

# Transport and Environment Committee

10.00am, Thursday, 3 November 2022

## George Street and First New Town – RIBA Stage 3 Design and Operational Plan update

Executive  
Wards  
Council Commitments

Executive  
11 – City Centre

### 1. Recommendations

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- 1.1 Transport and Environment Committee is asked to:
  - 1.1.1 Approve a set of final Royal Institute of British Architects (RIBA) Stage 3 fundamental design and reporting elements (Appendix 1) and agree to progress the project to RIBA Stage 4 – Technical Design;
  - 1.1.2 Note the updated principles of the proposed Operational Plan (Appendix 2), which are key to preparing the statutory road orders required to construct final project;
  - 1.1.3 Note that a procurement exercise has been undertaken to secure multi-disciplinary consultancy support to progress the next stage (RIBA Stage 4 – Technical Design), subject to approval of recommendation 1.1.1 and Sustrans assessment of the Stage 3 deliverables; and
  - 1.1.4 Note that the total project costs are now estimated to have increased from £32m to £36m, as a direct result of current inflationary and market conditions within the construction industry.

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## George Street and First New Town – RIBA Stage 3 Design and Operational Plan Update

### 2. Executive Summary

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- 2.1 George Street and the First New Town (GNT) is a public realm project that forms a key component of the Edinburgh City Centre Transformation (ECCT) strategy and delivery plan. It seeks to deliver an exceptional street environment that is welcoming and accessible for all users. Final design and operational plans for GNT follow several years of development, consultation and engagement to refine design objectives with residents, businesses and stakeholders (including the local Community Council and heritage, business, walking, cycling and accessibility groups).
- 2.2 The core elements of the proposed final developed design are presented in this report for approval, alongside a set of principles for the future operation of the First New Town streets. The proposals reflect alignment to strategic priorities (including the City Mobility Plan (CMP)) and form an integral relationship with other key city centre active travel projects including Meadows to George Street (MGS) and the City Centre West to East Link (CCWEL).

### 3. Background

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- 3.1 Edinburgh's 'First New Town' is of significant, and unique, value within the UNESCO World Heritage Site. George Street, which forms its core, is arguably the city's premier shopping street, and carries a strong appeal as a civic space and unique shopping, hospitality and visitor experience.
- 3.2 GNT is a major public realm project that aims to reconfigure the use of space in George Street and intersecting streets and squares to create an exceptionally high-quality place making environment. In keeping with the ECCT vision, the plans for GNT will make it attractive for people to visit, shop, rest, and make active and sustainable travel choices. The project will also support the Council's commitment to become a net-zero carbon city by 2030

#### **Design Principles and Concept Design Proposals**

- 3.3 Building on several years of continuous engagement and consultation, a final set of design principles and concept design proposals were approved by the Transport and Environment Committee on [19 August 2021](#). The final approved Concept

Design enabled the project to progress to the next stage in design, Royal Institute of British Architects (RIBA) Stage 3 - developed design.

- 3.4 A number of operational changes will be required to support the delivery of the GNT project to ensure that design outputs are maximised. Building on previous work, an exemplar, innovative and creative Operational Plan is critical in supporting the final design proposal. The Operational Plan is a crucial component of the project, as it proposes (in detail) the future arrangements for loading, servicing and vehicle access in the area. Initial fundamental principles of an Operational Plan (delivering pedestrian priority, through set periods of the day where the streets operate without non-essential vehicle access) were included in the report on 19 August 2021.

### **Strategic Priorities**

- 3.5 At a strategic level, GNT forms a key part of the approved ECCT and CMP strategies. For example, the ECCT strategy identifies key quiet zones where people will have priority, with vehicles given access treated as 'guests'. George Street is identified as one of these areas, where significant public realm improvements and pedestrian priority will be delivered.
- 3.6 GNT is one of the earlier programmed projects within the ECCT delivery plan, and once implemented, will make a significant contribution towards realising the vision of transforming the city centre as a revitalised, more vibrant and people focused place.
- 3.7 Ensuring people have had the opportunity to influence and shape the future of the city centre is essential to achieving a robust and sustainable design for the GNT area. In addition to observing relevant strategic consultation exercises, distinct consultation and engagement approaches for the GNT project have ensured appropriate, continuous and wide input at key stages:
- 3.7.1 Design Principles Setting stage (2016 - 2017);
  - 3.7.2 Design Objectives and Initial Concept Evaluation stage (2018 - 2019);
  - 3.7.3 Concept Design and Operational Plan Development stage (2019 - 2020);
  - 3.7.4 Final Concept Design stage (October 2020 - March 2021); and
  - 3.7.5 Stage 3 Developed Design and Operational Plan (Oct 2021 – August 2022)

### **RIBA Stage 4 Procurement**

- 3.8 The Finance and Resources Committee on [8 September 2022](#), approved procurement of RIBA Stage 4 technical design consultancy services. Faithful + Gould, appointed to deliver the Stage 3 design process, were reappointed (subject to the approval of recommendation 1.1.1 of this report and Sustrans assessment of the Stage 3 designs and deliverables).

## **4. Main report**

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- 4.1 Delivery of high-quality public realm improvements within the GNT area is essential to supporting a safe walking and cycling environment, business recovery and growth and with a focus on delivering inclusive access for all.

### **Stage 3 – Developed Design**

- 4.2 The project has reached another critical stage in its delivery programme with the completion of the Stage 3 Developed Design stage.
- 4.3 The Stage 3 process commenced in September 2021 and has developed the previously approved Concept Design principles to produce a set of technical and operational deliverables essential for progress towards commencement and completion of works on site.
- 4.4 Continued extensive consultation and engagement has been undertaken in preparing final Stage 3 design and operational proposals, especially with key stakeholders.
- 4.5 In addition, draft technical designs and considerations were presented to the Council's Urban Design Panel to seek final advice and support before finalising. The Panel were broadly supportive of the design proposals recognising, in particular, the continued positive collaborative approach, the women's safety audit and the surface water management strategy. Final comments from the Panel informed final Stage 3 outputs and will be incorporated into final detailed design and operational plans.

### **Core Elements of GNT Stage 3 Developed Design**

- 4.6 The Stage 3 Developed Design has built on the previously approved Concept Design principles which aim to reallocate and reprioritise space within the public realm to improve accessibility and active travel, make the spaces and streets more welcoming, whilst celebrating the unique heritage and architectural environment of the area.
- 4.7 This latest design stage consultation and engagement has been reinforced by a broad range of studies and assessments including: refreshed heritage impact assessment; economic impact assessment; women's safety audit; Threat, Vulnerability and Risk assessment; business/resident operations survey; and integrated impact assessment update.
- 4.8 The following core elements of the design process, which combine to underpin and reflect the previously approved concept design proposals include:
  - 4.8.1 Wider pavements (circa four metres) on both sides of George Street along the entire street length, will increase circulation space and accessibility for pedestrians. This is primarily achieved by a reduction in the road width, by removing of parking bays, which results in pedestrian crossing in all directions being more convenient, direct, safer and easier at all junctions. A designated space limit for café seating areas ensures that the pavement width remains consistent and ample;
  - 4.8.2 Landscaping will be confined to planters and low hedges, within sensitively balanced landscaped seating areas both on the north and south side of the street. This provides designated areas where people can relax or rest in comfort and safety, within a unique street environment. The greening of George Street will also compliment the Council's [Green Blue network](#)

[strategy](#), whereby the landscaped areas will also act as “rainwater gardens”;

- 4.8.3 The proposed removal of buses, and all other non-essential traffic, presents a unique opportunity to create a “European” styled cycling street within the central carriageway of the new street. The creation of a cycling street will provide a high quality approach to cycling in the First New Town area, interfacing with both CCWEL and MGS, to create a network of strategic cycling routes to the west from Charlotte Square, to the east through St Andrew Square and south via George IV Bridge. To accommodate the new cycleway, the junctions of George Street have been redesigned to provide cycling and pedestrian priority while also improving the visual setting around the central statues, helping slow down any remaining vehicle movements and reducing potential for cycle/pedestrian /vehicle conflict;
- 4.8.4 An integrated Sustainable Urban Drainage System (SUDS) has been incorporated within the design proposals. This introduction, which will be formed within the designated landscaped areas and main carriageway, will allow surface water to drain naturally via the creation of rainwater gardens, replenishing ground water and having zero impact on the capacity of existing drains and sewers. The varied landscape planting will also slow the rate of surface water as plants filter, reuse and reduce flood risks. The SUDS strategy has been developed in line with the Council’s wider [Green Blue network strategy](#);
- 4.8.5 The proposals include repositioning the James Clerk Maxwell (JCM) statue at the gateway into George Street; adjacent to the western entrance to St Andrew Square gardens. This location will create a more sympathetic and prominent position, with a commanding view of George Street where the statute can be enjoyed. Final relocation plans will be undertaken in close dialogue with the Royal Society of Edinburgh (owner) and Sandy Stoddart (sculptor) and will be subject to securing all necessary statutory approvals;
- 4.8.6 Proposed material finishes of natural stone products to the spaces, pavements and carriageway design, have been developed in close partnership with key stakeholders Edinburgh World Heritage (EWH), Historic Environment Scotland (HES) and the Cockburn Association);
- 4.8.7 Community safety, especially for more vulnerable groups, has been key in developing designs given the importance of the night time economy to the area. A women’s safety audit has been developed to create a safer first and last mile journey for women. The audit identified six areas of placemaking which should be addressed in designing safe spaces for women. As part of the audit process, a day and evening walkabout with key stakeholders, including Police Scotland, and local elected members took place and a workshop with several key stakeholders was undertaken. A copy of the findings are included in Appendix 3.

4.8.8 In addition to the Women's safety audit, a Threat, Vulnerability and Risk assessment has been completed. This is necessary due to the volume of pedestrians, wheelers and cyclists who visit George Street with the threat significantly increased during the Summer and Winter festivals. A final safety strategy, including Hostile Vehicle Mitigation measures, will be developed in line with the Council's wider community safety plans for the City Centre.

#### **Principles for a First New Town 'operational plan'**

- 4.9 Several operational changes will be required to support the transformation of the First New Town. The updated interim operational plan (Appendix 2), when complete, will form the basis of the development of the statutory notice process. Construction of the public realm improvements scheme requires publication of statutory notices which will begin during the next stage of the project.
- 4.10 Given the significant operational changes proposed, further engagement and analysis will be undertaken during the Stage 4 process. In addition, a comprehensive monitoring and evaluation framework will be established to assess the impact of any operational changes (once in place) over a 12-month period. At the conclusion of the 12-month evaluation period, operational changes will be fully assessed to determine what, if any, adjustments and/or amendments are necessary to support both the design and operational principles of the project.
- 4.11 The updated principles of the Operational Plan, aligned to the ECCT Strategy, include:
- 4.11.1 Delivering pedestrian and cycling priority, where George Street operates without non-essential vehicle access during set periods of the day but permitting blue badge access at all times. Proposed access windows will be between 7.00pm – 10.00am Monday to Saturday and 7.00pm to 12.00pm on Sundays. Criteria to be applied for access for essential services outwith servicing and loading windows and to enforce vehicle restrictions will be finalised during Stage 4;
  - 4.11.2 Preserving the use of cycling infrastructure all year-round;
  - 4.11.3 Maintaining local bus passenger services within the GNT area, including direct crossing points with George Street (but not along George Street). Final proposals will be determined by the outcome of a wider city bus network review;
  - 4.11.4 Prioritising blue-badge parking, including George Street and essential resident parking within the wider area (but not on George Street), to support access for this group of key users;
  - 4.11.5 Licensed taxis will continue to be permitted access throughout the GNT, however restrictions will be applied to George Street whereby access will only be permitted during servicing and loading windows. Taxi rank spaces will be retained on George Street and in the wider First New Town. This recognises how critical taxis are to supporting operations in the GNT area,

especially the evening/night-time economy and the key role they play in public safety. During the Stage 4 process further consideration will be given to addressing the challenge of taxi access to George Street “out with” service access windows for disabled users. At this stage in the design process, it is proposed Private Hire Cars (PHC’s) will still be able to fully access the First New Town however, in line with the adjacent Meadows to George Street project where PHC restrictions are proposed under current proposals, PHC’s will be restricted from directly accessing George Street during and out with service access windows. However, during the Stage 4n process further analysis will be undertaken to secure additional data relating to PHC operations within the wider city centre area and feedback from the PHC industry before recommending a final decision;

- 4.11.6 During the Stage 3 process, an assessment of enforcement methods currently applied to promote “pedestrian and cycling zone” spaces within Edinburgh, Scotland and elsewhere in the UK was progressed. The key outcome was the need to address current challenges associated with traditional enforcement methods, which rely on signage and lining restrictions to enforce traffic violations. At this stage, a similar enforcement method to that in place for the High Street and Grassmarket is proposed (whereby an automated bollard system will effectively control access). In addition, technology-based enforcement methods, e.g., Automated Number Plate Recognition (ANPR), will continue to be explored to assess their effectiveness to monitor any non-compliant vehicles;
- 4.11.7 The proposed introduction of a bollard-based enforcement system will also align with the need to create a safe and secure environment for all users. A final Hostile Vehicle Mitigation strategy will be developed, in partnership with Police Scotland, to align with wider City Centre Community Safety and Hostile Vehicle Mitigation measures; and
- 4.11.8 In developing a final operational plan for George Street particular consideration will be given to the location and needs of hotels and places of worship (including the Intercontinental George Hotel and St Andrew’s and George’s West Church). Further analysis and research will be undertaken during the Stage 4 process to determine an operational system which not only sustains the viability of such premises but also ensures that active travel operational and design principles are prioritised.

## **5. Next Steps**

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- 5.1 If Committee approve the recommendations in this report, the next stage is to progress and subsequently complete the development of the Stage 4 Technical Design which aligns with the RIBA Plan of Work, which sets out key processes required to deliver projects.
- 5.2 The commencement of Stage 4 is a significant milestone as it will include the promotion of all necessary statutory processes; critically are Traffic Regulation and Redetermination Orders which provide the powers to enable the construction of the

project, earmarked for 2024. It is expected that promotion of these Orders will commence early 2023.

- 5.3 During the Stage 4 process, the project team, in liaison with Procurement Services, will consider options to secure the construction expertise to deliver the project. Early contractor engagement will assist in preparing final programme and projected constructions costs ensuring the project is deliverable.
- 5.4 The Stage 4 process will also deliver the final Operational Plan.

## **6. Financial impact**

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- 6.1 As reported previously to Committee, total estimated projects costs totalled £32m. A revised costs plan was produced as part of the Stage 3 process and has estimated that, based on current design proposals and market conditions, construction costs are likely to be in the region of £30-32m with total project costs totalling £36m. This cost estimate is reflective of increases across the construction industry which has been impacted by Covid-19 and inflationary increases especially with regards to labour and material costs.
- 6.2 As part of the revised five year Active Travel Investment Programme, approved in [October 2021](#), GNT has been allocated multi-year funding up to £15.07m, funded through Sustrans Scotland Places for Everyone programme and the Council's capital programme. During the Stage 4 process, additional grant funding from Sustrans will be sought to support the final estimated project costs prior to formalising any final construction start date.
- 6.3 Multi-disciplinary consultancy fees for Stage 4 will be 100% funded by Sustrans, subject to final approval of the end of the Stage 3 process.
- 6.4 The project management team will also be 100% funded from the Sustrans (agreed in principle and to be confirmed through the terms of the final Legal Agreement currently being developed).
- 6.5 At this stage in the process, a further capital budget allocation from the Council will be required to deliver the project in full. This could be in the region of up to £10m. Given the ongoing pressures on budgets caused by inflationary increases and supplier chain issues, it is proposed that the Active Travel Investment Programme will be reviewed to reflect these changes. This will require a prioritisation of the existing programme, which will be presented early in the new year.

## **7. Stakeholder/Community Impact**

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- 7.1 The input of stakeholders, including local residents, key stakeholder groups, businesses, interest groups, people with protected characteristics and the general public, has been critical in delivering design and operational proposals to date.
- 7.2 In arriving at a final Stage 3 design, further detailed "in depth" engagement was undertaken with key stakeholders, both during formal group stakeholder sessions organised between Autumn 2021 and Summer 2022 and, where necessary, on a one to one basis. A further local business and resident engagement exercise was



launched in Spring 2022 and publicised on the Council's Consultation Hub and via local newsletter to garner further detailed feedback on draft operational plan proposals.

- 7.3 Wider public engagement will continue via the dedicated project website.
- 7.4 A revised [Integrated Impact Assessment](#) (IIA) has been undertaken as part of the Stage 3 process and will be maintained throughout the design process. This identifies many positive impacts for people with protected characteristics, and notes where some potential negative impacts require further development.
- 7.5 During the Stage 3 process, Rettie and Co were commissioned to undertake an Economic Impact Assessment (EIA) to determine the potential economic impact of the project on the local economy. The report (Appendix 4), using UK Treasury Green Book guidelines, concludes that "in this economic impact assessment the 'full investment' option is judged to make a major contribution towards delivering the benefits associated with the strategic objectives, to deliver significant net economic impacts and to achieve a relatively strong benefit-cost ratio". Over a 20-year period the estimated cost-benefit analysis indicates a potential positive benefit-cost ratio of 2.2. This means that for every £1 spent on the project will produce economic benefits up to the value of £2.20, generating a potential net Gross Value Added (GVA) benefit to the economy of £95m. Positive economic and non-economic impacts include local job creation and sustainability, increased property values, increased visitor spend and a healthier, safer and more relaxed urban environment.
- 7.6 The project will create a significant number of construction jobs from 2024 onwards and, in turn, create opportunities for local suppliers and businesses. As with all major Council construction contracts, community benefit clauses will be included in any contracts aiming to secure benefits such as local apprenticeships and training opportunities.

