



GEORGE ST: PUBLIC LIFE STREET ASSESSMENT

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



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:

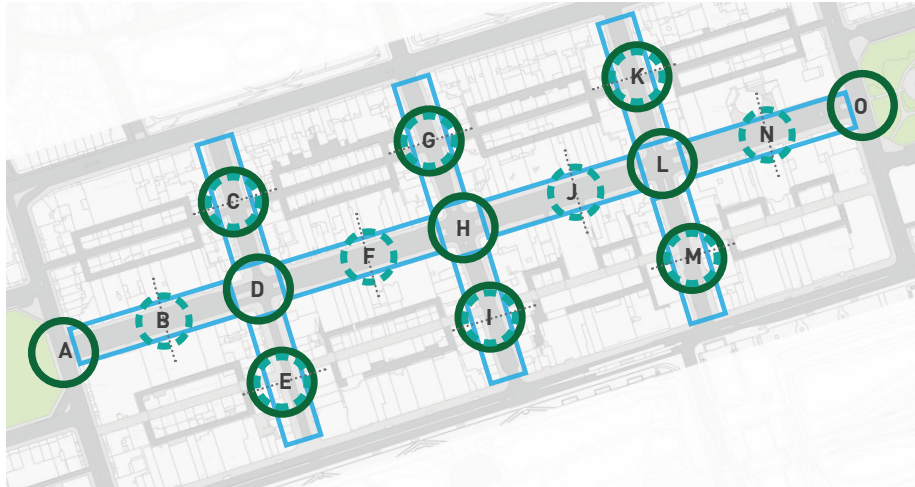
- **Tracing studies (revealing pedestrian movement + desire lines)** at 11 locations, 10min study, at 8am, 12.30pm, 5pm on each of 3 research days.
- **Pedestrian count studies (footfall volume and direction)** at 10 locations, 10min study, at 8am, 12.30pm, 5pm on each of 3 research days.
- **Behavioural 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.

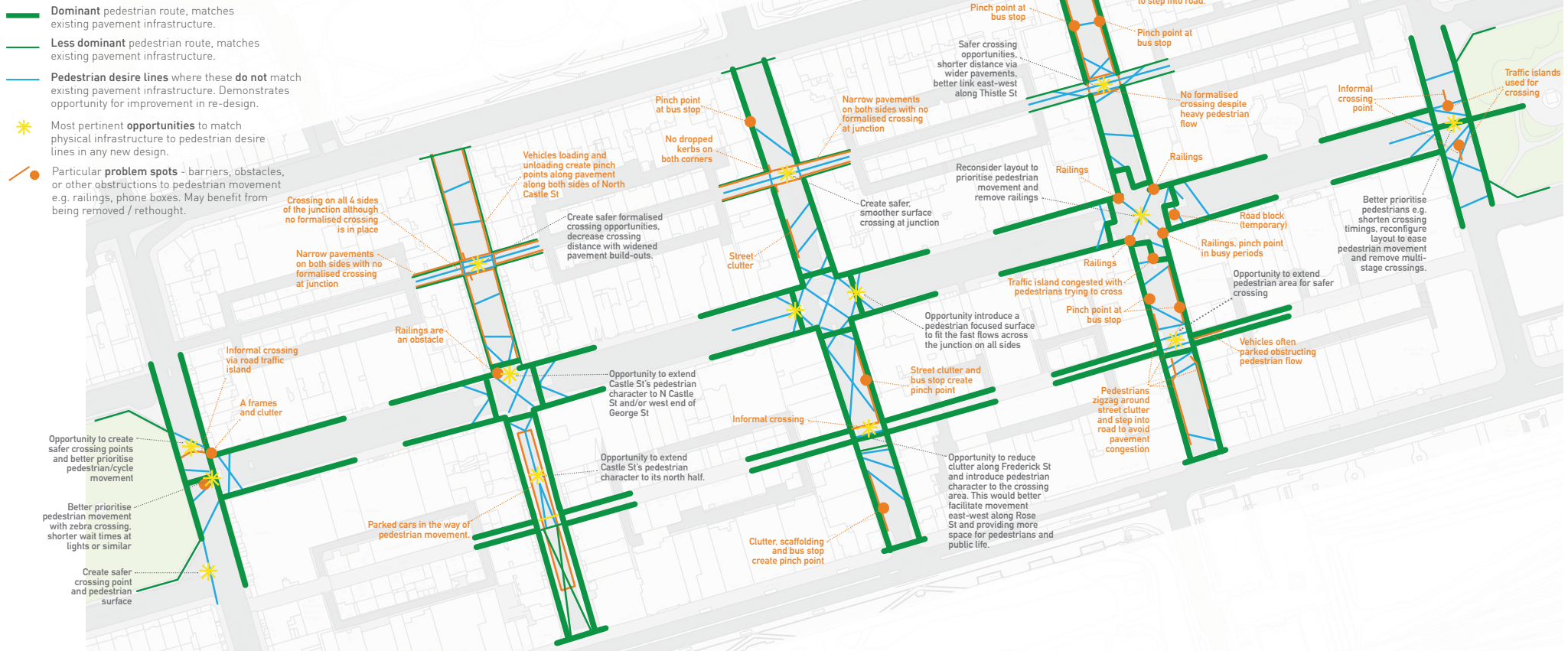
This executive summary highlights the key findings from this research, and the four research methods used to investigate these themes (tracing studies, pedestrian counts, behavioural mapping and place function assessment). It is followed by individual, more detailed sections showing the full data collected 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



