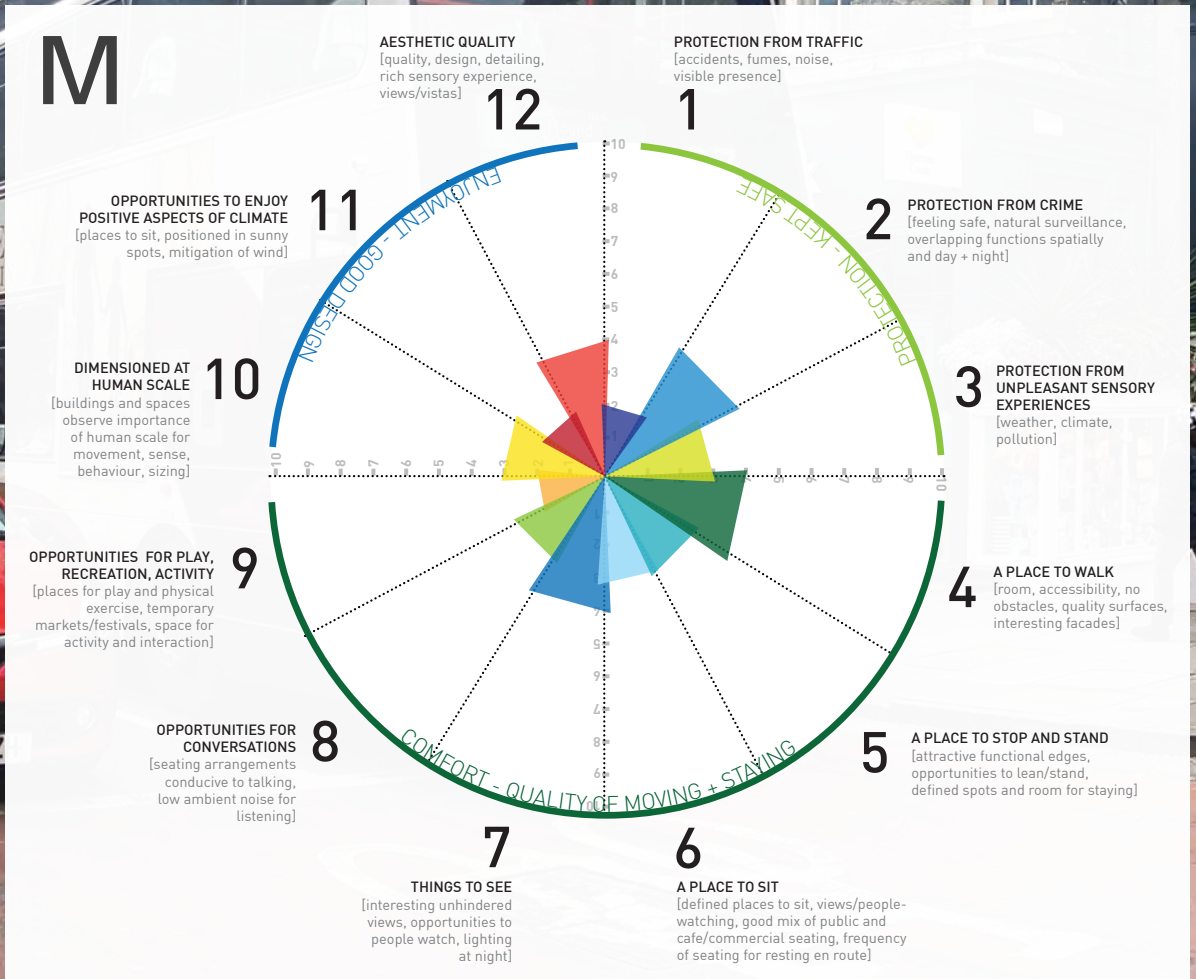


Long queues of traffic and buses dominate the street, create barrier between east and west pavements, cause noise and pollution, and give sense street is for traffic not people.

No crossing east-west over Hanover St toward Thistle St despite popularity of this route.