## **8. [Background reading/external references](#)**

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- 8.1 George Street Experimental Traffic Regulation Order, Concluding Report and Design Principles - Transport and Environment Committee [7 June 2016](#)
- 8.2 George Street and First New Town Design Project Update - Transport and Environment Committee [5 October 2017](#)
- 8.3 George Street and First New Town – Consultation and Design Development Update - Transport and Environment Committee [16 May 2019](#)
- 8.4 George Street and First New Town Project Business Bulletin Update Transport and Environment Committee [12 September 2019](#)
- 8.5 George Street and First New Town Project Business Bulletin Update – Transport and Environment Committee [11 October 2019](#)
- 8.6 George Street and First New Town Project Update – Leadership Advisory Panel [31 March 2020](#)

- 8.7 Edinburgh City Centre Transformation (ECCT) Business Bulletin Update – Transport and Environment Committee [12 November 2020](#)
- 8.8 George Street and First New Town Public Realm Project\_Business Bulletin Update – Transport and Environment Committee [28 January 2021](#)
- 8.9 George Street and First New Town (GNT) Public Realm Project – Transport and Environmental Committee [22 April 2021](#)
- 8.10 George Street and First New Town (GNT) Public Realm Project – Transport and Environmental Committee [17 June 2021](#)
- 8.11 George Street and First New Town (GNT) Public Realm Project – Concept Design and Operational Plan - Transport and Environment Committee [August 2021](#)
- 8.12 George Street and First New Town (GNT) Public Realm Project – Business Bulletin - Transport and Environmental Committee [6 October 2022](#)

## **9. Appendices**

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- 9.1 Appendix 1 – Final Stage 3 Developed Design Plans
- 9.2 Appendix 2 – Updated GNT Operational Plan
- 9.3 Appendix 3 – Women’s Safety Audit
- 9.4 Appendix 4 – Economic Impact Assessment

**Appendix 1 – GEORGE STREET AND FIRST NEW TOWN FINAL STAGE 3 DEVELOPED DESIGN PLANS**



## MASTERPLAN

The design proposal for George Street itself has a symmetrical pattern which is repeated along the street to reflect the original James Craig masterplan for the First New Town. Staying true to these intentions will maintain the unique heritage value of the GNT project area. The pattern of each section is illustrated by the figure 1.1 below. As can be seen the design proposals for each of the four blocks on George Street have similar layouts and comprise of the same key elements. The wide carriageway and footway reflect the dimensions in the masterplan which allowed for open views of key buildings along the street. In addition, a block plan for one of the blocks is shown in more detail in figure 1.2

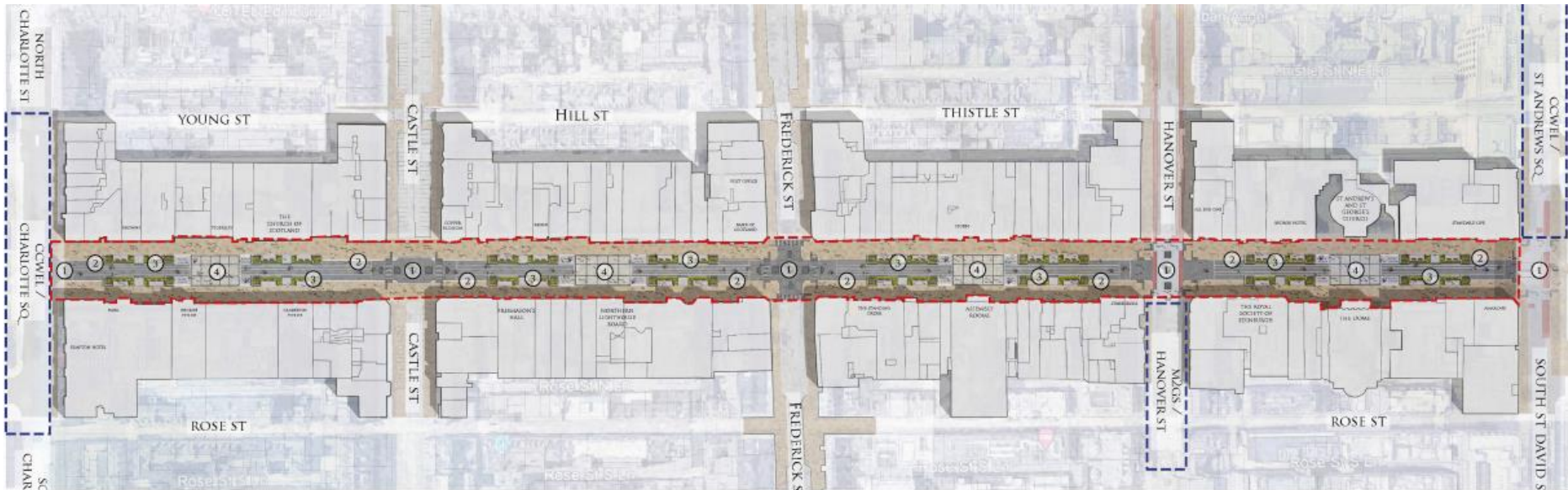


Figure 1.1

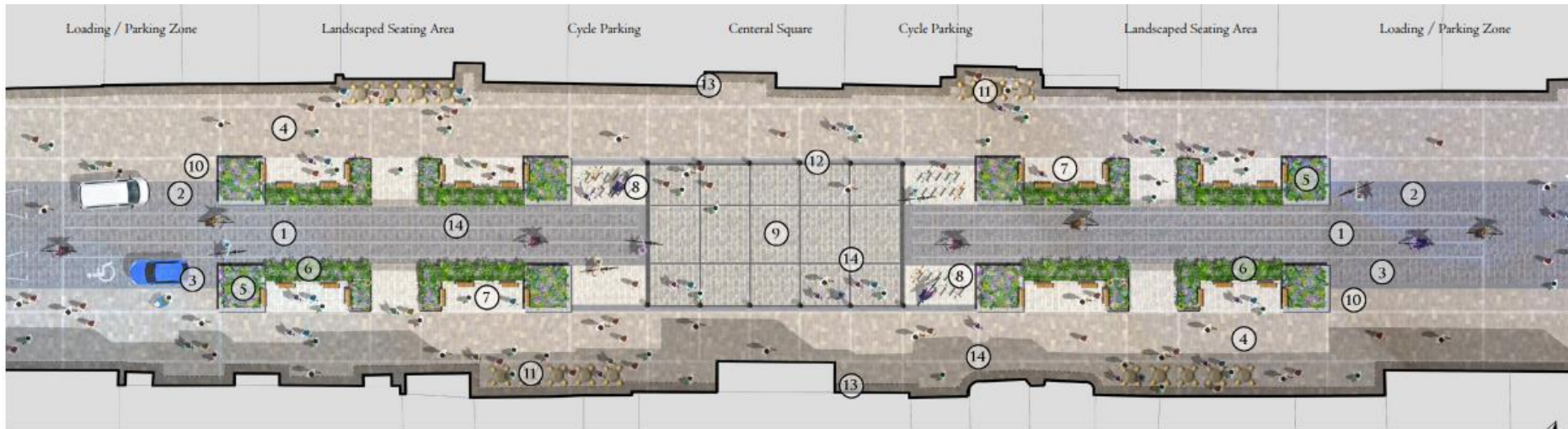


Figure 1.2 – Block Plan

- 1. cycle street
- 2. Loading area / taxi rank
- 3. disabled parking area
- 4. pedestrian movement corridor
- 5. raised planter
- 6. Rain garden
- 7. seating
- 8. cycle parking area
- 9. Central square
- 10. flex-zone
- 11. spill-out zone
- 12. bollards
- 13. indicative threshold line
- 14. feature banding

# TYPICAL CROSS SECTION – GEORGE STEET (Figure 1.3)



Figure 2-4 -Site Section 1



Figure 2-5 -Site Section 2

## FOOTWAYS

The widths of the footways on George Street will not be less than 4 m in the proposed developed design. They do vary along the length between the two squares depending on the surrounding functions and due to the building line shifting significantly along George Street. However, the defining feature of the footways is the 4 m wide clutter-free pedestrian movement corridor which will be retained in a straight line in the full length of the street. Figure 1.4 below shows the zones that make up the footways including the pedestrian movement corridor in the context of the Street. Cafes and restaurants can use the area between the pedestrian movement corridor and the buildings as a spill-out zone. Typically, this will be approximately 2.5 m wide. The dimensions will depend on the specific context and the building line.



Figure 1.4

## JUNCTIONS

The junction design proposals (figure 1.5) have been developed to reflect the anticipated usage of each junction as well as the project aspirations and key heritage requirement to retain symmetry and consistency in the layout. To help reduce the use of George Street as a vehicle thoroughfare and to simplify the junction layouts, right turning by vehicles will be banned at Castle St., Frederick St., and Hanover St. junctions. The proposals described below have been subject to extensive engagement with key CEC teams and other key stakeholders. Initial tracking checks have also been undertaken to confirm that buses and large vehicles such as HGVs can manoeuvre through the streets, but these will be further validated as part of the refinements in the Stage 4 design. It should be noted that road markings, tactile paving, traffic signs and traffic signalling design will require further development and will be defined during Stage 4. Any of these that are shown in the drawings or diagrams associated with this package should be treated as indicative.

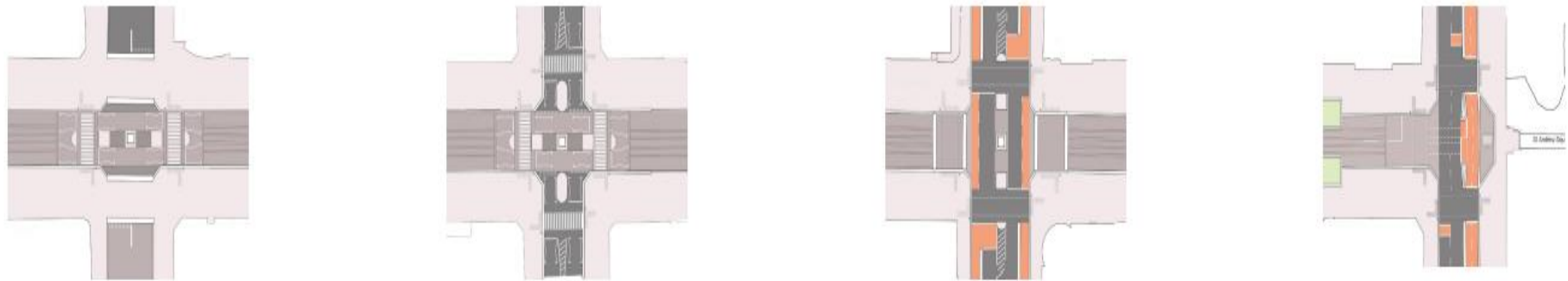


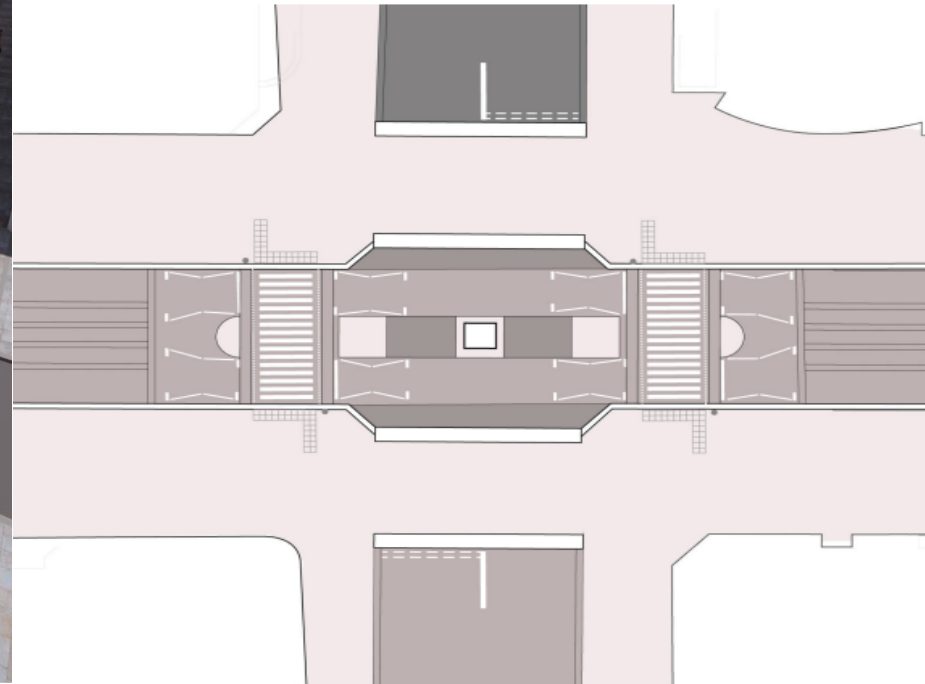
Figure 1.5

**Note** - There has been limited development of the junction at Charlotte Sq. as this will be better developed as part of the forthcoming Charlotte Sq. project which will define how the CCWEL route will pass through the square. However, it is anticipated that the design for this junction will broadly mirror the proposals presented for the junction at St. Andrew Square



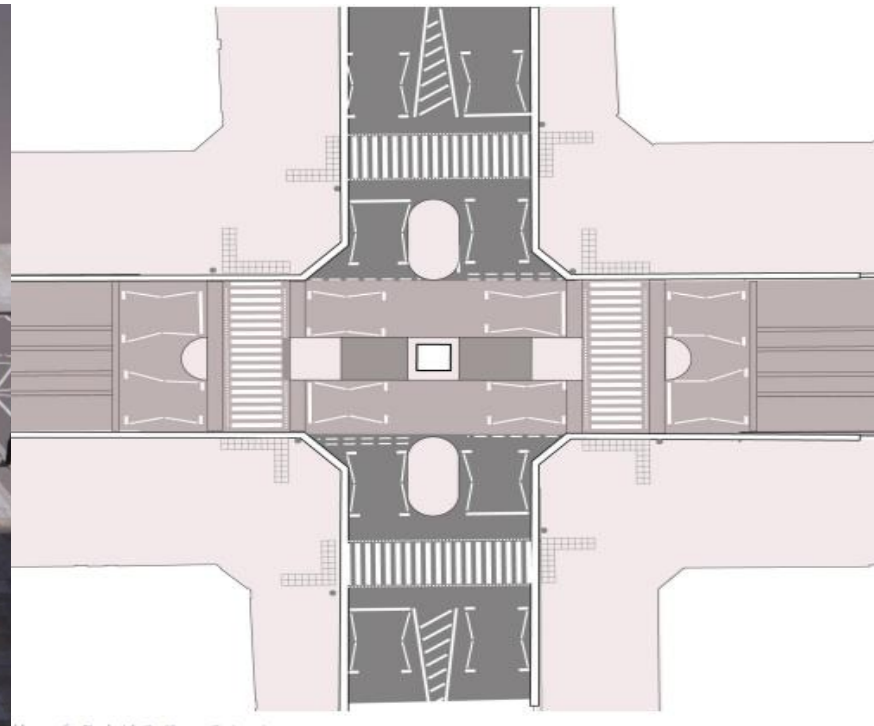
## JUNCTION OF CASTLE STREET AND GEORGE STREET

Traffic levels on and around Castle St. are currently low and are expected to be even lower by the time GNT is implemented. There is also limited scope for north-south motorised traffic movements due to there being no access to or from Princes St. at the south end of Castle St. The east-west cycle movement is a key feature through GNT as it in effect forms a section of CCWEL. As such, the proposed layout has been developed considering the east-west vehicle/cycle movement on George St. as the priority.



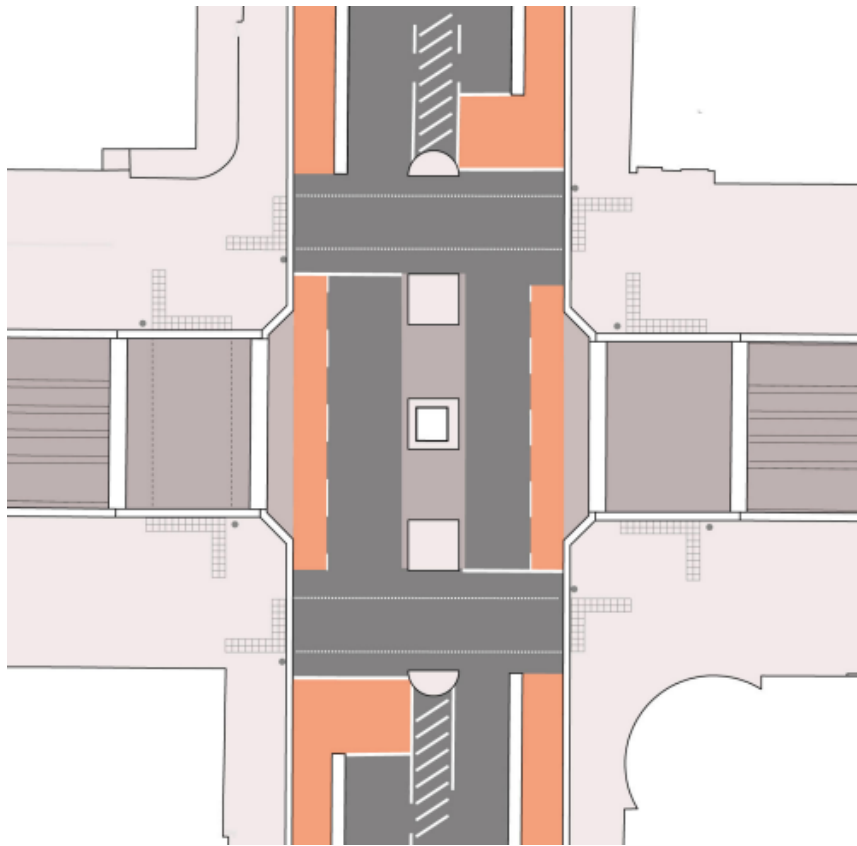
## JUNCTION OF FREDERICK STREET AND GEORGE STREET

Frederick St. is expected to remain a north-south bus route which has been a key consideration in the design. The east-west cycle movement remains key and given the access constraints on general traffic in the surrounding streets (e.g. Princes St.), it is anticipated that levels will be lower than they are now when GNT is implemented. The proposed layout has prioritised the east-west vehicle/ cycle movement on George St. whilst also including allowances to facilitate the passage of buses moving north-south.