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.

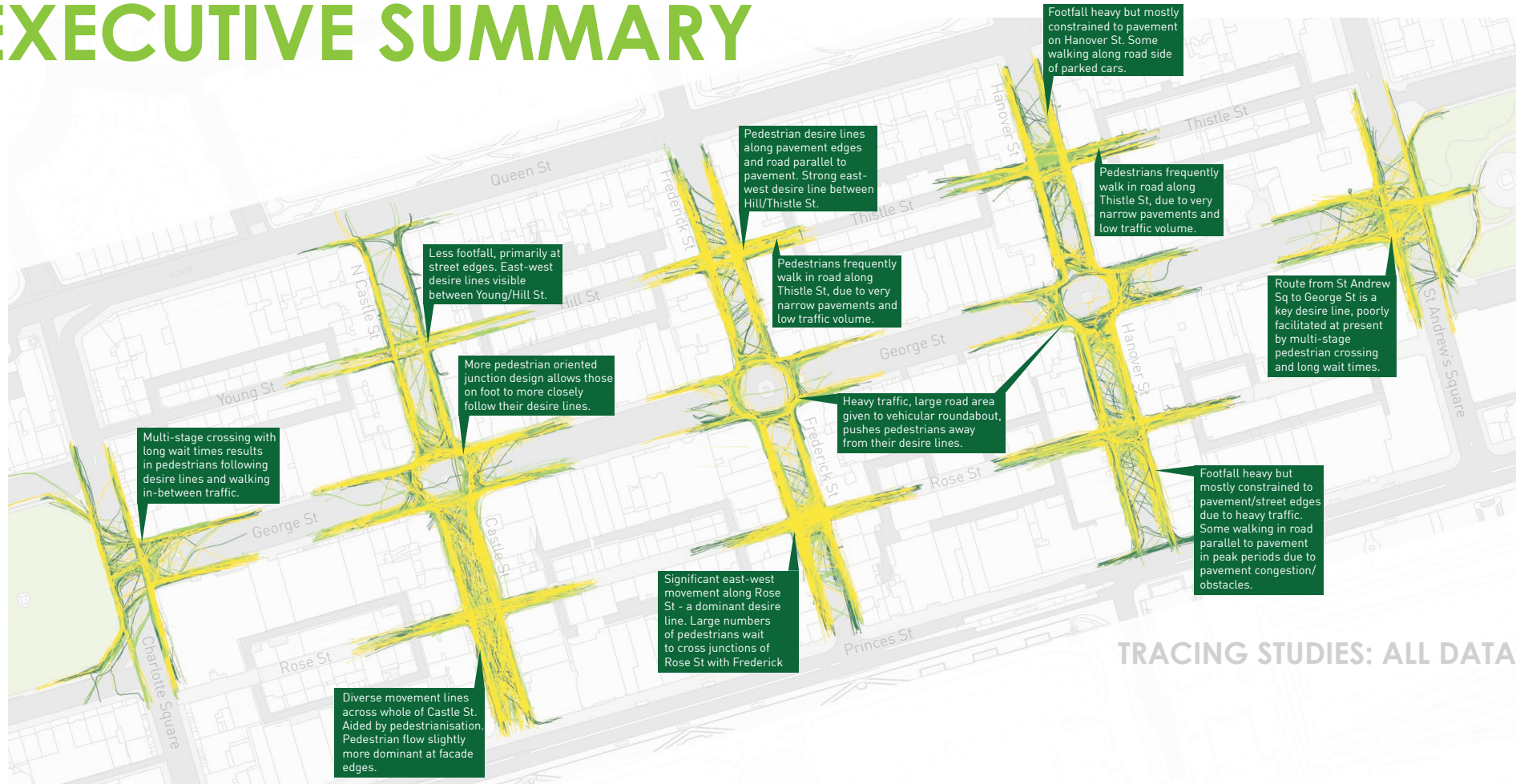
Key findings from tracing studies included:

- **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.