PLACE FUNCTION: 12 QUALITY CRITERIA

HANOVER STREET [SOUTH]





1. Protection from vehicular traffic

- ▶ Relatively wide pavements.
- ▶ Signalised pedestrian crossings at George St, Rose St and Princes St junctions with Hanover St aid pedestrian movement.
- ▶ Vehicle dominated street, as a key arterial route north-south from The Mound and Old Town toward New Town and the bus station.
- ▶ Long waiting times at signalised crossings for pedestrians, and congestion on pavements due to large crowds building up due to this prioritising of vehicle movement over ease of walking.
- ▶ Heavy traffic, large numbers of buses, and associated noise and pollution. Visual domination of vehicles in the street environment.
- ▶ Frequent loading by large lorries and vans into Rose St, often causing obstructions to pedestrians.
- ▶ Lack of suitable cycling infrastructure and priority.

2. Protection from crime

- ▶ Mix of land uses and functions combined with high footfall, provide good natural surveillance during day-time in particular. Presence of shops (JD Sport, Bonkers, Crabtree+Evelyn, Virgin Media, Ernest Jones, Oliver Bonas, Lakeland, McColls, Camper, Fraser Hart, Thomas Cook, Barrhead Travel, Lothian Buses Travel Shop), offices (Hanover House, Merchants Hall), and cafés (Costa Coffee, Oink, Subway, Pret A Manger, Bibi's Cakes, Starbucks) provide good day-time surveillance and activity. In particular Starbucks is open earlier than others and provides activity from early morning. Some restaurants (Bella Italia, Pizza Hut) and bars (El Barrio, Hoot The Redeemer) provide activity into the evening. Bus stops are active at most times of day, and provide additional street presence.
- ▶ Activity and natural surveillance is most prevalent during the day-time, with only a few facades providing 'eyes on the street' into the evening.

3. Protection from unpleasant sensory experiences

- ▶ Bus stop shelters provide some temporary shelter from heavy rain. Equally, recessed doorways (at TSB, Thomas Cook, Lothian Buses Travel Shop, Crabtree+Evelyn, Camper) provide some informal sheltered spots.
- ▶ Bus stops frequently over capacity and cannot shelter or accommodate all those waiting.
- ▶ No protection from heavy traffic pollution. No street trees specified or present to mitigate pollution.

4. A place to walk

- ▶ Relatively wide pavements can easily accommodate pedestrians in non-peak periods.
- ▶ Signalised pedestrian crossings at George St, Rose St, Princes St junctions help facilitate crossing the road.
- ▶ In high footfall peak periods, a combination of street clutter obstacles (poles, bins, bus stops, A frames) and large volumes of pedestrians cause pavement congestion. Many pedestrian step hazardingly into the road to pass one another, despite often busy and unpredictable traffic.
- ▶ Long waits at signalised pedestrian crossings, cause large crowds to build up on the pavements, and significant informal crossing in-between busy traffic to avoid the wait.
- ▶ Feeling of vehicle priority over pedestrian priority, with street layout designed around vehicle movement not ease of walking.
- ▶ Railings at George St/Hanover St junction restrict pedestrian movement and cause further deviation from pedestrian desire lines. Buses swing around corners encroaching on pedestrian dedicated pavement space, which the railings help mitigate. However, many pedestrians walk on the road side of the railings to better follow their desire lines, resulting in hazardous situations.
- ▶ Multi-stage crossing at Hanover St/George St results in the central traffic island over-capacity in busy periods, and a frustrating two-step crossing experience.

5. A place to stop and stand

- ▶ Some edges that accommodate stopping/standing. For example the low wall and recessed doorway at TSB, and wall to lean against at Merchant's Hall. There are also several facade steps for standing off the main thoroughfare (at Merchant's Hall, Bibi's, Bearford House, Subway, and near McColls and Starbucks).
- ▶ No defined formal public spaces for stopping and standing off the main thoroughfare.
- ▶ Busy footfall prevents stopping/standing against main shop facades due to limited space on the pavement in peak periods.

6. A place to sit

- ▶ Steps at building facades provide informal seating opportunities for short stays.
- ▶ Basement commercial seating at Milnes (35 Hanover St).
- ▶ High footfall provides opportunities for people-watching.
- ▶ No formal public seating opportunities at all. Very limited commercial seating opportunities.