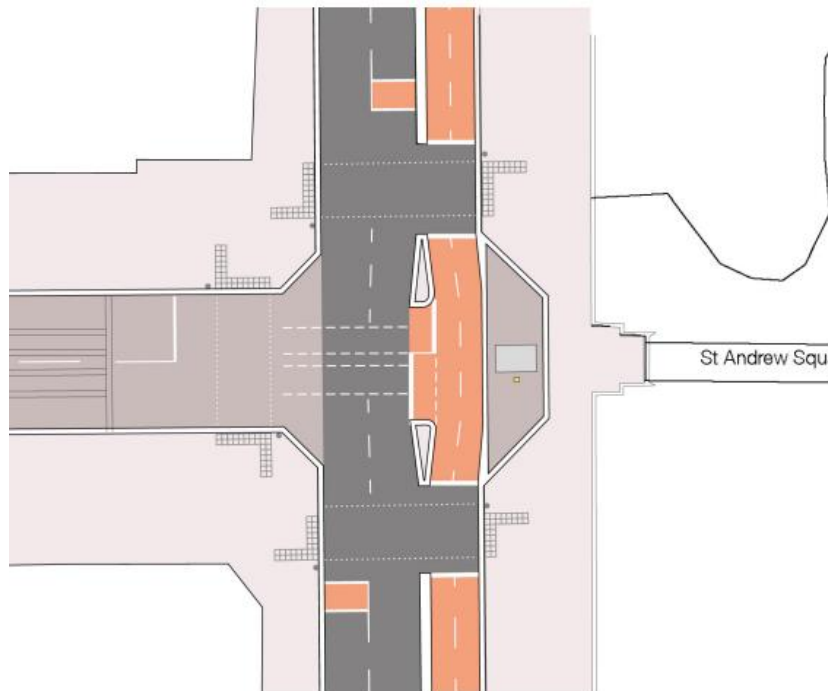
## JUNCTION OF HANOVER AND GEORGE STREETS

Hanover Street will remain a vital north-south route for buses and will become an arterial north-south cycle route following completion of the MGS scheme. It is also expected to retain some north-south access for general traffic subject to the TRO for MGS. As with the other junctions, the east-west cycle movement remains key. Given the anticipated high volume of bus traffic, the proposed layout has prioritised the north-south vehicle/cycle movement on Hanover Street whilst also including measures to ensure that east-west traffic is not unduly impeded. The junction is signalised on all arms with raised pedestrian crossings on the George Street arms to indicate priority of the north-south cycle/vehicle movement over the east-west cycle/vehicle movement.



## JUNCTION OF ST ANDREW SQUARE AND GEORGE STREET

St David Street on St Andrew Square will remain an important north-south route for buses and North St. David Street will become an arterial north-south cycle route following completion of the CCWEL scheme. It is also expected to retain general traffic travelling north-south and into/out of George Street. The design proposal has given each of the three arms equal priority to facilitate these movements. The design proposes to move the James Clerk-Maxwell statue to a position on the footway outside the west entrance to the square. Placing the statue here, rather than its current location, will simplify the operation and layout of the junction. Moving the statue has been discussed with the sculptor and the Royal Society of Edinburgh (RSE). It will also be subject to receiving planning consent.



## CYCLE STREET

The area of George Street which facilitates east-west movement of vehicles and cycles is defined as a “cycle street” (figure 1.6) in the design proposals. In line with the project objectives and principles, it has been designed as a cycle priority space where motorised vehicles are only permitted under certain circumstances. The principle of the cycle street is that motor vehicles are guests on the street and should drive at the speed of cycle traffic, but the overrun areas allow motor vehicles to pass cycles if the opposite lane is clear and ensure that two vehicles can pass each other even if the street looks and feels narrower than a typical street.



## CENTRAL SQUARES / CLUTTER FREE SPACES

The central squares are large, clutter free areas (figure 1.7) in the mid sections of each block. They have been designed to correspond to the prominent buildings in the middle of each block, such as The Dome, The Assembly Rooms and St Andrew's and St George's West church. Their primary purpose is to slow down traffic, allow for informal street crossing points mid-block and provide spaces where temporary events can be hosted. They also provide an additional operational benefit of being able to accommodate large vehicles such as HGVs stopping and unloading on the rare occasions that they are required to enter the street.



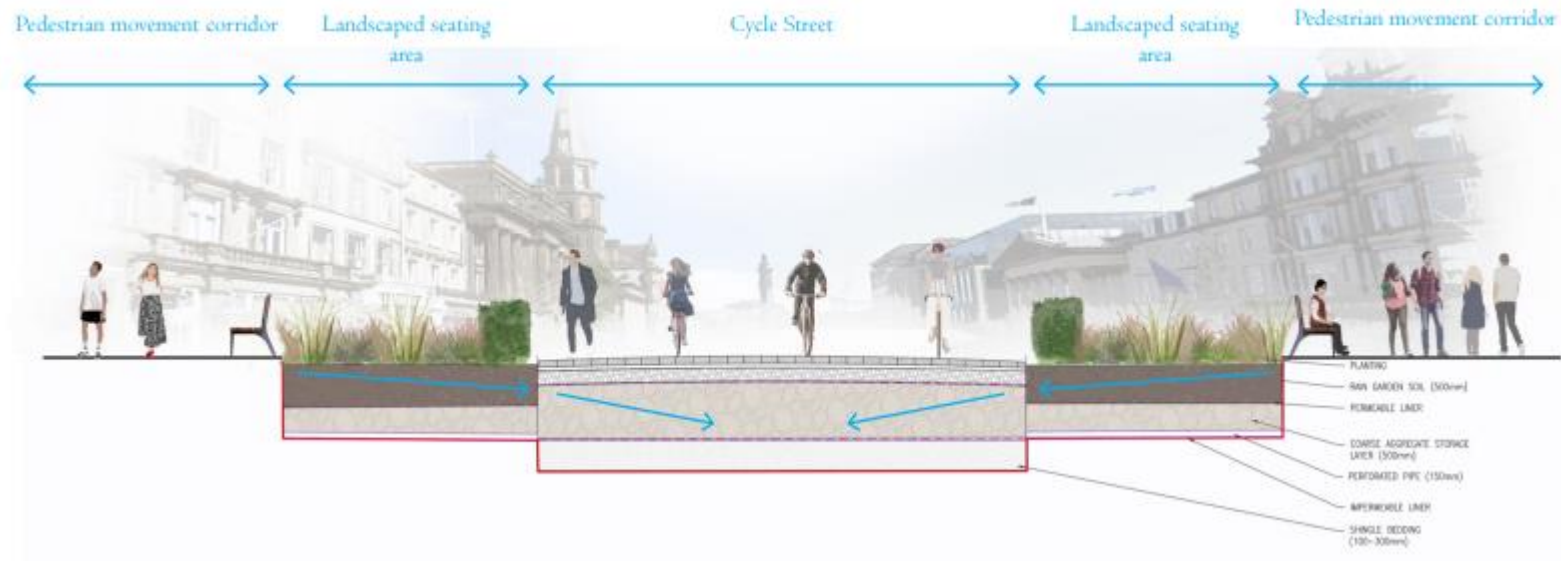
## LANDSCAPED SEATING AREAS

The landscaped seating areas (figure 1.8) are spaces in each block of George Street which are designed to provide users with an opportunity to pause and enjoy the street. These areas integrate a small amount of appropriate planting to soften the streetscape without compromising the heritage aspirations. The inclusion of this planting also allows the landscaped seating areas to function as rain gardens and contribute to the sustainable urban drainage system (SUDS) that is incorporated into the design.



## DRAINAGE

As with other aspects of the design, the drainage design proposals for GNT have been developed with a focus on George Street. The four key considerations when developing this were: 1) Integration with the unique heritage value of the GNT project area, 2) Adapting to climate change and implementing a system that reflects CEC's aspirations to respond to the climate emergency. 3) Maintainability of the system and ensuring that it would work within CEC's maintenance regime, 4) The known and unknown physical constraints of retrofitting a drainage system in a mature streetscape environment. Considering the above, an innovative solution has been developed where the storage volume is provided by a high void ratio aggregate fill below the cycle street and rainwater is transported to this by a combination of kerbs, channels and rain gardens. The proposed solution is shown diagrammatically below in figure 1.9.





## MATERIALS

The proposed materials palette for GNT has been developed from the concept design via extensive engagement with key stakeholders including heritage groups and CEC. The focussed engagement with these groups reflected the focus on remaining true to the heritage of GNT and also using materials that were maintainable for CEC. The materials palette and soft landscape specifications will continue to be developed through stage 4. The material selection for the cycle street is critical to the visual effect in George Street, that maintains and reflects its heritage value. The stage 3 design proposes that GNT uses flat topped granite setts for the cycle street. A laying pattern (figure 1.10) which uses varied unit lengths has also been specified. As with the cycle street, the material choice for the footways is very important on George Street. In line with EWH and CEC guidance for a street of this character, the Stage 3 design proposes that the footways on George Street are paved using Scoutmoor Yorkstone flags. The proposed laying pattern has also been developed and uses varied widths (figure 1.11). The surface material for the central squares is proposed by the design to be granite setts. However, to help emphasise that these spaces are distinct from the cycle street, the laying pattern and colour of the granite will be different. The reasons for the choice of this material are similar to those described for the cycle street. The colour will be a lighter shade of granite which will soften the contrast with the Scoutmoor Yorkstone of the pedestrian spaces. The setts are intended to be laid in a diagonal pattern, the detail of this will be developed in stage 4.

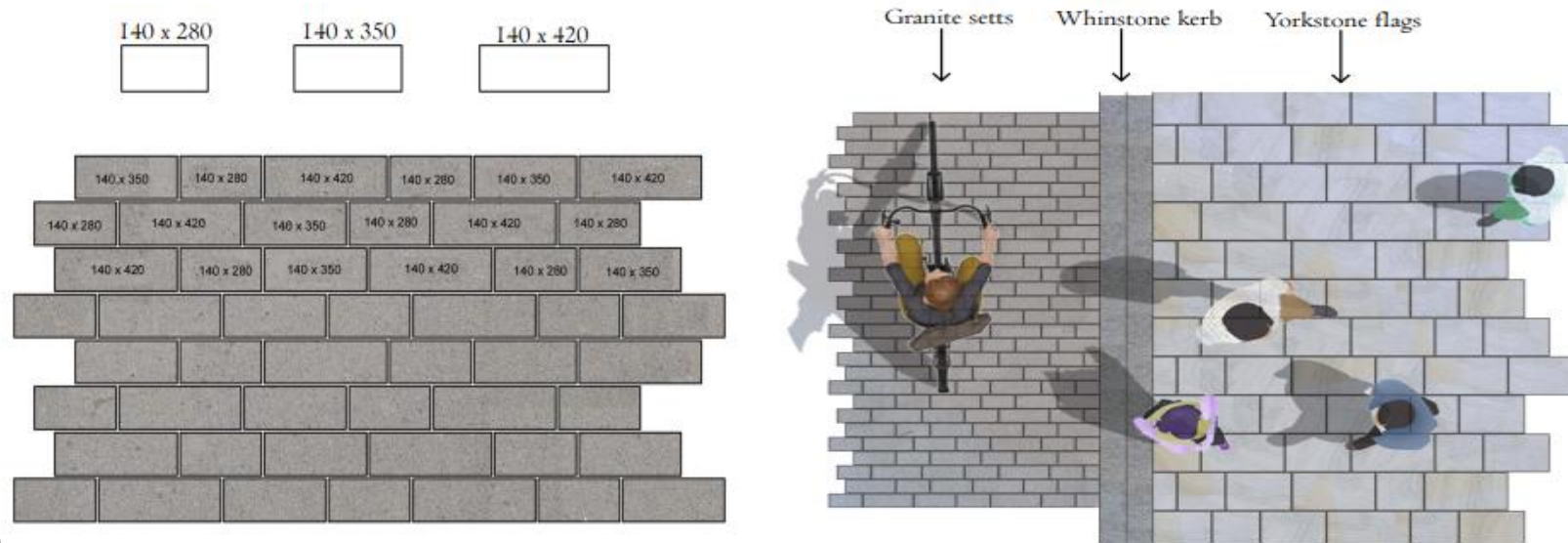


Figure 1.10

# George Street and First New Town Design Project - GNT

RIBA Stage 3 – Draft Operational Plan

The City of Edinburgh Council

October 2022



# Notice

This document and its contents have been prepared and are intended solely as information for The City of Edinburgh Council and use in relation to the George Street and First New Town Design Project.

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## Document history

Document title: RIBA Stage 3 – Draft Operational Plan

Document reference: Draft

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
0.1	Draft	AC	KF	KF	JC	July 2022
1.0	Draft Issue	AC	KF	KF	JC	Aug 2022
1.1	Revised Draft	AC	KF	AM, KF	JC	Aug 2022
1.2	Final Version	AC	KF	KF	JC	Oct 2022

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# TERMS OF REFERENCE

The following are a series of terms used throughout proceeding chapters of the report. For clarity these are defined below:

## Project Terminology

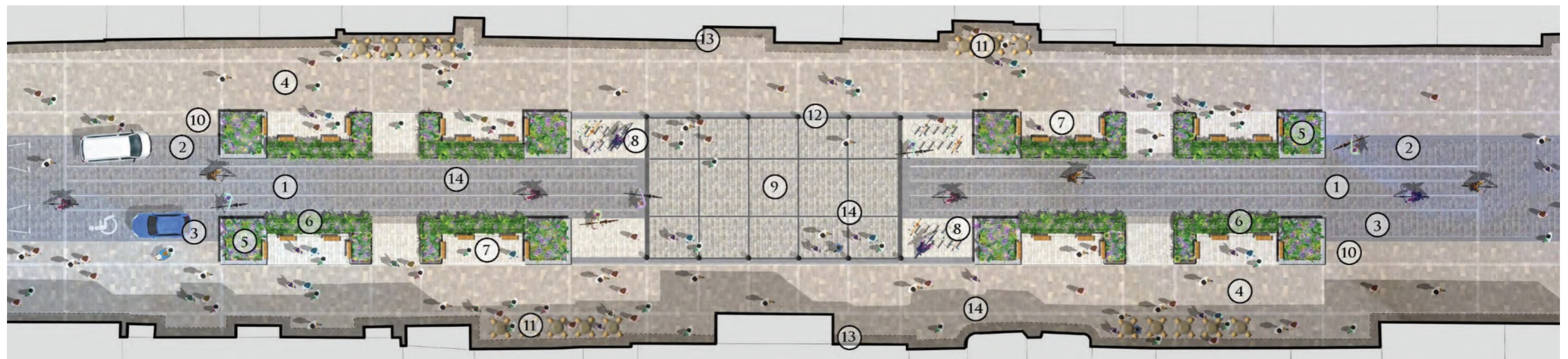
- **Edinburgh City Centre Transformation (CCT), Edinburgh City Centre Transformation Strategy (ECCT)** – City of Edinburgh Council’s current sustainable design framework. Currently estimated to deliver over £420m of benefits over a 10-year period through investment in improved public spaces, inclusive access and prioritisation of travel on foot, by bicycle and on public transport. Three key projects already underway; City Centre west to east link (CCWEL), Meadows to George Street (MGS) and George Street and First New Town Design Project (GNT). [City Centre Transformation – The City of Edinburgh Council](#).
- **Edinburgh City Mobility Plan (CMP)** – City of Edinburgh Council’s current sustainable transport strategy. It sets out the strategy for significant tram, bus network and active travel interventions from 2020-2030 and links closely with the Edinburgh City Centre Transformation Strategy. [City Mobility Plan – The City of Edinburgh Council](#).
- **Edinburgh Low Emission Zone (LEZ)** – The recently approved proposal to limit vehicles and tighten vehicle emission standards in the heart of the city centre. [Low Emission Zone – The City of Edinburgh Council](#)

## Design Terminology

The cross section below presents the standard elements and terminology used to describe the proposed Stage 3 GNT design. These include:

1. **Cycle Street** – 6m wide central carriageway with physical and visual traffic calming (14).
2. **Loading Area** - bays allocated for servicing and deliveries during permitted hours.
3. **Disabled Parking Area** – bays allocated for blue badge parking.
4. **Pedestrian Movement Corridor** – Core area of footway used for pedestrian movement
5. **Raised planter** – High quality planting areas which a
6. **Rain garden** –Planting areas also designed to collect rainwater and surface runoff.
7. **Landscaped Seating Areas** – Public seating and amenity areas connected to planters.
8. **Cycle Parking Area** – dedicated areas for cycle parking.
9. **Central Zone** – An open and clutter-free central space within each ‘block’ of George Street which has a raised surface and provides enhanced views of the key buildings on the street.
10. **Flex-zone** - A flexible space between footways and loading/parking bays which can take several functions including additional spill-out areas for businesses. Where necessary street furniture such as cycle parking, bins etc. can be installed.
11. **Spill-out Zone** – Footway zones adjacent to building frontages design for slower moving pedestrian traffic e.g. ‘window shopping’ and additionally an area in which cafes and restaurants can use for outdoor seating. On average, this is approximately 2.5m wide.
12. **Bollards** – Used to define central zones and prevent nuisance parking.
13. **Indicative threshold line** – Areas of footway detailing designed to highlight building edges.
14. **Feature banding** – visual traffic calming which narrows lanes of the cycle street carriageway using bands of visually contrasting materials.

Figure A - ‘Block’ Plan of George Street



## EXECUTIVE SUMMARY

The City of Edinburgh Council are committed to implementing their City Mobility Plan (CMP) and City Centre Transformation Strategy (CCT) policies. These set out a basis for transport and active travel interventions to improve mobility and tackle existing barriers / challenges within the city centre, key to ensuring Edinburgh achieves its commitment to become a net zero City by 2030. The George Street and First New Town Project (GNT) forms a key part of CCT and is one of the earliest projects programmed within the 10-year delivery plan. When implemented, the proposed design and subsequent transport and environmental changes would make a significant contribution towards realising the long-term vision of transforming the city centre. The project also has an integral relationship with the two other current city centre active travel projects; Meadows to George Street (MGS) and the City Centre West to East Link (CCWEL).

The GNT project aims to reconfigure the available space within the First New Town to create a more accessible, high-quality environment that prioritise the movement of people over other travel modes. Currently at the developed design stage (RIBA Stage 3), the design proposes a variety of physical interventions and improvements including.

- Removal of non-essential parking on George Street, reallocating and reducing carriageway spaces.
- Prioritising pedestrian movements, creating widened, more accessible footways.
- Creating landscape seating areas, providing space in which people can now comfortably and safely dwell.
- Redesigning George Street junctions with Castle Street, Frederick Street, Hanover Street and St David's Street reflecting each street's unique function.
- Realigning pedestrian crossings, reducing required crossing distances, timings and removing street clutter.
- Introducing new and enhanced cycle infrastructure and facilities, including the development of a 'cycle street' design for George Street, similar to other European cities.
- Providing cycling connections to adjacent cycling schemes including the Meadows to George Street and City Centre West to East Link Projects.

To support and facilitate the Stage 3 Design, the Operational Plan proposes a package of operational and management measures which would improve accessibility, promote active travel, prioritise essential public transport and manage traffic access to the First New Town, this includes.

- The removal of all bus services from George Street, retaining services on Frederick Street, Hanover Street and St David Street while repositioning current bus stops to decrease required onward walking distances to city centre destinations for bus users. Route diversions are being considered as part of City of Edinburgh Council's 'City Centre Bus Network Review' Study.
- Banning right turns on all approaches of George Street's junctions with Castle Street, Frederick Street and Hanover Street.
- Removing general traffic access to George Street. Essential vehicle access to the street, such as daily deliveries and servicing is to be managed with a daily 'access window' from 10:00am – 7:00pm Monday to Saturday and 12:00pm – 7:00pm on Sundays. Outwith these times cyclists (and other exempt users such as blue badge holders) would have priority use of the street. Taxi access to George Street is proposed to be retained during the daily 'access window', with two taxi ranks proposed in-line with current provision.
- At this stage, vehicle access to George Street outwith daily 'access window' times is proposed to be controlled using physical restrictions such as automated bollards. The design and feasibility of these measures is to be explored further during the Stage 4 Design process.