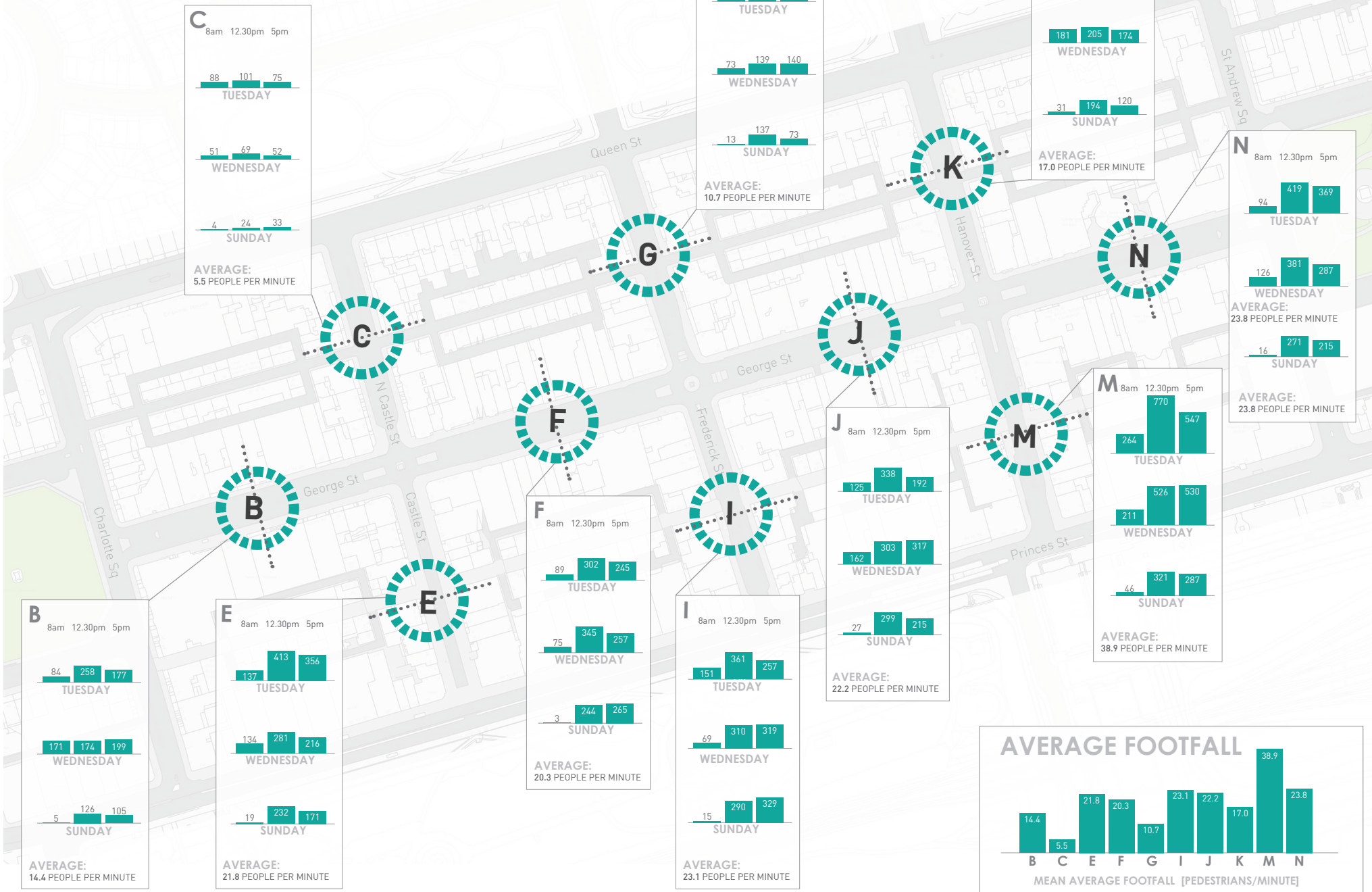
EXECUTIVE SUMMARY



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

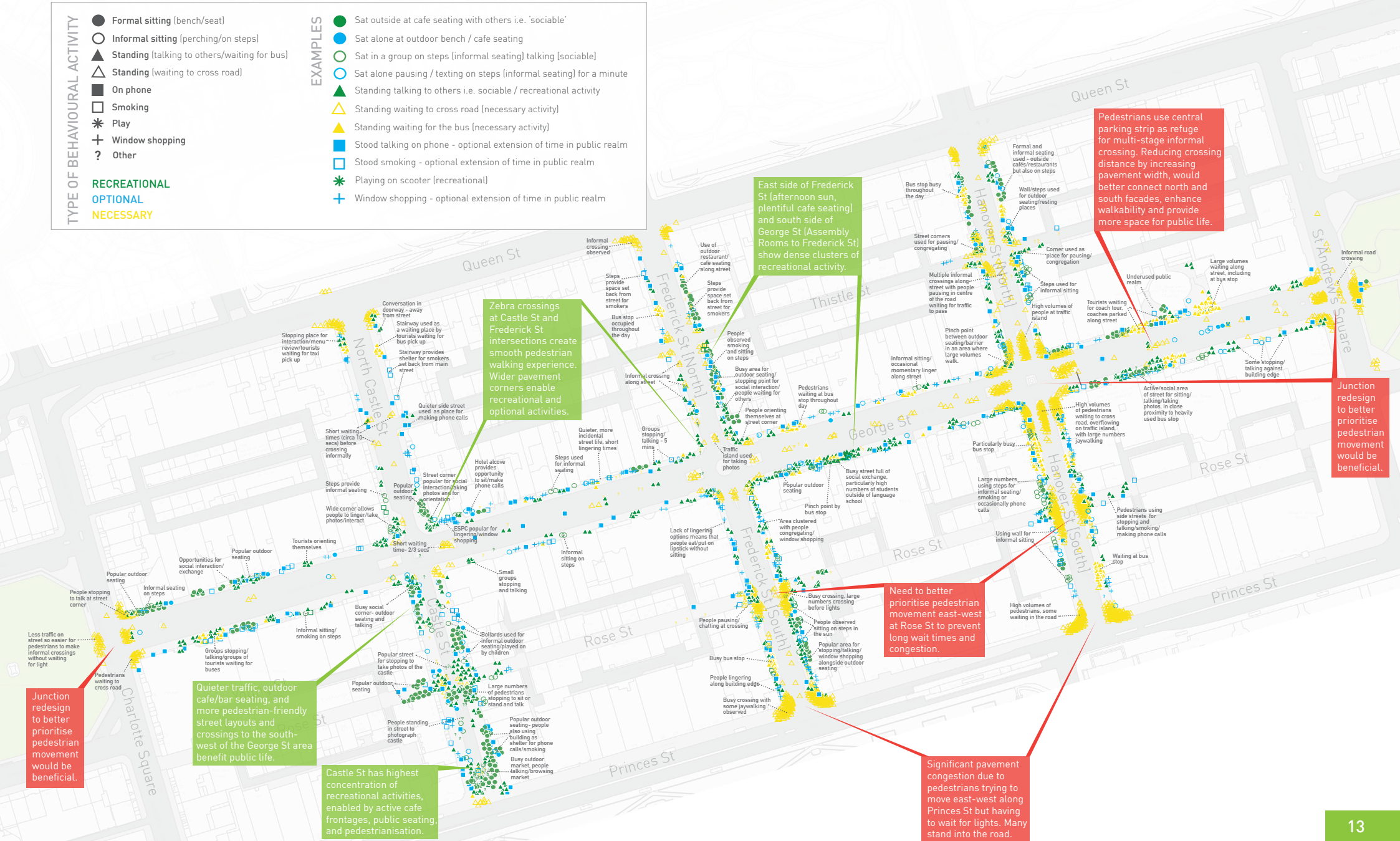
TYPE OF BEHAVIOURAL ACTIVITY

- 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