7. Things to see

- ▶ Positive views of the Royal Scottish Academy and old town to the south. Some interesting, active facades for window shopping.
- ▶ High footfall enables people-watching.
- ▶ Views hindered by heavy traffic, including large numbers of double decker buses that visually dominate the street and prevent visual and physical connection between east and west sides of the street.
- ▶ No seating or space to people-watch from. The street functions as a busy thoroughfare rather than a place to spend time.

8. Opportunities for conversations

- ▶ Some wider spaces where Rose St meets Hanover St, that provide a less traffic dominated and more generous space for conversations.
- ▶ Lorries and vans frequently loading and/or turning into Rose St. This can hinder conversations or mean pedestrians need to move at short notice.
- ▶ No public and very limited commercial seating available at which to sit and have conversations. Few places to stand to have conversations due to high footfall and limited space causing congestion.
- ▶ Significant traffic noise, particularly from buses and lorries.

9. Opportunities for play, recreation and activity

- ▶ Rose St offers more opportunities than Hanover St, due to the additional space and less traffic-dominated environment.
- ▶ Extremely limited opportunities for play/recreation/activity on Hanover St due to the dominance of multiple lanes of busy traffic and loading/parked vehicles, combined with a high footfall pedestrian thoroughfare with no room to stop without causing additional pavement congestion.

10. Dimensioned at human-scale

- ▶ Architectural facades offer human-scale detail/character above ground floor, and shops at ground floor offer sensory interest.
- ▶ Significant pinch points around bus stops and other street clutter in busy periods. Pavements are relatively wide but not sufficient to accommodate peak flows of pedestrians without some stepping hazardingly into the road to pass one another.
- ▶ Traffic dominance at odds with human scale facades, and visually block these. Road layout designed around vehicles and at large scale.

11. Opportunities to enjoy positive aspects of climate

- ▶ Low wall at TSB and steps on east side of Hanover St (at Bibi's, Bearford House, Subway) offer chance to perch/stand in sun in the morning.
- ▶ No outdoor public seating and very limited commercial seating. Few opportunities to stop/stand in the sun as its a busy thoroughfare.

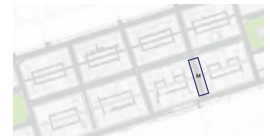
12. Aesthetic quality

- ▶ Good views of RSA, old town, and glimpse views down Rose St.
- ▶ Poor quality materials, including broken concrete slabs. Poor division of street carriageway between vehicles (dominant) and pedestrians.

PLACE FUNCTION: 12 QUALITY CRITERIA

M: HANOVER STREET [SOUTH]





Low walls/recessed steps at TSB provide some informal opportunities for staying/standing.

Bus stops create pinch points by significantly narrowing the available pavement.

Heavy footfall could be built upon to foster public life, if adequate space provided to allow stopping/staying.

Steps provide informal seating/standing opportunities off the main thoroughfare. Some seating at Milnes.



Busy traffic creates visual and physical barrier between east and west side of street.

Phone boxes, bins, poles and other street clutter reduce available pavement width.

Vehicles park/load onto the pavement, causing cracked slabs.

Low walls/recessed steps provide some informal opportunities for staying/standing.

Active, interesting frontages provide window shopping opportunities / sensory interest

PLACE FUNCTION: 12 QUALITY CRITERIA

GEORGE STREET
[HANOVER STREET TO ST ANDREWS SQUARE]





1. Protection from vehicular traffic

- ▶ Wide pavements lined with parked cars buffer pedestrians from moving vehicles. An alternative buffer (e.g. trees/seating could also be used).
- ▶ Very dominant visual presence of traffic and queued buses due to large numbers of parked cars in 3 long strips down the street (centre, and adjacent to both pavements), in addition to two heavily trafficked moving vehicle lanes, frequently blocked with stationary buses and cars queuing for the lights. This creates 5 'lanes' of traffic total.
- ▶ Cars and vans observed parked for long periods in 'loading only' bays. Inefficient, car-focussed use of street space.
- ▶ Dashed cycle lane observed to be consistently driven in by cars, offering little perceived protection to cyclists.
- ▶ Hazardous crossing conditions for pedestrians mid-street (between parked cars/queued buses).
- ▶ Use of sunny north side of street primarily for parking rather than positive microclimate to benefit public life.