This report also highlights a number of subsequent Council and potential GNT Stage 4 work packages which will be crucial to the future development of the project and implementation of the Edinburgh City Centre Transformation Strategy going forward, this includes:

- CCT Bus Network Review
- CCT Coach Strategy
- CCT Events Management Plan
- CCT Operational Plan
- GNT/CCT – Hostile Vehicle Mitigation & Enforcement Strategy
- GNT - Construction Management Plan
- GNT / CCT Smart Permitting/Parking Management System

**Figure B – William Pitt The Younger, George Street**



# INTRODUCTION

## Project Background & Scope



# 1. Project Background

The City of Edinburgh Council are committed to implementing their City Mobility Plan (CMP), City Centre Transformation Plan (CCT), net zero City 2030 and 2050 City Vision. These aim to improve the accessibility and quality of Edinburgh City Centre environment through a programme of transport and urban realm design measures.

The incremental transformation of the city centre in the coming years will include many improvements for pedestrians and wheelers including urban realm measures such as public seating, enhanced wayfinding and crossing provision, footway widening, lighting upgrades and other safety improvements. For cyclists the introduction of priority cycle lanes, segregated and off-road infrastructure, improvements at junctions and notable road safety hotspots to prioritise people on foot and bicycle and increase cycle parking in key locations. Major new initiatives to reduce traffic congestion and emissions, prioritise public transport along key corridors and generally improve the appearance and enjoyment of public spaces and streets throughout Edinburgh's historic First New Town and Old Town.

The George Street and First New Town (GNT) Project, Meadows to George Street (MGS) Project and City Centre West to East Link (CCWEL) form the first suite of CCT / CMP Projects. Collectively these projects will tackle city centre legacy issues such as the reliance on vehicle travel, congestion, poor active travel infrastructure and pressing current issues including damaging city centre air pollution and the continued risks of climate change. MGS and CCWEL connect to and travel through George Street to provide one interconnected inner-city network of pedestrian and cycle-priority routes. The GNT Study area and connections to adjacent projects are shown below in Figure 2-1.

## 1.1. Study Area

Edinburgh's First New Town in which the GNT project sits consists of a wide range of business types and land uses, including office spaces to restaurants, bars/nightclubs, conference/cultural spaces, hotels and places of worship. A sizable percentage of properties in the area are also residential, including traditional townhouse-style dwellings and luxury apartments. As a result these require a variety of right of access for daily deliveries, servicing and other maintenance and utilities works. Located within a UNESCO World Heritage Site, the area is also known for its high-quality shopping and Georgian Architecture.

# 2. Scope

This report concludes the draft Operational Plan previously prepared during the Stage 2 Concept Design process to support the effective management and function of the latest RIBA Stage 3 GNT public realm design proposals. This document and the Stage 3 (Developed) Design act together to put forward a package of measures which would reallocate and reprioritise spaces within the public realm to improve accessibility, promoting active travel, manage traffic access to the First New Town and prioritise essential public transport.

The plan also discusses the future methods of access and operation of all travel modes within the First New Town study area, and how people will come to interact with and navigate the city centre following the implementation of the design proposals. Where relevant this also presents considerations and feedback which influenced the development of the plan and areas where further design development is required.

## 2.1. CCT and Other Interdependent Proposals

The wider objectives of the Edinburgh CMP and CCT will be delivered through a long-term programme of design projects, transport interventions, and other forms of management. The proposals which have influenced and will influence the GNT proposal going forward are:

**Edinburgh Low Emission Zone (LEZ)** – From 1<sup>st</sup> June 2024 the Edinburgh Low Emission Zone will come into effect. This aims to reduce the dangerous levels of air pollution currently produced in Edinburgh City Centre and attempts to mitigate the resulting impacts to public health. The LEZ will enforce strict emission standards for vehicles entering the cordon, this includes an area encompassing The First New Town, West End, Old Town, Royal Mile and The Meadows. The LEZ will result in a change of vehicle types (an increased proportion will likely become hybrid or fully electric in future), size and will likely impact travel patterns around the City Centre. The system is anticipated to be enforced by a system of ANPR (automatic number plate recognition) cameras which would detect vehicles as they enter the zone.

**CCT Bus Network Review** - A comprehensive review of public transport provision and service routes through Edinburgh City Centre is proposed as part of CCT. This will investigate the impact of rerouting services which currently travel along George Street and consider the potential to reconfigure or combine services. Any realignment of routes and/or bus stops would result in changes to bus journey times through and around the First New Town.

**CCT Operational Plan** – A long term plan which aims to optimise loading, servicing and waste management functions throughout the wider City Centre area. Still in its inception stages, this would also look to develop local 'freight hubs' which would enable micromanagement of deliveries. Complementary to the LEZ this aims to reduce the frequency of on-demand servicing and the volume/size of servicing vehicles entering the area. This would alleviate delays and provide greater priority for public transport, likely increasing reliability and decreasing journey times along key routes. Importantly for the properties of the GNT study area, this plan would address the servicing operation, access and attempt to reduce demand on adjoining streets and lanes such as Rose Street, Hill Street and Thistle Street.

**CCT Events Management Plan** – Building on the 'One Edinburgh' and other cultural strategies for the city, an Events Management Plan is also proposed under CCT. This will set out the 'principles' (e.g. required vehicle access routes/timings, facilities available, methods to access utilities etc.) involved in coordinating events and methods to consolidate the permissions required to host events in key City Centre areas such as The First New Town (including George Street) and Old Town (including the Royal Mile, Bristo Square and George Square). Practically, this plan aims to reduce the disruption caused by the set-up and vehicles associated with events, while maximising the potential benefits for local residents, business and visitors.

**CCT Coach Strategy** – Similar to the proposed Bus Network Review, this long-term strategy aims to manage the access permissions and locations in which privately operated bus services and coaches can alight in Edinburgh City Centre. This may come to effect ability for coaches to enter the city centre, the routes of tour bus services and the locations of coach parking surrounding the GNT study area.

**Figure 2-1 - GNT Project Study Area and connections to CCT Projects**

**CCWEL/  
St Andrews Sq.**



# **POLICY & STRATEGIC CONTEXT**

## Key Governing Policy, GNT Design Principles

## 3. Key Policy Governance

### 3.1. Introduction

Policy is changing at all levels throughout Scotland and the UK to reflect the climate emergency and the serious impacts that it poses if nothing is done to tackle it head on. This chapter sets out the local, national and UK-wide transport and environmental policy context in which the GNT Project sits.

#### UK-wide, National and Local Transport Policy and Guidance

When preparing the Operational Plan, the following policy documents have been taken into consideration and their defining principles carried forward to develop an Operational Plan for the GNT Study Area:

- City of Edinburgh Council – City Mobility Plan 2021-2030, 2020
- City of Edinburgh Council – City Centre Transformation Strategy, 2019
- The Scottish Government’s Climate Change Plan (2018-2032), 2020
- The Bute House Agreement Publication, 2021
- The Scottish Government’s Active Travel Framework, 2021
- The Scottish Government’s National Walking Strategy, 2016
- The Scottish Government’s Cleaner Air for Scotland 2: Towards a Better Place for Everyone, 2021
- Transport Scotland’s National *Transport Strategy 2* (NTS2), 2020
- Transport Scotland’s Emerging *Strategic Transport Projects Review 2* (STPR2), 2022
- Better Delivery – The Challenge for Freight, (NIC), (April 2019)
- Decarbonising Transport – Setting the Challenge, Department for Transport (DfT), (2020)

These documents are summarised in turn below.

### 3.2. Local Level Policy

#### 3.2.1. CEC City Mobility Plan 2021-2030 & Implementation Plan, 2020

City of Edinburgh Council’s City Mobility Plan (CMP) outlines The Council’s plan to achieve sustainability, reduce carbon emissions and provide enhanced mobility across the city. Acting as a successor to Edinburgh’s Local Transport Strategy it sets out The Council’s commitment to become net-zero by 2030 and acknowledges transport (including how people, goods and services are moved around) is the largest producer of carbon emissions across all of Scotland.

*“The plan is central to a clean, connected and net zero carbon future. This sits along with other innovative schemes we’re progressing, from City Centre Transformation (CCT) to a Low Emission Zone, Trams to Newhaven and a range of exciting active travel projects connecting communities It will help people make sustainable choices about how they move around the city, through improving walking, cycling and wheeling options and creating better links to public transport.”*

Taking influence from National level policy such as the Scottish Climate Change Plan, the CMP develops a series of objective which focus on encouraging a shift to more sustainable travel modes and active travel, tackle vehicle dominance, reduce emissions and improve accessibility and wellbeing for all people travelling in the city.

#### 3.2.2. CEC City Centre Transformation Strategy & Delivery Plan, 2019

City of Edinburgh Council’s City Centre Transformation Strategy (CCT) sets out The Council’s sustainable design and spatial framework (movement hierarchy and reprioritisation of movement corridors) within the City Centre. It focuses on enhancing and facilitating the movement of people of all abilities and providing world class urban spaces within the historic context of Edinburgh. The strategy identifies the First New Town, in which George Street and the GNT study area is located, as one of several growth areas in which urban realm and transport interventions will be prioritised going forward.

Building on the aims and objectives defined within CEC’s 2030/2050 Vision document, CCT introduces a series of six key ‘principles for change’ which will be used to guide the development of projects such as GNT. These were used as a basis for the design objectives for the GNT Project initial defined at RIBA Stage 2 (Concept Design) in 2017/2018, these include.

- **People First** - Priority will be given to people travelling on foot, by bicycle and by public transport, providing enhanced connectivity and permeability, whilst minimising negative impacts of traffic displacement.
- **Unique Character & Identity** - The unique character of Edinburgh’s built, and natural environment will be celebrated and enhanced.
- **Inclusive & Accessible** - Inclusive design and management of our streets and places will be embedded across all actions affecting our city centre.
- **Enhanced Open Spaces** - Green areas, open spaces and street networks will be linked to make the most of these spaces for communities.
- **Liveable** - A better environment will be created for city centre residents by enhancing local centres and reducing traffic within the city centre, improving air quality.
- **Integrated Policies & Projects** - Policy objectives and project delivery will be integrated, creating a consistent and coordinated approach to city centre planning and management.

In developing the spatial framework the document also describes five preferred packages of interventions which can be used to improve accessibility for walking, wheeling, cycling and public transport users, facilitate a reduction in private and commercial vehicle movements and improve public realm spaces and sense of place within the City Centre. These are shown in Table 3-1.

**Table 3-1 - Edinburgh City Centre Transformation – Proposed Transport Interventions**

Types of Intervention	Design Measures
<b>Allocation of street space</b>	Street Closures, reallocation of traffic lanes, junction improvements, introduction of safe cycle routes and traffic management.
<b>Public Transport</b>	Enhancing bus priority, rerouting of existing bus services, providing additional and enhanced services and review of taxi ranks.
<b>Parking Reduction and Space Reprioritisation</b>	Phased reduction of on-street parking, revisions to parking zones / residents permit parking and off-street parking, revisions to parking charges and introducing electric vehicle charging points.
<b>City Operations and Management</b>	Introduce an operational / management plan for the City Centre, improve transport integration and provide real-time service updates, introduce a coach management strategy, expand shared mobility and car sharing schemes and develop 'last-mile' logistics provision.
<b>Place</b>	Improved physical and digital wayfinding, provide new vertical connections to key locations, improve accessibility and permeability of Princes Street Gardens, maximise the potential of public spaces and enable temporary or time-restricted closures of roads to allow for community-based activities and events.

### 3.3. National Level Policy

#### 3.3.1. Scotland's Climate Change Plan – Scottish Government, 2020

In response to the global climate emergency, Scotland's Climate Change Plan update in 2020 set out a world-leading commitment to reduce car kilometres by 20% by 2030. Transport accounts for a quarter of Scotland's greenhouse gas emissions, with cars making up almost 40% of transport emissions. Carbon-reduction modelling has concluded that it will not be possible to reach net-zero emissions through technological solutions alone. Reducing car use is essential in order for the transport system to be decarbonised at a pace that meets the statutory emissions targets set by the Scottish Parliament.

The route map, co-developed by Transport Scotland and the Convention of Scottish Local Authorities (COSLA), sets out the suite of transport and non-transport policies that will be implemented to support car-use reduction in order to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

It is recognised that less frequent car use may be more challenging for people in certain geographical locations and for those who have certain travel needs such as specific disabilities. However, the aim of route map is to promote a range of inclusive travel options that people can freely adopt for as many journeys as possible.

#### 3.3.2. Bute House Agreement Publication, 2021

The Bute House Agreement is an agreement between the Scottish Government and the Scottish Green Party Parliamentary Group to work together over the next five years to build a green economic recovery from COVID, respond to the climate emergency and create a fairer country.

The agreement delivers bold policy action on pressing issues including taking big steps to accelerate our transition to net zero – and more support for active travel. It also includes commitments to increase investment in active travel and public transport, including a Fair Fares review to provide a realistic and affordable alternative to car use.

#### 3.3.3. Active Travel Framework – Scottish Government, 2021

The Active Travel Framework brings together the key policy approaches to improving the uptake of walking and cycling in Scotland for travel. It has been produced collaboratively by Transport Scotland and key delivery partners, with input from Regional Transport Partnerships (RTPs) and local authorities.

Drawing on the long-term shared vision and strategic objectives for active travel developed and set out in partnership in 2014, at its heart is an ambition that by 2030, Scotland's communities are shaped around people and place, enabling walking and cycling to be the most popular mode of travel for short, everyday journeys. This is particularly important in more remote areas where accessibility by road outweighs that by more sustainable modes. Where this is the case, targeted measures, such as active travel corridors, will better connect rural communities and ensure that the promotion of walking and cycling for all user groups is maximised.

#### 3.3.4. Let's Get Scotland Walking: The National Walking Strategy – Scottish Government 2016-2026

The vision that the Scottish Government has is a Nation where everyone benefits from walking as part of their everyday journeys and where urban spaces are well designed to encourage walking.

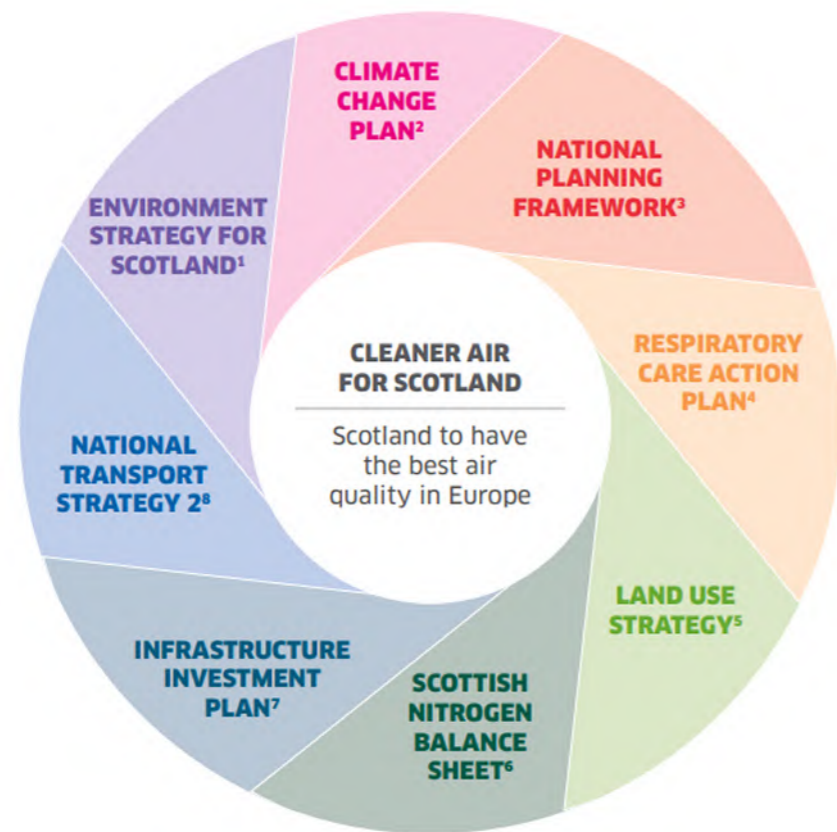
The 3 Strategic Aims of the National Walking Strategy are:

- Create a culture of walking where everyone walks more often as part of their everyday travel and for recreation and wellbeing.
- Better quality walking environments with attractive, well designed and managed built and natural spaces for everyone; and
- Enable easy, convenient and safe independent mobility for everyone.

### 3.3.5. Cleaner Air for Scotland 2: Towards a Better Place for Everyone – Scottish Government, 2021

Cleaner Air for Scotland 2 (CAFS 2) is a strategy setting out how the Scottish Government will continue to deliver air quality improvements over the next five years (to 2026). Shaped around 10 general themes the strategy aims to achieve a vision for Scotland to have the best air quality in Europe.

The strategy recognises that there is significant overlap between the measures needed to address climate change and improve air quality in areas such as transport, agriculture and industrial emissions and effort to address these issues in a more coordinated way offers additional likely co-benefits. CAFS 2 therefore takes an integrated policy approach to deliver policy in tandem with other key Scottish Government strategies to achieve the vision for Scotland to have the best air quality in Europe. Clear synergies exist between these strategies, which include those set out in Figure 3-1 below.



**Figure 3-1 - CAFS 2 Integrated Policy Approach**

Improving air quality makes an important contribution to the United Nations Sustainable Development Goals and the Scottish Government’s National Outcomes. In a wider context, further progress in embedding placemaking principles across all policy areas will deliver benefits for both physical and mental health through creating better urban spaces that are more attractive to spend time and easier to move around in.

### 3.3.6. National Transport Strategy 2 – Transport Scotland, 2020

The National Transport Strategy 2 (NTS2) forefronts sustainable transport, identifying active travel as a key mechanism to realise its ambitious vision for Scotland’s transport network for the next 20 years. Encouraging people to travel more actively and sustainably is at the heart of the Scottish Government’s NTS2 vision and priorities and will contribute to the equality, health and carbon reduction targets that the strategy supports.