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.

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.

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

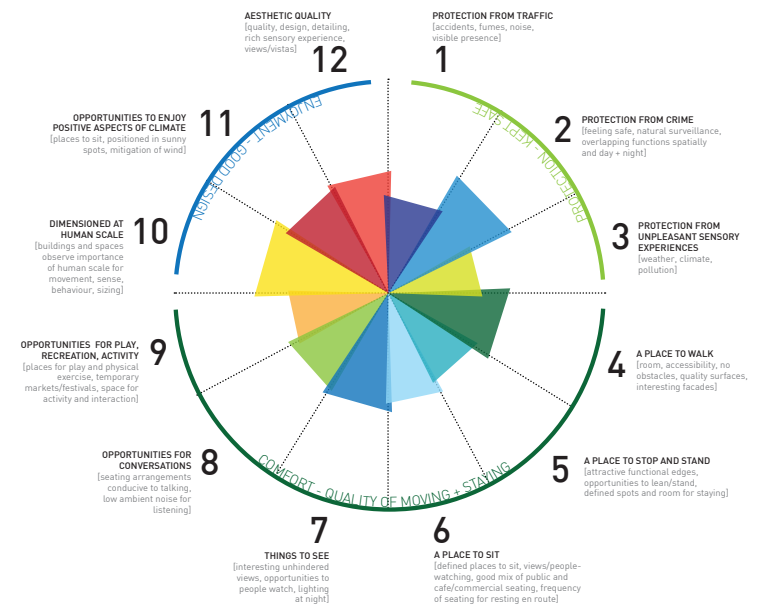
to the east and west of this thoroughfare to create a more conducive setting for public life.