2. Protection from crime

- ▶ Mix of overlapping functions. Daytime activity from a range of offices, banks (Natwest) and shops (Lakeland Plastics, Kuon travel agent) in daytime use. Day into evening activity and natural surveillance from cafés/restaurants (Amarone, Hard Rock Cafe, The Dome, Undercroft Cafe at St Andrew's and St George West Church, Burr&Co., The Printing Press) and bars (Le Monde, All Bar One).
- ▶ A number of banks/offices have passive or inactive facades and limit natural surveillance, particularly at the east end of this street section closest to St Andrew's Square.

3. Protection from unpleasant sensory experiences

- ▶ Building overhangs at St Andrews and St George West church, The Printing Press and The Dome provide cover from rain.
- ▶ Doorway porches also provide some limited shelter at Lakeland Plastics, Hard Rock Cafe, Burr&Co., and 10, 22, and 24 George St.
- ▶ Tree within recessed semi-public area adjacent to St Andrews & St George West church provides some shelter from wind and light rain, and nearby road noise.
- ▶ Exposure to wind. Particularly prevailing south-westerly winds in main street due to east-west street orientation.

4. A place to walk

- ▶ Wide pavements on both sides, some active interesting frontages (especially to west end of this street section).
- ▶ Wider recessed semi-public spaces adjacent to St Andrews & George West church provides opportunity for larger groups (e.g. coach tours) and those smoking/on phone to wait off main pavement, easing congestion.
- ▶ Obstacles (poles, A frames, parking meters) reduce effective pavement width.
- ▶ Hard for pedestrians to cross between parked cars/queued and often heavy traffic and buses.
- ▶ Cracked concrete pavement slabs (particularly near road edge) may cause trip hazard.
- ▶ Crossing layout at Hanover St/George St and St Andrew's Square/George St junctions prioritise vehicles over pedestrians. Limited pavement space, railing barriers, frustrating multi-stage crossing for pedestrians.

5. A place to stop and stand

- ▶ Wide pavements accommodate stationary pedestrians without causing congestion.
- ▶ Occasional semi-public steps on both north and south sides of street (at The Dome, and church) create opportunities for short-term standing or pausing.
- ▶ Recessed semi-public spaces adjacent to church provides sunny wider nodal spaces to pause off thoroughfare.
- ▶ No nodal spaces to stop on south side of street.

6. A place to sit

- ▶ Occasional steps (at The Dome, some very low steps at St Andrews & George West church) offer some limited informal seating opportunities.
- ▶ Commercial outdoor cafe seating at All Bar One, Le Monde, The Dome, Hard Rock Cafe, Burr&Co., The Printing Press.
- ▶ Privately owned bench outside church on north side of street treated as public seating and frequently used.
- ▶ Very limited informal, and no truly public formal seating means few options to stop and rest en route for those with additional accessibility needs.
- ▶ Only semi-public bench present on street in frequent use, indicating demand for additional public seating.
- ▶ Dominance of traffic reduces potential long views.

7. Things to see

- ▶ Long views north to Fife, south to Royal Scottish Academy from Hanover St/George St junction (though limited by traffic). Partial views to St Andrew's Square green space (limited by traffic).
- ▶ Busy footfall for people-watching, especially during day.
- ▶ Multiple rows of parked cars/vans/tourist coaches and frequent high volumes of buses partially block long views and create visual barrier between north/south sides of street.
- ▶ Limited public or informal seating from which to people-watch.
- ▶ Some active facades provide visual interest but also many inactive.

8. Opportunities for conversations

- ▶ Outdoor commercial cafe/bar seating in clusters at All Bar One, Le Monde, The Dome, Hard Rock Cafe, Burr&Co., Printing Press.
- ▶ Steps at The Dome and recessed pavement off main pedestrian thoroughfare at St Andrews&St George West church offer informal spots for short stays/conversations further from traffic/noise.
- ▶ Limited public spaces with seating for longer conversations except those that are commercial/privately owned.
- ▶ Noise from cars, buses and busy traffic. Engines often idling whilst in queues waiting for the lights, particularly on north side of road heading east. Creates poor environment for conversations.