*“It is a Strategy for the whole transport system (people and freight), and it considers why we travel and how those trips are made, by including walking, cycling, and travelling by bus, train, ferry, car, lorry and aeroplane. It is a Strategy for all users: those travelling to, from and within Scotland.”*

NTS2 emphasises that walking, wheeling, and cycling are the prioritised methods of travel, recognising the significant influence they hold in bringing the Strategy’s vision and priorities to fruition. It recognises that high-quality walking and cycling infrastructure can attract a wider range of people to take up active travel to meet these wider policy aims.

There are four priorities to support that vision:

- Reduces inequalities.
- Takes climate action.
- Helps deliver inclusive economic growth; and
- Improves our health and wellbeing.

The NTS2 will enable people to make healthy travel choices: active modes will be a preferred method of travel and have a significant positive effect on individual health and wellbeing, both by making people more active and by improving air quality.

### 3.3.7. Emerging Strategic Transport Projects Review 2 (STPR2) – Transport Scotland, 2022

The emerging Strategic Transport Projects Review 2 (STPR2) reviews the strategic transport network’s performance and will inform transport investment in Scotland for the next 20 years (2022-2042).

STPR2 provides an overview of transport investment, mainly infrastructure and other behaviour change recommendations, that are required to deliver the NTS2 priorities and objectives. In many cases the recommendations build on the individual investment and policy decisions taken in recent years, but the overall balance of the recommendations reflects the vision, priorities and outcomes of the NTS2 and commitments in its Delivery Plan.

The objectives of STPR2 align with Scottish Government policy and cover topics such as climate action; inequalities and accessibility; health and wellbeing; sustainable and inclusive economic growth; and improving safety and reliability of the transport networks. A key aspect of STPR2 is the consideration of the transport needs of Scotland’s people and communities, with a clear priority in favour of active travel (walking, wheeling, cycling).

### 3.4. UK-Wide Policy and Guidance

#### 3.4.1. Better Delivery - The Challenge for Freight, National Infrastructure Commission (NIC), 2019

The National Infrastructure Commission (NIC) sets out in 'The challenge for freight' the environmental and technological drivers for change within the freight and logistics sector and how these can be better integrated into the land use and planning process. Aligning itself with UK targets, NIC prioritises the decarbonisation of freight by 2050 and highlights that innovation and further management optimisations are required to tackle environmental challenges.

The document also notes the key factors which will affect the freight and logistics industry going forward, these include.

**Growth in internet shopping** - The existing centralised approach to freight may need to adapt to incorporate more regional and local level storage to meet customer demands. Such a move in both retail and business markets could have a significant impact on the size and operation of systems and vehicle miles driven.

**Zero / Low emission vehicles** - Transition towards alternative fuels or electric vehicles could see short and medium-term changes in the way the logistics industry operates, however alternative fuelling/charging infrastructure is required to facilitate this.

The NIC also discusses a transition to zero emission servicing vehicles, with the recommendation that the UK Government should commit to decarbonising road freight by 2050 and further plan to ban the sale of new diesel-powered HGVs no later than 2040. Considering smaller vehicles like LGVs and vans, the market for zero and low emission market is more developed, NIC suggests that it is essential that local charging infrastructure be further developed as not to become a barrier to change.

Considering recent innovations in operation across the UK, NIC note the use of micro-distribution centres (working towards the last-mile delivery model) and use of e-cargo bikes have both produced positive results where prevailing conditions are right. In the short-term logistics operators will likely only adopt sustainable practices that reduce emissions and congestion impacts if this does not put them at a disadvantage to their competition. NIC note temporary legislation or subsidies could help operators looking to trial new techniques in partnership with local authorities.

NIC speculate that the best way to introduce further innovation in the industry is to support the establishment of consolidation/micro-distribution centres. Continuing to say local authorities should use their planning systems to make land in suitable locations available and consider the case for subsidising more sustainable operations in the short term, where competition law permits.

#### 3.4.2. Decarbonising Transport – Setting the Challenge, Department for Transport (DFT), 2020

DFT describe this document as *“the first step to developing the policy proposals and a coordinated plan for decarbonising transport. Delivering the emissions reduction needed from transport is a significant and sustained challenge and net zero demands a fresh approach. We have a duty to act and continue our global leadership in this area.”*

In the report DFT set out their strategic priorities from 2020-2040 and a 'Transport Decarbonisation Plan', which will guide the country towards a net-zero transport system. Business operations and logistics are considered under the heading 'Decarbonising how we get our goods' as one of the key principles of the document. There is also emphasis on last-mile deliveries, developing an integrated supply chain and optimise efficiency of existing networks.

The document goes on to detail an e-cargo bike trial in London via e-Cargobikes.com. The scheme worked closely with supermarket chain Sainsbury's to trial the use of electric cargo bikes to deliver groceries, using funding from a DFT innovation grant. Using five bikes, delivering around 100 orders a day from the Streatham Common store, the study found.

- *“c.96.7% of orders could be fulfilled in a single e-cargo bike journey”.*
- Due to the ability of e-cargo bikes to make use of cycle and bus lanes, this resulted in shorter delivery routes, decreased journey times and average speeds greater than typical delivery vans.

## 4. Design Development, Objectives and Principles

### 4.1. Introduction

This chapter outlines the progression of the GNT Design at RIBA Stage 3 and presents the overarching objectives / principles which have been used to guide the development of the project.

### 4.2. Design Objectives / Principles

Prior to undertaking design work at this stage, the project team undertook a due diligence review of the Stage 2 design, draft Operational Plan, and objectives/principles. The following project objectives were inherited from Stage 2 and further developed upon at this stage:

- Create a world class place that respects and enhances the world heritage site.
- Enlarge and enhance public and pedestrian space creating a safe, vibrant space for all.
- Prioritise active travel and access for people with a disability or impairment, with public parking in George St seen as lowest priority.
- Develop an adaptable street design, in particular enabling use for appropriate events.
- Enhance the First New Town as a place where businesses can thrive.
- Provide a solution which gives priority to pedestrian movement; with set periods of the day without non-essential vehicle access; bus services or blue badge access where appropriate.
- Preserving the use of cycling infrastructure year-round.
- Maintain the current local bus passenger services within the area, with limited bus stop and route realignment.
- Prioritise blue-badge parking by reallocating some bays from George Street to other streets within the First New Town where possible.
- Reduce vehicle traffic movements at the junction of George and Hanover Street to support essential access requirements through the First New Town.

### 4.3. Design Development and RIBA Stage 3 Design Overview

#### 4.3.1. RIBA Stage 2 Design

The RIBA Stage 2 (Concept) Design (finalised August 2021) recognised that several outstanding design and operational challenges would need to be addressed during the Stage 3 (developed) design process including drainage, hostile vehicle and anti-terrorism measures, junction detailing and outstanding operational decisions. A detailed assessment of the Concept Design was undertaken, and several key priorities identified which would help shape final Stage 3 design and operational outputs including:

- Revising the ‘roundabout-style’ intersections with George Street and Castle Street, Frederick Street and Hanover Street to become more traditional 4-armed priority / signalised priority junctions.
- Prioritising the north-south movement of vehicles at junctions and optimising remaining space for pedestrians. This aims to promote north-south flows of vehicles and deter through traffic from entering George Street.
- Banning of right turns at the three main junctions of George Street with Castle Street, Frederick Street and Hanover Street. Analysis of vehicle paths taken to navigate the junctions indicated significant areas of overrun would be required to perform this manoeuvre, severely impacting pedestrian accessibility.
- Simplifying the operation of the George Street - Hanover Street junction’s signal operation to minimise delays and optimise journey times, removing unnecessary signal phases and reducing this to three phases: a north-south vehicle green, an east-west vehicle green phase and an all-approach pedestrian green phase.
- Understanding the functions of Castle Street/North Castle Street and Frederick Street are different to those of George Street and Hanover Street and their resulting traffic demand is far lower, these junctions have been redesigned to provide additional priority for pedestrians.

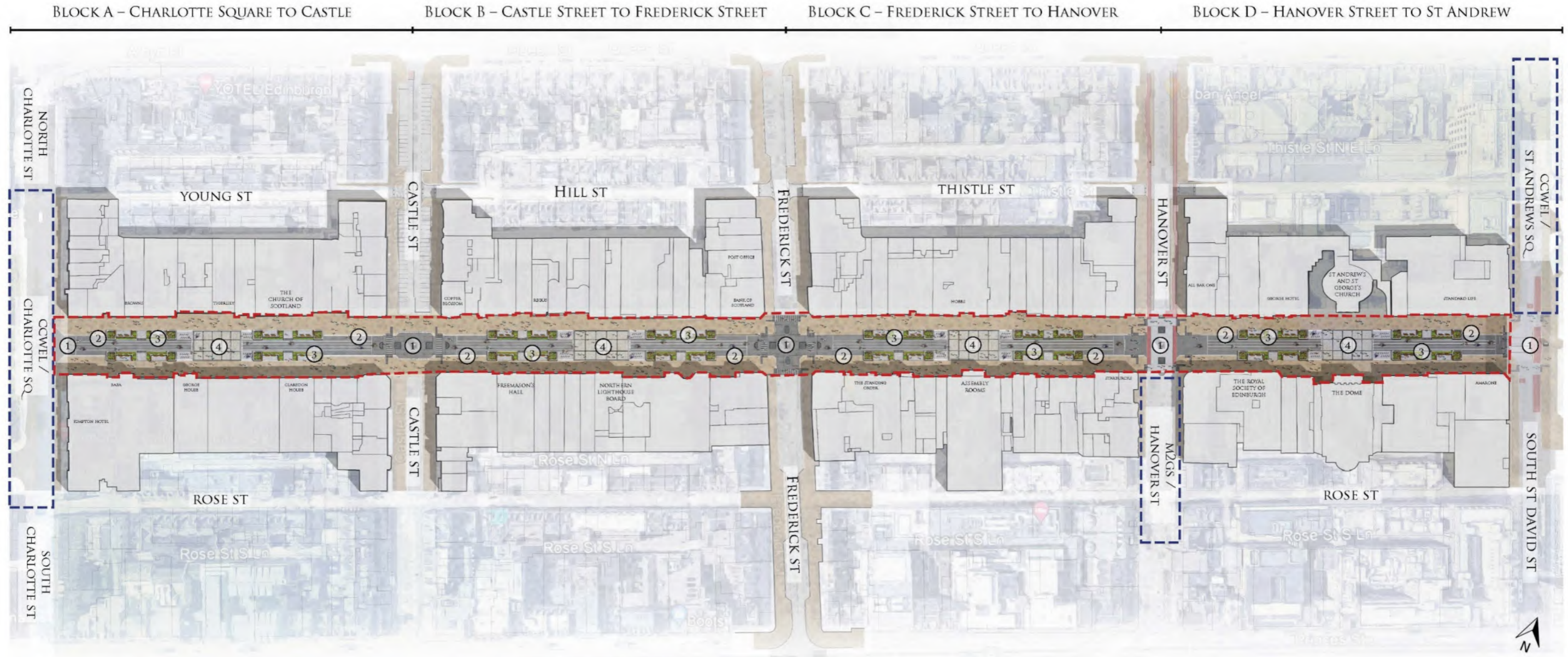
#### 4.3.2. RIBA Stage 3 Design Overview

Building on the concept design principles developed throughout 2018-2021, the RIBA Stage 3 (Developed) Design has been developed by drawing on the expertise of a number of disciplines across the Project Team including civil engineering, drainage, heritage, landscape and urban design, roads and transport planning. A full review of the Stage 3 Design is provided in the RIBA Stage 3 Design Report.

The design proposal for George Street in particular provides a symmetrical pattern which is repeated along each ‘block’ of the street. This reflects closely with the original James Craig masterplan for the First New Town from 1766. Each of the ‘blocks’ have similar layouts and are comprised of the same key elements such as enhanced footways, public realm improvements, removal of non-essential parking and reduction in carriageway widths. The Stage 3 masterplan is shown below in Figure 4-1. Illustrative cross-section views of the proposed George Street design are also shown Figure 4-2 and Figure 4-3. Both are discussed further in proceeding chapters.



Figure 4-1 - RIBA Stage 3 GNT Design Masterplan



**Masterplan Key Elements**

- 1. Junctions
- 2. Loading areas / disabled parking
- 3. Landscaped seating areas
- 4. Central Squares

Figure 4-2 - George Street Cross Section View 1 - Illustrative View with Landscaped Seating Areas



Figure 4-3 - George Street Cross Section View 2 - Illustrative View with Flexible Zones



# STAKEHOLDER ENGAGEMENT

## Internal and External Engagement and Findings

## 5. Operational Plan Engagement

### 5.1. Introduction

The proposal set out in proceeding chapters has been collaboratively developed with CEC, Sustrans and city stakeholders, residents, businesses and the general public. This chapter sets out a concise summary of the engagement undertaken at this stage regarding the GNT Operational Plan. Additional information on engagement undertaken at this stage on the GNT Design can be found within the GNT Stage 3 Engagement Report.

### 5.2. Business and Residents (External Stakeholder) Engagement

Throughout March - July of 2022, the team undertook a rigorous schedule of online and 1-2-1 style engagement with local businesses and residents of the GNT study area to gather information on day-to-day transport operation and attain feedback on the preferred way forward on operational aspects of the proposed design.

The online elements were conducted using Microsoft Forms online questionnaires hosted on the CEC Consultation Hub from March-April. Questions focussed on gaining feedback from respondents on every-day access requirements and opinions on proposed operational measures such as restricting vehicle access and imposing daily loading windows. The questionnaires were promoted via flyer drop to all addresses within the study area, informational emails and through Council social media channels.

In parallel to the online survey and throughout the remainder of RIBA Stage 3 a number of 1-2-1 meetings were also undertaken by the team. These included businesses, residents and local organisations in the area. These were organised by directly contacting by phone, email or in person. Engagement feedback from residents has shown support for measures which would reduce traffic within the city centre and rationalise unnecessary sources of parking. There also is a strong public awareness of the potential damage high levels of airborne pollution could have on the population of Edinburgh.

### 5.3. CEC Officer (Internal Stakeholder) Engagement

Throughout this stage, from March-July, the Project Team also undertook a series of technical meetings with City of Edinburgh Council Officers regarding elements of the Operational Plan. A total of 22 officers were met to understand the potential impact on their specific areas of responsibility, this included:

- Active Travel
- City Centre Transformation (including City Centre Operational Plan)
- City Centre West to East Link (CCWEL)
- Low Emission Zone
- Meadows to George Street (MGS)
- Parking/TRO/Taxi/Licensing
- Planning
- Public safety and events
- Public Transport
- Sustainable Development/Climate Change
- Transport Networks
- Waste Services

#### Key Feedback attained at this stage

<b>Vehicle Access</b>	<ul style="list-style-type: none"> <li>• Access for the mobility impaired / older people / blue badge holders is essential.</li> <li>• Opportunities for pick-up and drop-off need to be explored, including many requests for taxi access to be retained in future.</li> <li>• Trades Access and other ad-hoc access needs to be carefully managed.</li> <li>• Maintaining residents parking and access is important. Potential impact on capacity in surrounding streets needs to be considered.</li> <li>• Many requests for access exemptions e.g. trades, construction, weddings/funerals, utility works, other statutory work.</li> <li>• Facilitating access to hotels will require further consideration.</li> <li>• Enforcement is also a major issue, many suggest ANPR, or similar methods are required.</li> <li>• Concerns about managing access and business during events. Many are unsure about the potential size and scale of events in future.</li> </ul>
<b>Transport Network</b>	<ul style="list-style-type: none"> <li>• Concerns about the impact on the wider transport network, potentially causing congestion on other arterial routes like Lothian Road, Queen Street, Leith Street and George IV Bridge.</li> <li>• Concerns about alternative routing of vehicles around First New Town and Edinburgh Old Town, effects of the proposed Meadows to George Street bus gate.</li> </ul>
<b>Servicing and Loading</b>	<ul style="list-style-type: none"> <li>• Consensus points to a morning and evening access window being required.</li> <li>• Most businesses are well aligned to a morning window ending at 10:00 - 10:30am, the peak for deliveries in the area is currently 8:00am-11:00am.</li> <li>• Extended access may be required on Sundays to facilitate St Andrew's and St George's Church.</li> <li>• Residents highlight waste and recycling from local bars is often collected between 2-4am, often excessive noise and disruption. They query if this could be managed using windows.</li> </ul>
<b>Public safety and security</b>	<ul style="list-style-type: none"> <li>• Very positive response to building-in night-time safety and security into the design and operation of the area.</li> <li>• Many have suggested other night-time safety measures such as Taxi wardens are also required.</li> <li>• Many businesses, particularly food &amp; beverage, have existing relationships with taxi groups and private hire groups e.g. Uber. These businesses use taxi travel to ensure the safety of their staff in the early hours of the morning, they feel this needs to be accommodated within the proposal</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>• Many businesses are already working towards NetZero and have strategies in place.</li> <li>• A lack of electric vehicle charging points and other sustainable infrastructure was highlighted.</li> <li>• Most of those who met with the team had limited knowledge or no knowledge of the wider ambitions of CCT</li> </ul>
<b>Construction</b>	<ul style="list-style-type: none"> <li>• Concerns about the impact of construction and potential loss of earnings.</li> <li>• Phasing and construction timeline (when contractors are involved) need to be communicated early and often with those who may be affected.</li> </ul>

## 6. Operational Planning Considerations

### 6.1. Problems, Issues, Opportunities and Constraints

A number of actual and perceived operational/transport-related problems, issues, opportunities, and constraints have been identified within the study area and Edinburgh City Centre. These are based on historical evidence, research and engagement undertaken to date. These provide a baseline for the development of operational measures discussed in proceeding chapters.

#### Problems

The perceived and actual problems identified within the study area include but are not limited to:

- The legacy of the current layout of George Street and car-centric streetscape of the area acts a barrier to accessibility and deters active travel users.
- Perceived misuse of trades permits and other parking permits, high numbers of daily parking penalty notices and nuisance parking occurs within the City Centre.
- Lack of adoption of active travel and awareness of the existing active travel routes and opportunities locally.
- Perceived night-time safety concerns particularly for women and other vulnerable groups.
- Road safety and crossing safety concerns at junctions. High Collision rates for incidents involving pedestrians and cyclists in the study area, greater than 60% of all collisions involve these users (33/50 STATS19 casualties, 2016-2020).
- Staged pedestrian crossings and islands on Hanover Street poorly accommodate existing traffic, pedestrian demand and desire lines. Accessibility measures for the mobility / sensory impaired people are not always provided at crossing locations.
- Wayfinding information and signage to guide pedestrians is limited within the First New Town, especially links to nearby destinations such as Waverley Rail Station.