- **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

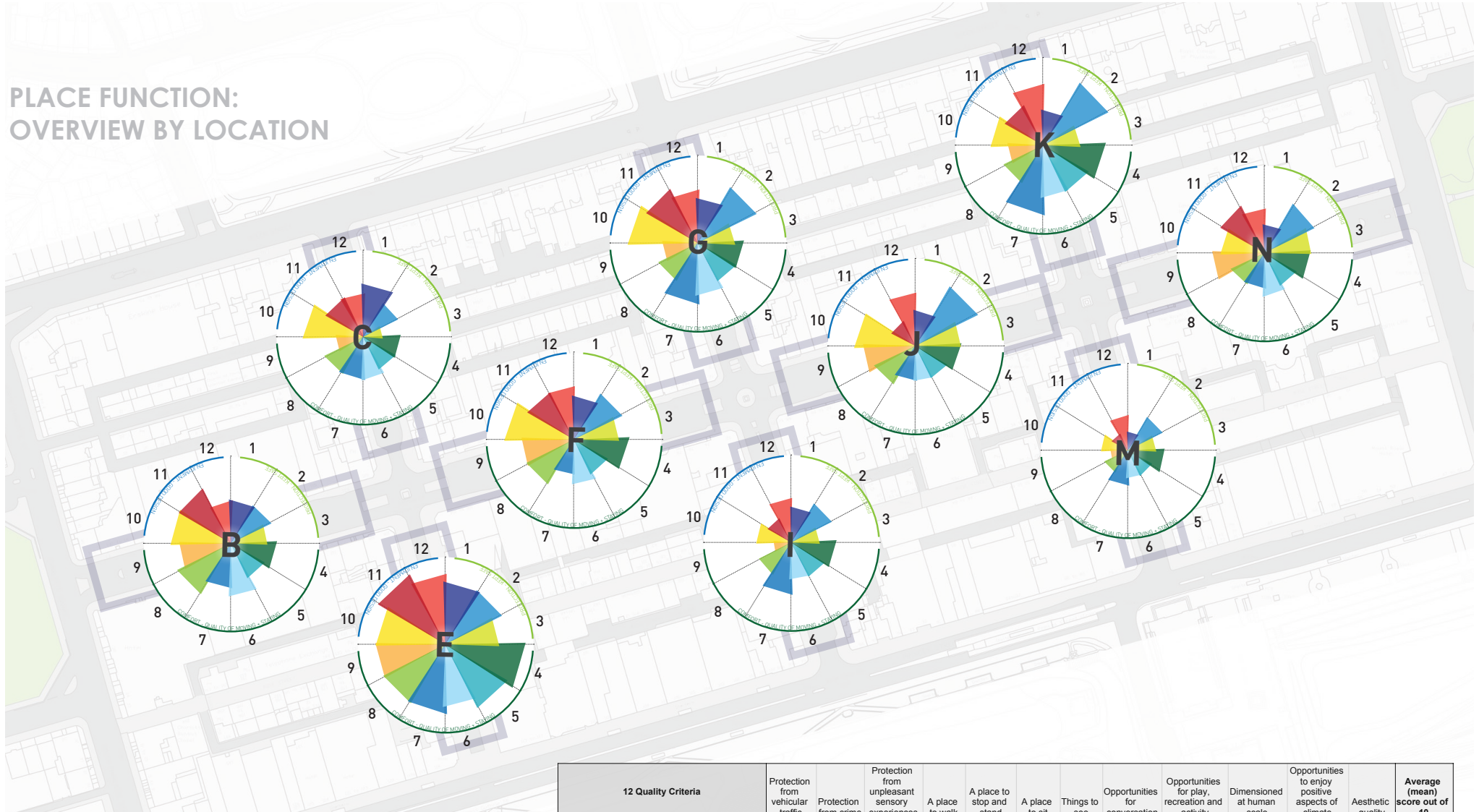
route in most cases. On busier streets (such as Hanover St and Frederick St south), high footfall also makes stopping to stand for even brief periods a challenge without causing pedestrian congestion on the pavement thoroughfare.

- **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).





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