9. Opportunities for play, recreation and activity

- ▶ Wide pavements allow for running/stopping for chance meetings.
- ▶ Temporary use during August for Fringe. Potential for more year-round activities/temporary events if parking reduced to give more space to pedestrians/events/public realm/market uses.
- ▶ Limited year-round outdoor events/activity at present. Heavy traffic and frequent buses may need to be reduced/redirected.

10. Dimensioned at human-scale

- ▶ Steps at The Dome offer human-scale opportunity to sit away from road and noise, wide pavements accommodate pedestrian movement, some interesting human-scale facades at ground level.
- ▶ Dominance of vehicles in street environment (moving or parked). Frequent queues of large buses. Large vehicle scale street layout at Hanover St and St Andrews Sq/George St junctions.

11. Opportunities to enjoy positive aspects of climate

- ▶ Steps on north side provide informal seating in daytime sun.
- ▶ No formal public or commercial seating on sunniest north side.

12. Aesthetic quality

- ▶ Cobbles in good condition in central strip, interesting architectural features and facades, several sensory-rich active frontages.
- ▶ Broken concrete pavement slabs, views limited by vehicles, visual and functional dominance of parked cars and buses/coaches.

PLACE FUNCTION: 12 QUALITY CRITERIA

N: GEORGE STREET [BETWEEN HANOVER STREET AND ST ANDREWS SQUARE]



Poor visual and physical connection between north and south side of street due to heavy traffic/parked vehicles.

Interesting architectural facades, and private planters gives visual interest.

A need for more bike racks. Currently existing railing infrastructure used due to lack of proximal options.

Recessed semi-public gathering space offers opportunity to stand away from main pedestrian thoroughfare.



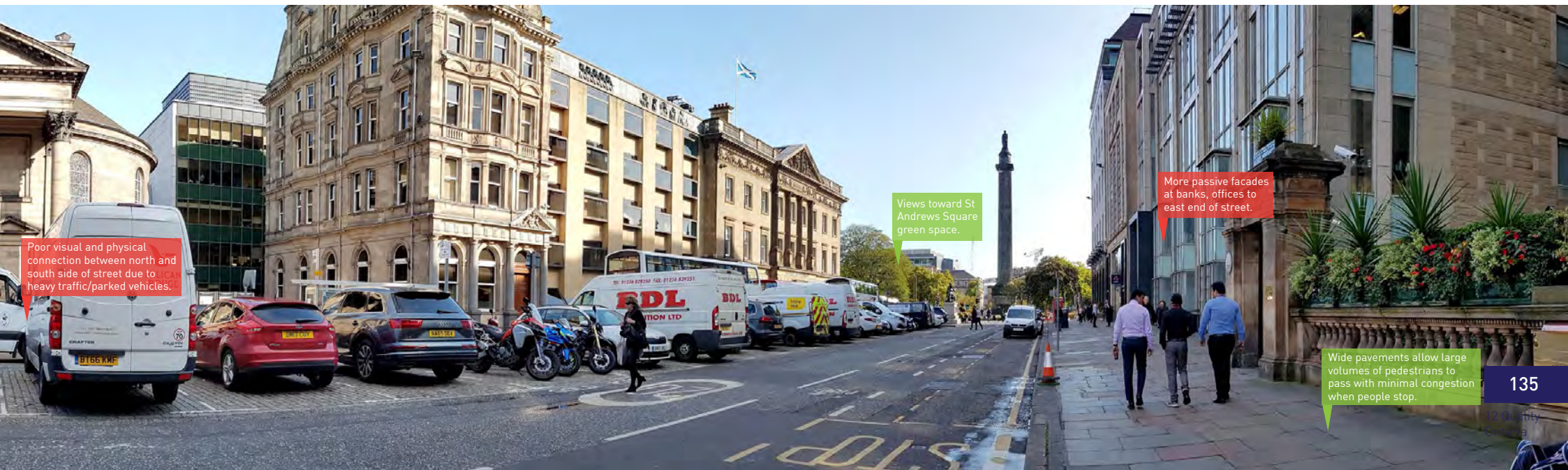


Privately owned but publicly perceived bench in frequent use.