#### Issues

The issues identified within the study area which impact the proposal include but are not limited to:

- Variety of business types and functions present in the area.
- Size and scale of deliveries i.e. typical goods and services required in the area.
- The lack of coherence of delivery times and number of third-party service providers in the area.
- Urgent need to reduce vehicle demand, carbon emissions and shift servicing patterns in a more sustainable direction.
- One of George Street's core functions is for events, particularly during the Edinburgh Fringe. Maintaining access to existing venues and facilitating the street's ability to host a variety of event types will be pivotal to its economic longevity.
- Limited availability of kerbside space to provide dedicated locations for loading and servicing
- Limited availability of kerbside space to be allocated for resident and permitted parking.
- Lack of sustainable technologies in Edinburgh City Centre e.g. Electric vehicle infrastructure
- High existing parking demand within the City Centre and potential pressure which will occur in parking zones adjacent to the GNT Project if rationalisation of parking is not properly managed.
- Scotland's temperate climate makes providing year-round cycling facilities difficult.
- Lack of alignment and coherence of vehicle access windows within the City Centre may increase congestion pressures on the area.
- Street furniture currently clutters footways in the area and limits accessibility.
- There is potential that some older/impaired people who do not have a blue badge and struggle to use public transport may find it more difficult to access George Street.

#### Opportunities

Opportunities which will have a bearing on operations and travel in the study area include but are not limited to:

- Enhancing the pedestrian experience of the area and incorporate the needs of users of all levels of mobility and ability.
- Reducing levels of background traffic within the City Centre and reducing the dependence on vehicle travel modes.
- Manage and reduce the presence of larger vehicles within the City Centre.
- To combat public health challenges such as obesity and promote wellbeing through encouraging walking and cycling.
- Combating the environmental crisis through reducing vehicle emissions and challenging existing servicing behaviours/modes and positively contribute to the net-zero 2030 movement.
- Reducing pedestrian crossing distances and increasing safety and coherence at junctions.
- Support economic recovery and long-term growth of the City Centre ensuring George Street retains its status as a premier UK/European shopping street
- Provide a high-quality cycling route which can serve the evolving travel needs of the city.
- Promote local public transport and encourage more sustainable travel behaviour.
- Improve the liveability of the City Centre and encourage further residential ownership.
- To communicate the objectives of Edinburgh City Mobility Plan and City Centre Transformation delivery plan.

#### Constraints

Constraints which limit the effectiveness of the proposal include but are not limited to

- The quantity of businesses in the area often limits the effectiveness of engagement and the representativeness of operational measures proposed.
- Pedestrian accessibility is impacted by the topography of the area.
- Due to the length of George Street itself extended distances required to access key buildings and venues at the centre of each 'block' e.g. The Dome and Assembly Rooms.
- Route choice for vehicles entering or exiting the GNT study area is largely governed by adjacent projects which are still in development (e.g. Meadows to George Street, St Andrew Square) and existing restrictions.
- Increased dependence on taxi and private hire car travel in the area especially after 6pm.
- Complexity of operation on George Street between Hanover Street and St Andrew Square
- Unrestricted access for blue badge parking or the relocation of this parking to adjacent streets will likely have knock-on impacts on residential parking.
- The lack of control a majority of businesses have on third party logistics and waste service providers.
- Enforceability of the proposals are limited by current Scottish Government Policy and City of Edinburgh's legislative powers.
- Blue badges are registered to a specific person not a vehicle, this complicates potential access control and enforcement.

## 6.2. Project Benchmarks

The proposed traffic restrictions and operational measures of the GNT Design and Operational Plan detailed in subsequent chapters have also been benchmarked against other development proposals and servicing/vehicle management schemes introduced across Edinburgh, Scotland and the UK, a summary of these are given in Table 6-1 below.

**Table 6-1 - Operational Benchmarks**

Location	Urban Context	Restrictions / Operational Times	Enforcement Measures
<b>Edinburgh</b>			
Castle Street	Pedestrianised street	8pm – 10:30am, Mon – Sun	No through route, Pedestrian Zone
Grassmarket	Pedestrianised Street (Partial)	12pm – 6:30am Mon – Sun	Pedestrian Zone, one- way, rising bollards
High Street	Pedestrianised Street (Partial)	10:30pm – 6:30am Mon - Sun	Pedestrian Zone, HVM barriers, removable bollards
Princes Street	Main pedestrian and public transport route	8pm – 7am, Mon – Sun	Double yellow lines, Permitted vehicles only zone
Rose Street	Pedestrianised Street (Partial)	11pm to 10:30am, Mon – Sun	Pedestrian Zone, turning restrictions, removable bollards
<b>Scotland</b>			
Glasgow – Buchanan St. & Argyll St.	Shopping street, Urban thoroughfare (pedestrianised)	7pm – 10am, Mon – Sun	Removable/folding bollards
Glasgow – Sauchiehall Street	Multi-functional shopping street Pedestrianised (partial)	6pm – 8am, Mon – Sun	One way street, Single/double yellow lines
Perth – High Street and adjacent streets	Shopping streets, controlled zone	6pm – 8:30am, Mon – Sun	Restricted vehicle access, one-way streets, turning restrictions, pedestrian zone, automatic bollards
Stirling – Port Street	Pedestrianised Street	4pm – 11am, Mon – Sun	Removable/folding bollards, pedestrian zone
<b>UK</b>			
Leeds – King Edwards St (and lanes)	Shopping streets, controlled zone	7pm – 10:30am, Mon – Sun	Perimeter signage, Removable/folding bollards
London – Regent Street (and surrounding lanes)	Main pedestrian and public transport route	12:00am – 7am, Mon – Sun	Double yellow lines
London - Leicester Square	Shopping streets, controlled zone	12:00am –8:30am, Mon – Sun	Automatic rising bollards
Manchester – Market Street	Pedestrianised Street	7pm – 8am, Mon – Sun	Automatic rising bollards

# GNT OPERATIONAL PLAN



## An accessible and inclusive street environment

*Create a more accessible streetscape which itself will become a local destination*

### Key Principles

- A. Provide an attractive and welcoming street environment for pedestrians.
- B. Support the movement of all users of all abilities around the City Centre
- C. Improve the accessibility and simplify the operation of road junctions
- D. Provide high-quality, safe, and comfortable cycle facilities which can be used year-round.
- E. Enhance safety within the urban environment and improve road safety.

### Proposed Operational Measures & Design Considerations

- A. Using design features create a world-class space which will attract increased footfall. Introduce outdoor seating areas and amenity spaces which encourage people to dwell in the area.
- B. Apply the principles of inclusive design, optimise pedestrian crossings and coherence of the street layout. Retain essential blue badge parking and minimise required walking distances where possible.
- C. Reduce the complexity of junctions and number of phases at traffic signals to reduce delays. Reduce required crossing distances and maximise pedestrian green times.
- D. Introduce a cycle-street design on George Street. Provide connections to the M2GS and CCWEL cycle routes to form a city centre cycle network.
- E. Implement the findings of the Woman’s Safety Audit and Threat, Vulnerability & Risk Assessment. Mitigate potential road and crossing conflicts with pedestrians, cyclists, and road other users.





## Introducing a new transport hierarchy

*Provide innovative designs which move away from the vehicle-dominated street layouts of the past*

### Key Principles

- A. Prioritise the movement of people in the City Centre over private car travel and other vehicles
- B. Provide additional priority for local bus services, improve their reliability, and maintain a high level of service along key routes
- C. Remove non-essential parking and the presence of vehicles on George Street during set periods of the day
- D. Attempt to tackle inner city congestion

### Proposed Operational Measures & Design Considerations

- A. Increase footway widths/quality and revise bus stop locations where possible to increase the accessibility of public transport. Restrict right turns at junctions and reduce carriageway widths on George Street to deter through traffic.
- B. Promote north-south traffic movements on Frederick Street and Hanover Street. Support the proposed CCT Bus Network Review.
- C. Retain only essential blue badge holder parking and loading bays on George Street. George Street is proposed to be vehicle free from 10:00am – 7:00pm Mon-Sat, 12:00pm – 7:00pm Sun
- D. Revise street spaces allocated for vehicle travel, reduce carriageway widths, and use physical traffic management to deter through traffic.



## A business and cultural centre at the heart of the First New Town

*Provide a framework for economic redevelopment, opportunities for events and an environment in which local businesses, residents and visitors can prosper*

### Key Principles

- A. Manage vehicle access to George Street, maintain essential local access to surrounding streets
- B. Support the local night-time economy and manage the requirements of the many venues present in the area
- C. Facilitate on-street events. Create a street which can become part of Edinburgh's unique cultural heritage
- D. Make the First New Town a place where businesses can thrive
- E. Maintain the essential functions for residents and the attractiveness of the First New Town as a place to live

### Proposed Operational Measures & Design Considerations

- A. George Street is to become a 'pedestrian and cycle zone'. This would allow only permitted vehicles access, e.g. deliveries, taxis, and other services, from 7:00pm – 10:00am Monday-Saturday, 7:00pm – 12:00pm Sunday.
- B. Retain local taxi access to George Street during permitted hours, including two ranks positioned on central squares. GNT TROs will establish a permitting system to manage vehicle access out with these times e.g. for larger vehicles required for events setup, construction/utilities, other works, and coaches.
- C. Provide a flexible street design and introduce a permit-based systems to control access out with operating hours. Allow for temporary closures for events while still accommodating local cycling. Support the development of the proposed CCT Events Strategy.
- D. Improve the attractiveness of the area to drive local footfall. Provide business an opportunity to have outdoor seating year-round. Ensure adequate kerbside loading provision to conduct daily servicing and deliveries.
- E. Improve the capacity of resident/permit holder parking on side streets. Consolidate waste collection into the 7:00pm – 10:00am 'access window' to minimise disruption. Manage essential works, retrofits using a permit scheme.



## Support the City's journey to Net-Zero by 2030

### *Promote a cleaner and greener local transport system and business practices*

#### **Key Principles**

- A. Reduce vehicle movements in the area, improve local air quality and encourage the shift to more sustainable modes for everyday journeys e.g. walking, cycling and public transport
- B. Introduce measures which consolidate the movement of goods and services
- C. Encourage local businesses and service providers to use smaller, lower emission and electric vehicles

#### **Proposed Operational Measures & Design Considerations**

- A. Improve the accessibility of the area for pedestrians and cyclists. General traffic access will not be permitted on George Street in future. North/South public transport movements will be prioritised.
- B. Permitted vehicle access and loading is proposed to be from 7:00pm – 10:00am Monday-Saturday, 7:00pm – 12:00pm Sunday. A Monitoring and Evaluation Plan is proposed to understand the effects of the design and suggest any further operational changes, if required.
- C. Work with CEC and local service providers long-term to introduce last-mile logistics hubs. Introduce electric vehicle charging points (Stage 4 design).

# GNT OPERATIONAL PLAN – TECHNICAL SUMMARY

## 7. Proposed Junction Design and Operation

### 7.1. Introduction

This chapter provides a detailed summary of the operation and function of each of the four junction redesign proposals within the RIBA Stage 3 Design. This includes George Street and its junctions with Castle Street, Frederick Street, Hanover Street and St Andrew Square. At this stage there has been limited development of the Charlotte Street – George Street junction as this is out with the GNT Project Study Area (Figure 2-1). It is expected that this project will be progressed as a standalone design scheme though closely integrated with both GNT and CCWEL going forward. This additional link will define how the CCWEL route will pass through the square and continue east via George Street. The design proposals shown below have been developed to reflect the current and anticipated usage of each junction, project principles and key heritage requirements e.g. symmetry and consistency in their layouts. Further details such as finalised road markings, tactile paving layouts, signage and traffic signalling design will be defined during RIBA Stage 4.

### 7.2. Castle Street / North Castle Street – George Street Junction Design Summary

Traffic levels on and around Castle Street are known to be the lowest of each of the four junctions and are expected to be even lower by the time the GNT design is implemented. There is also limited scope for north-south motorised traffic movements due to there being no access to or from Princes Street at the south end of Castle Street. The junction is unsignalised and now includes continuous footways across the Castle Street and North Castle Street approaches, mimicking the existing layout at Castle Street. These emphasise pedestrian priority over north-southbound cyclists and vehicles. The continuous footways also indicate that the east-west cycle/vehicle movement has priority over cycles/vehicles travelling north-south.

#### Changes from the existing layout

- George Street becomes a cycle-priority street with a low (<20mph) design speed.
- 2-phased crossings, central pedestrian islands on the George Street approaches and other street clutter is to be removed.
- Crossings on each approach are realigned and required crossing distances are reduced from 19m to 10m. North and south approaches are provided with continuous footways.
- Priority is shifted from north-south movements to east-west movements through the junction, giving priority to cycle users.

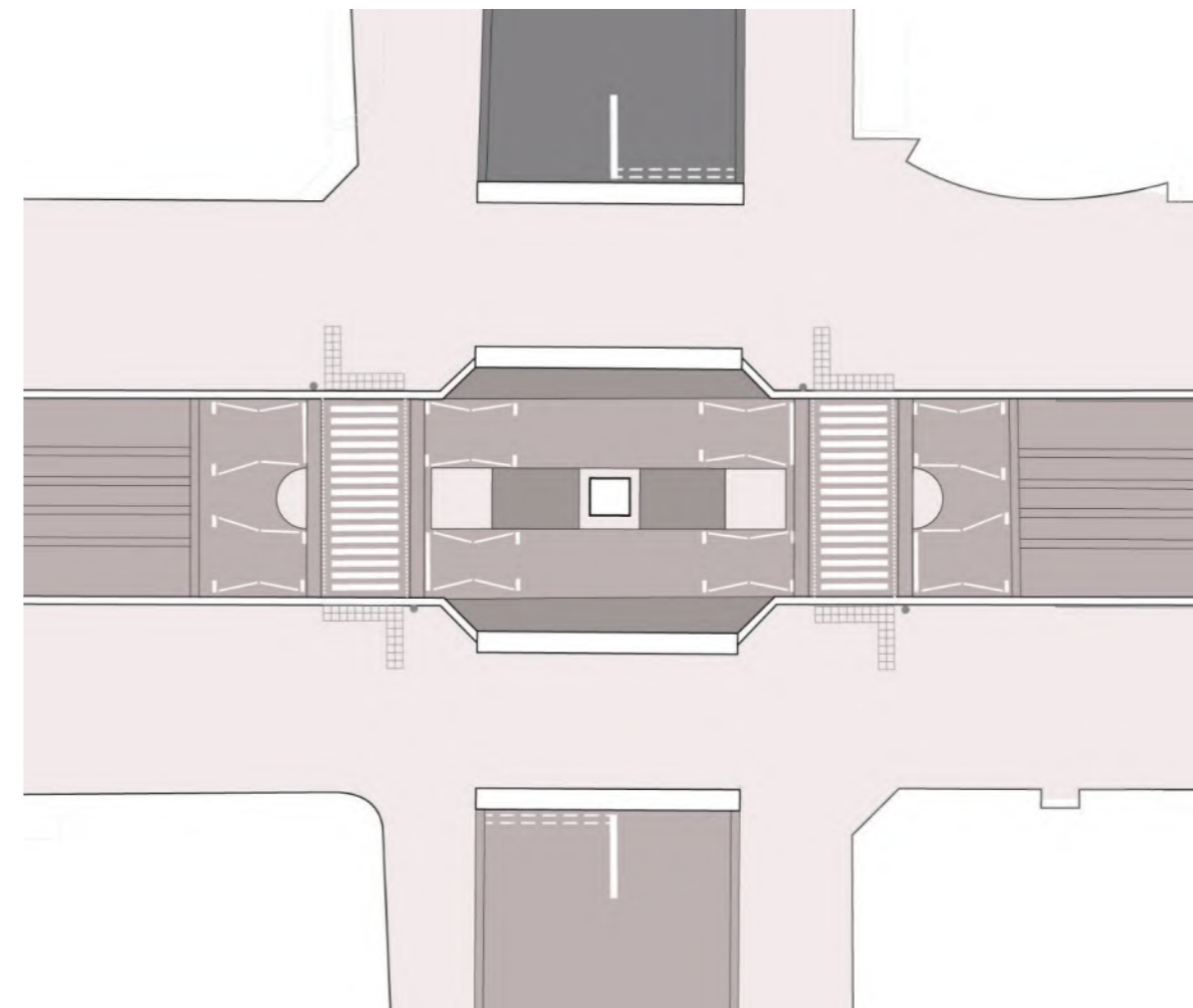
#### Pedestrian & Cycle Operation

- Pedestrians crossing to and from each approach of the junction would have priority over other users. Similar to the existing layout zebra crossings on the east and west be provided. As with all typical zebra crossings, traffic would be required to stop for any pedestrians waiting to cross or already crossing the cycle carriageway. Pedestrians crossing to and from each approach of the junction would have priority over other users.
- The north and south approaches (Castle Street and North Castle Street) are provided with raised continuous footways. This encourages greater freedom of movement for pedestrians travelling east and west on George Street. Tactile and visually contrasting materials would be provided to aid navigation for visually and sensory impaired users.
- Cycle movements east-west on the cycle carriageway would now have priority over vehicles traveling on the north and south approaches.
- Cyclists would be exempt from right turning restrictions, giving them additional flexibility to turn in all directions from each approach of the junction.

#### Vehicle Operation

- On north and south approaches vehicles would be required to wait at the give-way line to allow pedestrians to clear the continuous footway and while entering the junction give way to cycle movements on George Street before continuing their journey.
- Similar to the current operation, vehicles on all George Street would be required to wait for pedestrians waiting to cross or currently crossing.
- Right turning movements from all approaches (around the Thomas Chalmers Statue) including U-turns would be banned.
- Only permitted vehicles (such as daily servicing and deliveries vehicles) would be able to turn left into and out of George Street during operating hours. Outwith these hours traffic emerging from Castle Street would be required to continue north towards Queen Street.

Figure 7-1 – Castle Street / North Castle Street - George Street Stage 3 Junction Layout



#### Summary

- The proposed design of Castle Street reflects the current and future vehicle demand of this area of the First New Town. It is currently the least trafficked of the junctions on George Street.
- Priority of the George Street carriageway is proposed to be shifted from north-south to east-west movements. This is done by introducing two continuous footways, these also give additional priority for pedestrians on George Street.
- Local access to residents/permit holder parking, taxi ranks and loading areas on Castle Street and North Castle Street is retained. Only permitted vehicles and cycles would access George Street.

Figure 7-2 – Castle Street / North Castle Street - George Street Junction Layout – 3D Visual



### 7.3. Frederick Street – George Street Junction

#### Design Summary

This junction's operation is similar in principle to the existing layout, it remains unsignalised although footway widths and quality will significantly increase. This will reduce required crossing distances and remove the need for a two-phased crossings, promoting greater access and navigation for pedestrians. For vehicles this will remain a core bus route in the City Centre.