Low steps used as pausing point to stand, sit for short periods.

High volume of buses frequently queue down street in busy periods, obstructing street for other vehicles and visual/noise impact on pedestrians.

Hard for pedestrians to cross mid-street due to parked cars, queued/moving buses and traffic reducing visibility.



Poor visual and physical connection between north and south side of street due to heavy traffic/parked vehicles.

Views toward St Andrew's Square green space.

More passive facades at banks, offices to east end of street.

Wide pavements allow large volumes of pedestrians to pass with minimal congestion when people stop.

CONCLUSION

This Public Life Street Assessment has involved the gathering and analysis of data relating to pedestrian movement dynamics, behavioural activity, and the quality of place that the George St area currently presents.

This information can be used to input into the design process when considering improvements to be made to the George St area. It can be also used as an evidence base or 'baseline' for later comparison of the impact that any changes to the street environment have had 'post-occupancy', by conducting a similar study in the future. We hope this Public Life Street Assessment provides useful information that can input into positive changes or improvements for the George St area and how pedestrians utilise and experience these street spaces.

Together, the range of different studies have lead to a number of key conclusions:

- **There is a general need to improve pedestrian priority and opportunities for public life. This could be achieved by reconsidering the balance of street space provided for vehicles (moving or parked) to pedestrians and cyclists.** Improvements to achieve this might include; wider pavements to accommodate existing high footfall, more fluid pedestrian movement at junctions to better meet desire lines, nodal spaces with seating and trees for rest stops (increasing accessibility and opportunities for public life), wider spaces for gathering/markets/events along the currently highly linear pavement/street spaces (creating character areas to aid navigation and encouraging public life), and improved pedestrian connectivity between opposite facades (to create a more cohesive, walkable and vibrant public realm).
- **There is a general lack of public seating available throughout the study area.** This results in pedestrians using building facade steps/recesses as informal places to pause or rest. A lack of frequent, and plentiful public rest spots/seating reduces the accessibility and walkability of the public realm for the most diverse range of pedestrians. It also misses opportunities for increasing public life.
- **The pedestrian-priority approach taken at Castle St is generally successful in terms of public life. Lessons could be learned from Castle St and replicated/improved upon elsewhere on George St.** The introduction of additional pedestrianised and shared space street sections would improve walkability and allow use of the full street width for more diverse activities, events and public life. This approach may work particularly well to the west of George St where there is less traffic. With reconsideration of existing bus routes this approach could more boldly be taken along the full length of George St to create a street vibrant with pedestrian and public life, whilst integrating and promoting cycle infrastructure and some limited vehicular access. Hanover St is a busy vehicular thoroughfare and could still function north-south as a key arterial route, including bus stops at the intersection with a more pedestrian-focussed George St.
- **Hanover St (south) experiences the highest footfall in the study area and functions as a necessary movement route.** Due to a combination of high peak footfall, street clutter, insufficient pavement space at rush hour, and lack of pedestrian priority at crossing points, the pedestrian street infrastructure is often over-capacity or congested. There is a demonstrable need for pedestrian movement to be better facilitated by the street layout.
- **There is a need to improve conditions for east-west pedestrian movement along Rose St and to better connect sections of Hill/Young/Thistle St.** Introduction of pedestrian crossing infrastructure over N Castle St, Hanover St and Frederick St at Hill/Young/Thistle St is needed facilitate existing pedestrian desire lines east-west, and more pedestrian-priority crossings with reduced wait times if moving east-west along Rose St over Frederick/Hanover St.
- **There is a need to rethink Hanover St and Frederick St junctions with George St to better facilitate pedestrian movement,** and more closely align pavement/crossing infrastructure with desire lines.
- **It would be beneficial to rationalise street clutter. This currently creates pinch points obstructing pedestrian movement.** Remove unnecessary poles and phone boxes. Consider repositioning bus stops and bins that currently create pinch points on the pavement (e.g. bus bulbs to replace bus stops within existing pavement thoroughfare). This will improve walkability for pedestrians by reducing obstacles to movement.





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