Raising crossing points on the east & west (George Street) approaches by 50-100mm create a speed bump for road users travelling on George Street, managing vehicle speeds through the junction, and reinforcing the priority of pedestrians. By restricting right turn movements it is possible to reduce the required carriageway space within the junction and running widths on George Street, which would further manage down speeds for east-west traffic. Give way markings are provided on the north & south (Frederick Street) approaches, now giving priority to the east-west movement. Visually distinct and contrasting materials would be used to communicate this.

#### Changes from the existing layout

- George Street becomes a cycle-priority street with a low (<20mph) design speed.
- 2-phased crossings, central pedestrian islands and other street clutter is to be removed.
- Priority is shifted from north-south movements to east-west movements through the junction, give priority to cycle users.
- Crossings on each approach are realigned and required crossing distances are reduced from 15-20m to 10-12m. East and west approaches have raised crossing to provide an additional level of traffic calming travelling through the junction.
- Contrasting overrun areas are provided on the north and south approaches to visually narrow Frederick Street and further reduce vehicle speeds.

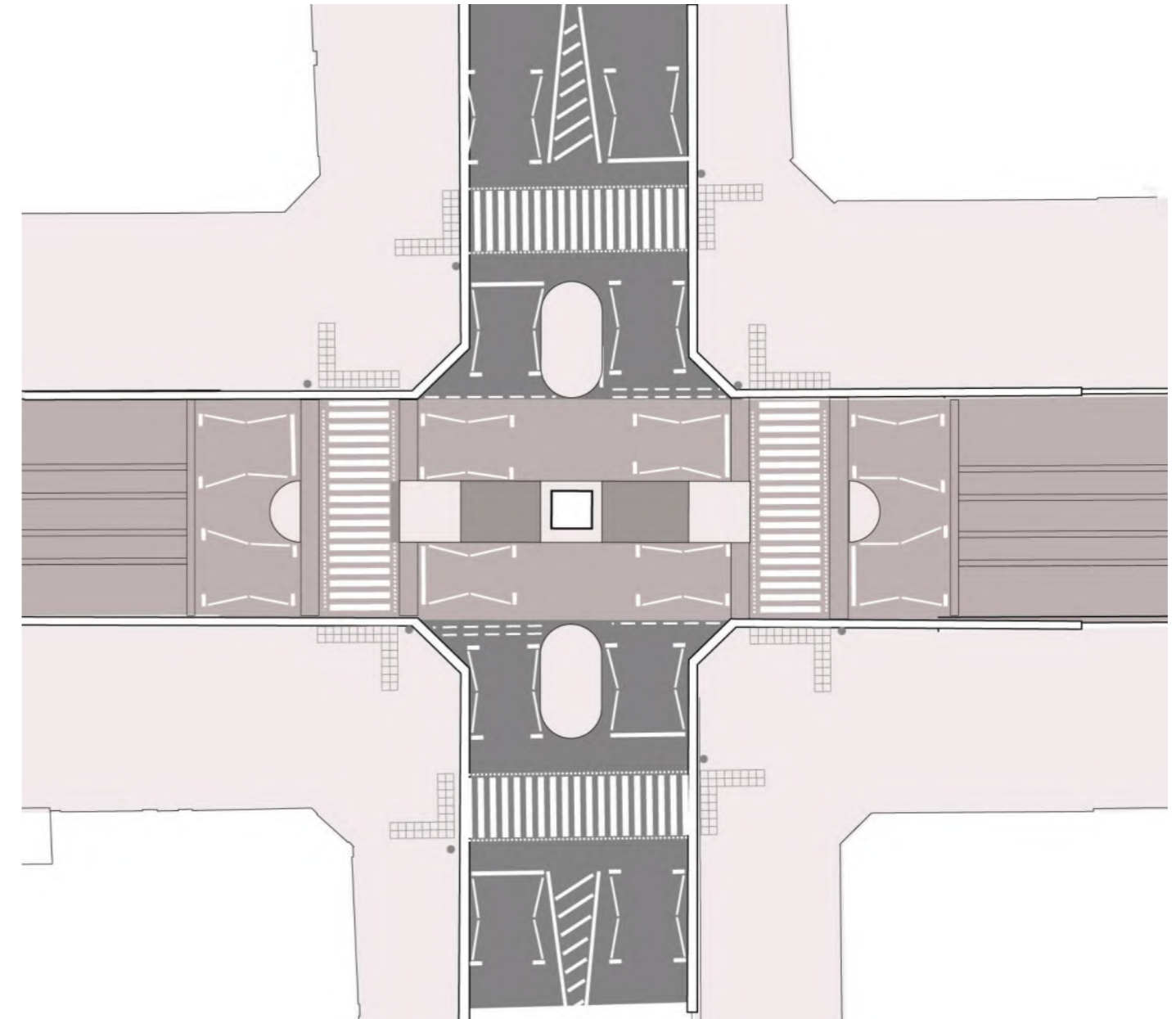
#### Pedestrian & Cycle Operation

- 4-way single-phased zebra crossings would be provided. Tactile and visually contrasting materials would be provided to aid navigation for visually and sensory impaired users.
- As with all typical zebra crossings, traffic would be required to stop for any pedestrians waiting to cross or already crossing the cycle carriageway. Pedestrians crossing to and from each approach of the junction would have priority over other users.
- Cycle movements east-west on the cycle carriageway would now have priority over vehicles travel on the north and south approaches.
- Cyclists would be exempt from right turning restrictions, giving them additional flexibility to turn in all directions from each approach of the junction.

#### Vehicle Operation

- Similar to the current operation, vehicles on all approaches would be required to wait for pedestrians waiting to cross or currently crossing.
- On Frederick Street (north and south approaches) buses and other vehicles would be required to wait at the give-way line to allow cycle (and other permitted vehicles) movements on George Street to clear the junction before continuing their journey.
- Right turning movements from all approaches (around the William Pitt, The Younger Statue) including U-turns would be banned.
- Only permitted vehicles (such as daily servicing and deliveries vehicles) would be able to turn left in and out of George Street during operating hours. Other traffic would be required to continue through the junction north-south to Princes Street or Queen Street.

Figure 7-3 - Frederick Street - George Street Stage 3 Junction Layout



#### Summary

- Frederick Street is one of the key bus corridors serving Edinburgh City Centre. The proposed junction design retains its essential functions for public transport and provides features to enhance priority for crossing pedestrians and cyclists on the George Street carriageway.
- Local access to residents/permit holder parking, taxi ranks and loading areas on Frederick Street is retained. To the south, existing vehicle restrictions Princes Street would also be retained; meaning buses, taxis and cyclists would be the main road users on this section of Frederick Street throughout the day. To the north, the junction of Frederick Street – Queen Street is the primary route for vehicle traffic to access the wider network.
- With proposed changes to city centre operation such as the CCT Bus Network Review and Low Emission Zone, Frederick Street will likely see an increase in bus movement and a general reduction in traffic volumes.
- Only permitted vehicles and cycles would access George Street.

Figure 7-4 - Frederick Street - George Street Junction Layout – 3D Visual





## 7.4. Hanover Street – George Street Junction

### Design Summary

Hanover St. is a vital north-south route for buses and will also become an arterial north-south cycle route following completion of the Meadows to George Street (MGS) Project. It is also expected to retain some north-south access for general traffic subject to the MGS TRO. As with the other junctions, the east-west cycle movement remains key. However, given the high volume of bus traffic, the proposed layout prioritises north-south movements on Hanover St.

Understanding Hanover Street is the most trafficked north-south route in the area, retaining 4-way signal control ensures that east-west movements from George Street are given appropriate time and space to complete their manoeuvres without the risk of conflict with north-south traffic. Raised pedestrian crossings to the east and west indicate priority to the north-south cycle/vehicle movement over the east-west cycle/vehicle movement. For cyclists, spaces adjacent to the George IV Statue form a 4m wide space to safely alight in the centre of the junction to wait to cross or perform a two-stage cycle left/right turn if desired.

On each approach signalised pedestrian crossings provide crossing opportunities for pedestrians. This level of control will help ensure that Hanover Street and the carriageway areas within the junction are clear of cycles and vehicles, particularly buses.

### Changes from the existing layout

- George Street becomes a cycle-priority street with a low (<20mph) design speed.
- 2-phased crossings, central pedestrian islands and other street clutter is to be removed.
- Signals operation at the junction is to be simplified to three phases: a north and south approach 'green' phase, an east and west approach 'green' phase and pedestrian 'all green' phase. These are shown in Figure 7-7 below.
- Crossings on each approach are realigned and required crossing distances are reduced from 16-20m to 11-15m. East and west approaches have raised crossing to provide an additional level of traffic calming travelling through the junction.
- Uni-directional cycle lanes are added to the east and west sides of the Hanover Street carriageway
- Contrasting overrun areas are provided on the north and south approaches to visually narrow Hanover Street and further reduce vehicle speeds on approach.

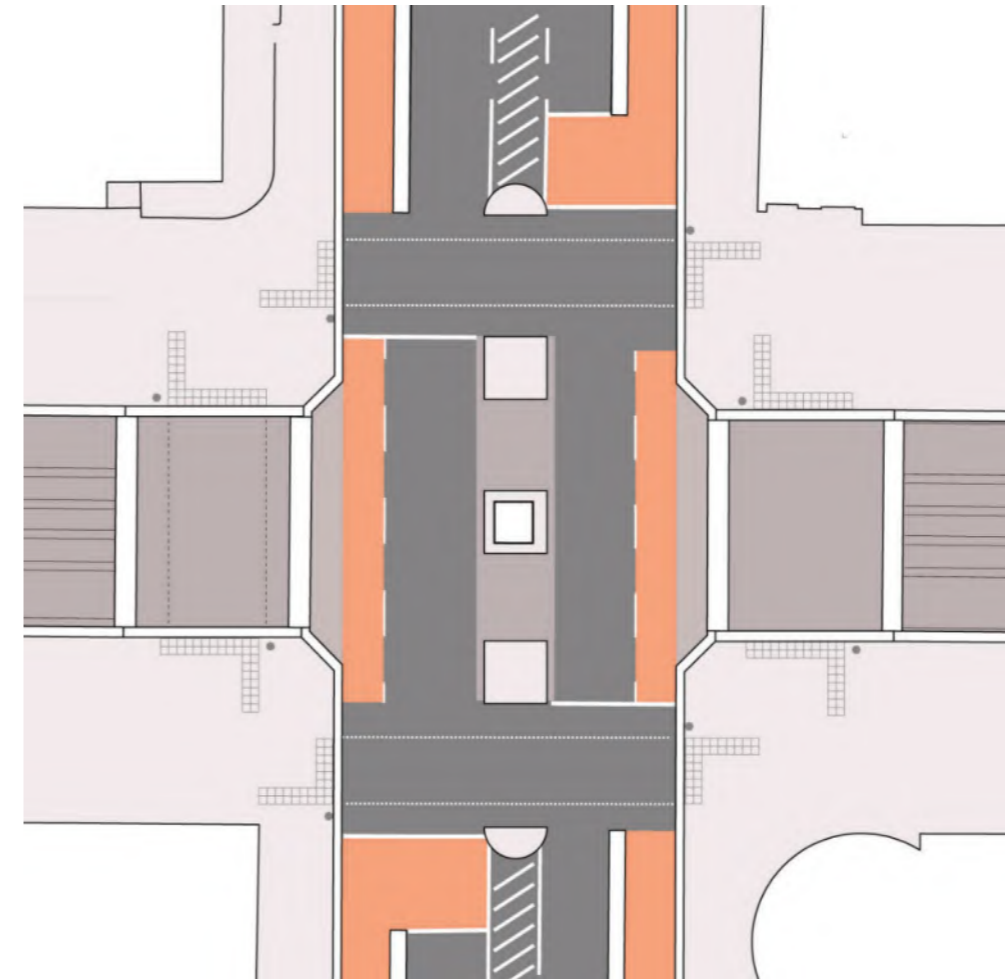
### Pedestrian & Cycle Operation

- 4-way single-phased pelican-style crossings would be provided. Tactile and visually contrasting materials would be provided to aid navigation for visually and sensory impaired users. While a 'green man' is shown for pedestrians an audible buzzer would also sound.
- Similar to the existing layout, pedestrians who want to cross must first press the button to activate the crossing, once it is safe to cross, a green man would illuminate, and traffic would be required to stop.
- During the north-south 'green' phase cyclists and vehicles on George Street (east and west approaches) would be required to wait at stop lines while signals
- Cyclists would be exempt from right turning restrictions, giving them additional flexibility to turn in all directions from each approach of the junction.

### Vehicle Operation

- Through traffic volumes would reduce and types of vehicles present on Hanover Street would change as a result of the Meadows to George Street and Low Emission Zone proposals. From 7:00am – 11:00pm each day, only buses, taxis and cyclists would be permitted to travel from The Mound to George IV Bridge via Bank Street, this is proposed to be enforced via an ANPR (automatic numberplate recognition) monitored bus gate. Existing bus north-south bus movements would likely see an increase in reliability.
- Right turning movements from all approaches (around the George IV Statue) including U-turns would be banned.
- Only permitted vehicles (such as daily servicing and deliveries vehicles) would be able to turn left into and out of George Street during operating hours. Other traffic would be required to continue through the junction north-south to The Mound or Queen Street.
- Similar to the current operation, vehicles on all approaches would be required to wait at stop lines while a red light is active to allow pedestrians to cross.

**Figure 7-5 - Hanover Street - George Street Stage 3 Junction Layout**



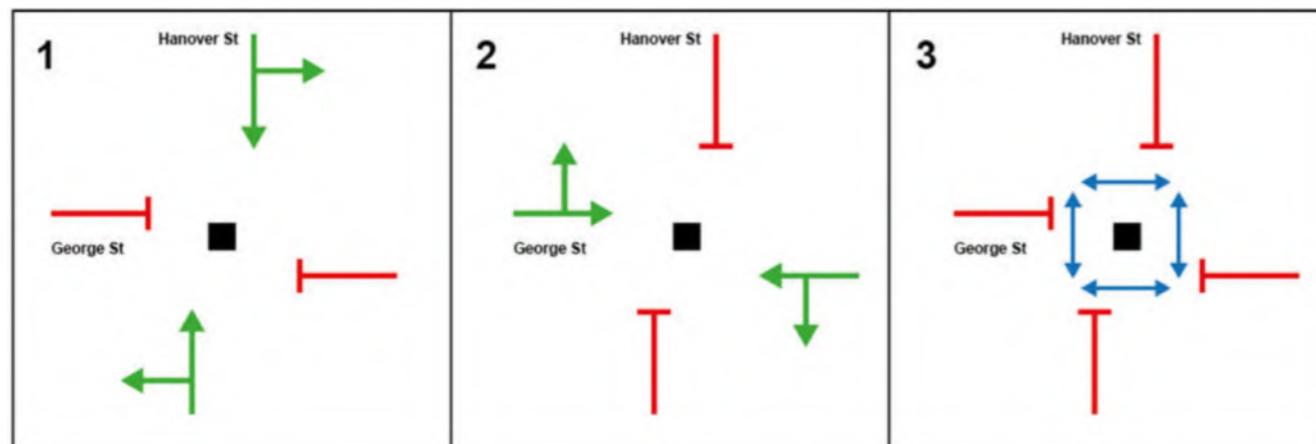
### Summary

- Hanover Street is an important bus and general traffic corridors serving Edinburgh City Centre. The proposed junction design prioritises north-south movements, particularly for public transport, while also managing vehicle speeds travelling through the junction.
- The junction has 4-way traffic signals with controlled pedestrian crossing on each approach.
- With proposed changes to city centre such as the Low Emission Zone and Meadows to George Street proposals background traffic flows on Hanover Street during peak daily hours will likely reduce. Only permitted vehicles and cycles would access George Street.

Figure 7-6 - Hanover Street - George Street Junction Layout – 3D Visual



Figure 7-7 - Hanover Street – George Street Junction Signal Phases



## 7.5. St Andrew Square – George Street Junction

### Design Summary

Similar to Hanover Street, St David Street and St Andrew Square is also an important north-south route for buses in the city centre. This route is proposed to become an arterial north-south route for cyclists following completion of the CCWEL project. The proposal signalised junction design gives each of the three approaches equal priority to facilitate these movements. While general traffic access is to be restricted on George Street, St Andrew Square will retain access to facilitate journeys travelling north-south towards Princes Street and Queen Street.

The junction is signalised on all approaches and would provide controlled crossing for pedestrians, ensuring the carriageway is clear of cycles and vehicles. Unlike the other junctions, pedestrian crossings on the St David Street (north and south) approaches are not raised. This is to avoid impacting the comfort of bus journeys and minimise any potential maintenance challenges. Understanding that through-traffic movements in future would be significantly reduced; traffic signal phasing at the junction proposes cyclist phases on all approaches operate in parallel to traffic phases, waiting in a central turning area within the cycle lane itself while giving way to vehicles currently on the carriageway. This will be explored further and fully defined within the Stage 4 (Technical) Design.

The design also proposes to move the James Clerk-Maxwell statue to a position on the footway outside the west entrance of St Andrew Square. Placing the statue here, serves both an aesthetic and functional purpose; repositioning it provides greater flexibility within the design and enables the simplification of the junction's layout and operation.

### Changes from the existing layout

- George Street becomes a cycle-priority street with a low (<20mph) design speed.
- 2-phased crossings, central pedestrian island and other street clutter is to be removed.
- The James Clark Maxwell Statue is proposed to be moved to a new plinth adjacent to St Andrew Square.
- Signals operation at the junction is to be simplified to three phases: a north and south approach 'green' phase, a west approach 'green' phase and pedestrian 'all green' phase. These are shown in Figure 7-10 below.
- A bi-directional cycle lane is added to the east side of the St David Street / St Andrew Square carriageway. Median islands are used to create a space for cyclists to alight wait waiting to cross to/from George Street.
- Crossings on each approach are realigned and required crossing distances are reduced from 16-21m to 11-11.5m.

### Pedestrian & Cycle Operation

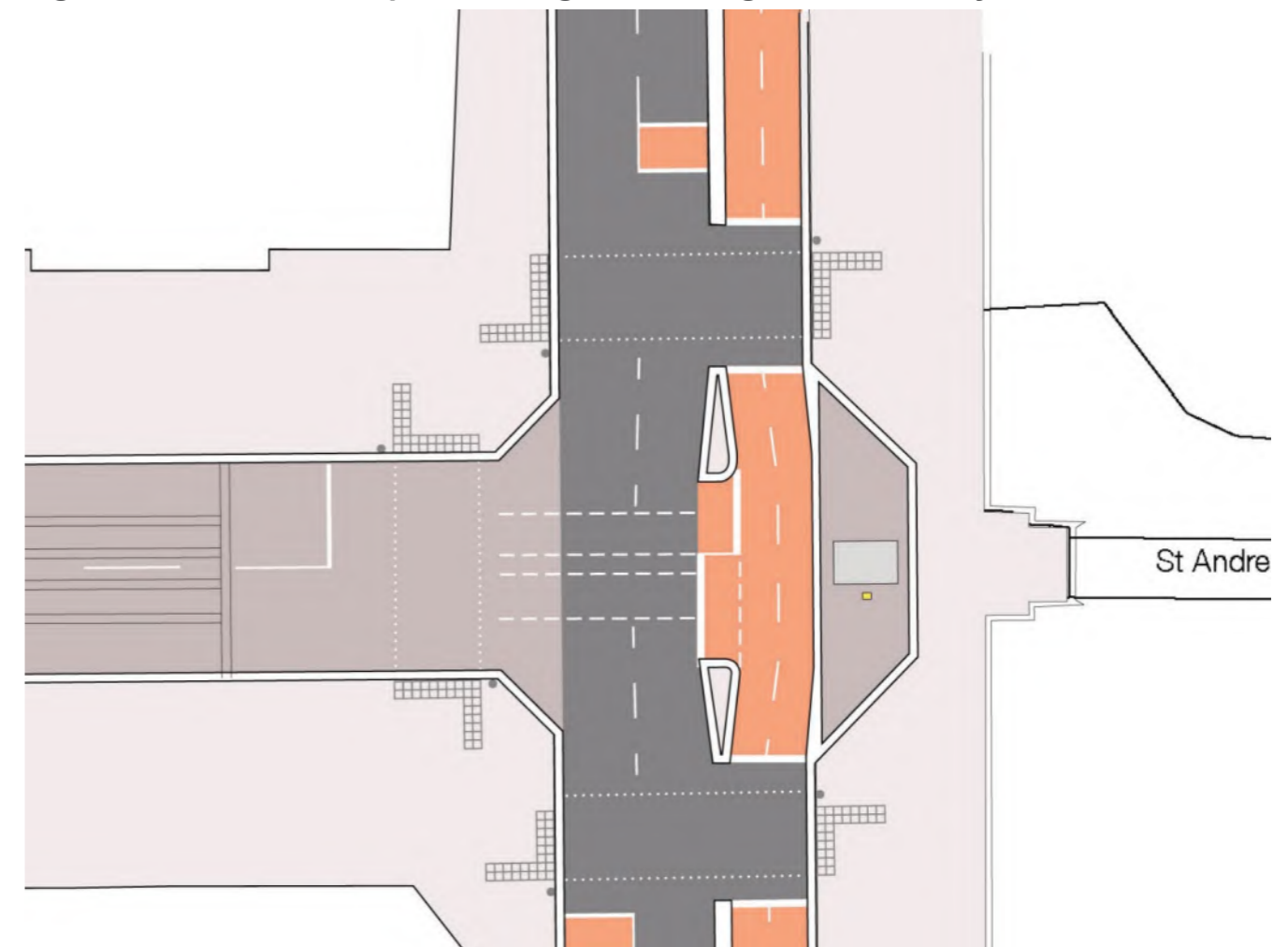
- 3-way single-phased pelican-style crossings would be provided. Tactile and visually contrasting materials would be provided to aid navigation for visually and sensory impaired users. While a 'green man' is shown for pedestrians an audible buzzer would also sound.
- Similar to the existing layout, pedestrians who want to cross must first press the button to activate the crossing, once it is safe to cross, a green man would illuminate, and traffic would be required to stop.
- During the north-south 'green' phase cyclists and vehicles on George Street would be required to wait at stop lines while signals.

- The CCWEL route is fully segregated from traffic travelling north-south, providing additional level of comfort and safety for cyclists. While within the junction cyclists would be required to give way to crossing pedestrians.

### Vehicle Operation

- Similar to the current operation, vehicles on all approaches would be required to wait at stop lines while a red light is active to allow pedestrians to cross.
- Through traffic volumes in the area would reduce and types of vehicles present would change as a result of the CCWEL and Low Emission Zone proposals. North-south bus movements would likely see an increase in reliability.
- Only permitted vehicles (such as daily servicing and deliveries vehicles) would be able to turn into and out of George Street during operating hours. Other traffic would be required to continue through the junction north-south towards Princes Street or Queen Street.

**Figure 7-8 – St Andrew Square - George Street Stage 3 Junction Layout**



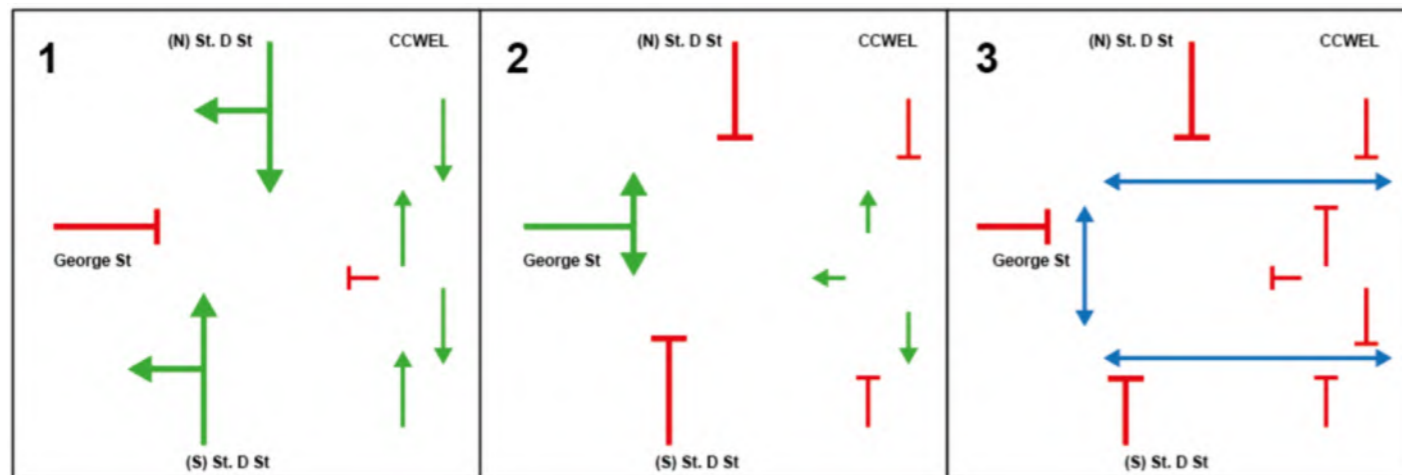
### Summary

- St Andrew Square / St. David's Street is another important bus corridor serving Edinburgh City Centre. With proposed changes to city centre such as the Low Emission Zone and CCWEL proposals background traffic flows around St Andrew Square during peak daily hours will reduce. This would likely increase in reliability north-south bus movements.
- The proposed junction design facilities cycle movement to the CCWEL route and provides segregation to north-south cycle movements.
- Only permitted vehicles and cycles would access George Street.

Figure 7-9 – St Andrew Square - George Street Junction Layout – 3D Visual



Figure 7-10 – St Andrew Square– George Street Junction Signal Phases



## 8. Walking, Wheeling, and Non-motorised Users

### 8.1. Introduction & CCT Context

City of Edinburgh Council's City Mobility Plan and City Centre Transformation policies recognise that the quality of inner-city spaces and the spatial framework itself impacts the success of local businesses (where they choose to locate and potentially invest), the quality of living for residents and attractiveness for visitors. The GNT project serves as an opportunity to improve the look, feel and operation of the city centre.

The Stage 3 design has been developed to support the needs of pedestrians of all ages and abilities. Proposed revisions to footway spaces and junctions promote improved desire lines, high-quality and level surface finishes, improved navigation and wayfinding. Reconsidering the transport hierarchy and vehicle access to George Street is also anticipated to reduce the volumes of traffic and unlock the potential of the currently cluttered, fatigued and untidy public realm spaces in the area.

### 8.2. Current Pedestrian Environment and Accessibility

George Street is characterised by its historic architecture, statues and scene vistas to Edinburgh Castle and The Forth, however is also dominated by vehicle-based transport. A majority of the space itself is dedicated to carriageways (to the north and south two-lane carriageways) and centrally allocated parking which detracts from the character and heritage of the street. At most times of year the area is cluttered with street furniture and other physical barriers which can limit pedestrian accessibility and present challenges to users such as the mobility impaired, the elderly or young families. Other street clutter such as railings, phone boxes, excessive signage and planters generally create obstacles for pedestrians crossing at junctions, causing delays and disruption at junctions. Footway widths and quality vary significantly across the area, with much of George Street's footways showing signs of damage and fatigue.

The variety of junction types and pedestrian crossing styles currently presents challenges to some user groups. At busier junctions with Hanover Street and Charlotte Square/Charlotte Street traffic signals with advanced cycle stop lines and multi-stage pedestrian crossings are provided to navigate very long crossing distances (often >15m). Where traffic is generally calmer, at junctions with Castle Street and Frederick Street, multi-stage zebra crossings are used, providing additional priority to pedestrians over east-west vehicle movements. The current design of these crossings and obstacles on the footway often encourages pedestrians to cross diagonally (ignoring formal crossing points) or unsafely crossing between queuing traffic.

Whilst public transport and coach services are limited to only the two eastern blocks of George Street, these services are currently well used during peak times. Parking on George Street is also well utilised throughout the day, attracting many vehicle users to the area, particularly trade and service vehicles. Road markings and carriageway surfaces in much of the area are significantly worn, these maintenance issues also generally detract from the pedestrian experience.

### 8.3. Public Realm Improvements

#### Design Approach

The approved GNT design principles aim to create more space on the street for walking and wheeling and make it easier and safer for users of all abilities to move around. The approach to footway spaces within the design is based on the following principles.

- Remove central median parking and kerbside parking to reduce the dominance of vehicles.
- Provide facilities which are 'accessibility for all'. Retain blue badge parking and promote inclusion for mobility impaired and other impaired user groups.
- Enlarge spaces available to pedestrians to improve the pedestrian experience
- Eliminate unnecessary street clutter (such as on-street signage or guard railings)
- Segregate pedestrian and cycle and vehicle spaces
- Retain and enhance key views and vistas within the streets
- Create areas for the public to dwell, including seating and break out spaces.
- Create a streetscape which is flexible and can host events without impacting pedestrian and cycle routes.
- Introduce a pallet of materials and high-quality finishes which communicates to cyclists and other vehicles on George Street that the traditional 'road' has been removed and that they are now the 'visitors' within this streetscape.

#### Footway design and function

With the removal of parking and reductions in carriageway spaces, there is c.30m of space (measuring northern building thresholds to southern building thresholds) to accommodate each of the street's required uses; as a pedestrian space and throughfare, a cycle / vehicle corridor and source of essential parking and loading facilities. The Stage 3 design seeks to prioritise pedestrian movement over other travel modes through a number of key layout changes including the introduction of significantly wider, unobstructed footway corridors and enhanced pedestrian crossings at all junctions. Figure 4-2 and Figure 4-3 above illustrates the proposed zone-based approach to George Street's footways. This includes a number of distinct areas detailed below.

#### 'Spill-out' Zones

The 'spill-out zone' is an approximately 2.5m wide zone adjacent to building frontages, though this varies based on individual building thresholds. This zone caters for controlled commercial spill-out (such as on-street seating for bars and restaurants) and slower moving pedestrian traffic (such as window shoppers) on both sides of the street, giving them a space to pause or access amenities on street. These areas are proposed to be constructed using Yorkstone Flags and longitudinal bands of contrasting material used to clearly define spill-out zones from the main footway corridor. Smaller cubes of material are proposed be used to highlight the thresholds of key buildings.

#### Pedestrian Movement Corridor (Main Footway Zone)

The main footway zone at the centre of the north and south footways is proposed to be a 4m wide corridor which has no obstruction or street furniture. This zone would facilitate faster moving east-west pedestrian movements. Delineation between the footway zones would be done using longitudinal banding of visually contrasting stone material.

#### Flex-zones

Between loading/ blue badge parking areas and the main footway zone 2.5m wide flexible zones are proposed. The specific function of these is yet to be agreed at this stage, these may be provided as additional spill-out areas for adjacent businesses, extended footways or will otherwise function as an inventory zone where necessary street furniture such as cycle parking, bins, fuse boxes, temporary/permanent Hostile Vehicle Mitigation (HVM) measures, etc. would be installed.

### Landscaped Seating Areas

Towards the centre of each block of George Street four landscaped seating areas are proposed. These combine planting and low stone walls to create sheltered seating areas where people can comfortably dwell in the street. Each of these areas are to be 5m wide and 16.5m long. Their function is envisaged to be adaptable and cater for a range of activities including incidental play. Gaps between landscape seating areas would be provided to introduce informal crossing opportunities (including dropped kerbs and tactile paving where appropriate) and improve the north-south permeability across the street.

### Other Pedestrian Design Features

#### Central Squares

Raised central squares are proposed at the centre of each block of George Street, these are provided in order to highlight key buildings such as Assembly Rooms, The Dome and St. Andrew's & St. George's West Church. These spaces open up the street, providing unobstructed vistas of key buildings and of the street as a whole. To provide additional support local business operation these spaces are also proposed to be used as taxi ranks and reserve areas loading (particularly for larger vehicles) during permitted hours.

The primary purposes of these are to slow down traffic and allow for informal street crossing points mid-block. It is also anticipated these spaces may be used for on-street events. The central squares are at the same level as the footway and are accessed by a ramped entrance kerbs, this is to help emphasise to both cyclists and motorised vehicles that this is a pedestrian priority space. Physically the squares would be formed through the use of different paving and material styles, this ensures features on these footway are visually distinct for those with visual or other impairments. Additional measures around the squares to aid navigation (such as tactile paving) and protect pedestrians (such as bollards and other street furniture) will continue to be developed as part of the Stage 4 design.

#### Raised Crossing locations

Raised zebra-style crossing points are proposed on the George Street approaches of the George Street-Castle Street and George Street-Frederick Street junctions. These enhance pedestrian experience by widening crossing points (therefore increasing the capacity for crossing pedestrian movements), while also acting as a traffic calming measure (such as a speed hump) slowing traffic on approach.

#### Continuous footways

On the Castle Street and North Castle Street approaches of the Castle Street-George Street-North Castle Street junction continuous footways are proposed. These sections of footway would be provided at the same level as the surrounding footways on George Street without visual breaks or changes in design. Different to a raised crossing, vehicle drivers are expected to treat these areas as part of the footway gain access George Street / Castle Street. Drivers entering these streets would be required to wait at stop lines for an appropriate gap in pedestrian movements to travel up and across the footway. This also aims to reduce vehicle speeds on approach.

Changing the hierarchy at these crossings allows east-west (cycle dominant) movements on George Street to have priority and provides greater space and priority to pedestrians over a raised crossing or other traditional uncontrolled crossing type e.g. zebra.

## 8.4. Improving accessibility and inclusion

### Equalities considerations

The CCT Strategic Environmental Assessment (SEA), published alongside the CCT delivery plan in September 2019 discussed the potential impact of CCT and the GNT project by travel mode, and highlighted key challenges to improving accessibility within the city centre, including

- The need to improve pedestrian priority and safety (Currently vehicles are dominant in the area)
- General lack of public seating
- The current street layout does not fully align with the desired pedestrian movement
- The Need to rationalise street clutter

### Edinburgh-Specific Considerations

Based on 2011 Census Data, and the yearly Scottish Household Survey (SHS) Edinburgh has one of the fastest growing populations of any city in the UK. Considering equalities characteristics, over 15% of (c.75,000) people across the city are considered to have a long-term condition or disability which impacts their mobility, 14% of the city's population is over 65 and 15% is under the age of 16, considering ethnic background Edinburgh's population is 91% White, 6% Asian, 1% Black, 1% Arab and 1% other ethnicities.

### Current accessibility

For low mobility and impaired users road crossings and junctions are known to be challenging to navigate within the current street layout. Multi-stage crossings, indirect desire lines and the lack of available footway space to alight on footways and pedestrian islands while crossing and street clutter such as guard rails results in an environment which increases the risk of discrimination against vulnerable users. Poor footway quality and fatigue in the area is also considered a barrier to access for limited mobility groups.

### Inclusive Design Approach

Ensuring accessibility for users of all abilities is a key element of the GNT Project. Inclusivity and consideration of those with impairments, whether visible or non-visible, and other equalities groups is embedded within the design and operational plan's development at this stage. The City of Edinburgh Council under CCT is also looking to integrate the scheme with other local initiatives to help people in equalities characteristic groups become more active.

Within the design, footways and crossing locations have been designed to be ergonomic, intuitive, improve movement capacities and provide a greater quality of pedestrian experience. A consistent approach to providing inclusive facilities such as audible buzzers and tactile cones at controlled crossings, dropped kerbs and tactile materials at informal crossing locations and contrasting materials to illustrate footway zones has been used to improve the visual coherence of the scheme. These features are anticipated to provide points of reference for those with visual impairments and other protected characteristics when navigating the space.

Upgraded footways in the area are also be proposed to be at a consistent level travelling east-west, removing the current risk of slips and trips and improving the accessibility for low mobility groups such as wheelchair users. At pedestrian crossing points, all median islands have been removed and crossing locations realigned to reduce required crossing distances and more directly align with desire lines. Kerb lines throughout the design would be provided with a minimum vertical delineation of 100mm in order to improve visibility and accommodate users with partially sightedness, whether walking independently or with a guide dog.

## User benefits

The main beneficiaries of the scheme are anticipated to be pedestrians using the street who will benefit from wider footways, improved crossings and reduced traffic volumes in the area. Similarly, those who already cycle regularly to commute or for leisure as well as those less confident cyclists which would consider changing modes would also benefit from the improved street environment. Alongside these users blue badge holders looking to access shops and businesses in the area, retail shoppers, tourists and businesses in the area would all benefit from the improved accessibility and associated increase in footfall in the area. Public transport users will also have the opportunity to benefit from the scheme through improvements to footway accessibility, repositioning of bus stops and reduced general traffic movements in the area.

This notwithstanding, the proposed restrictions to vehicle access may impact disproportionately on those reliant on bus and taxi services outwith daily 'access window' hours. The location of bus stops and taxi ranks on intermediate streets will be located as close to George Street as possible to help mitigate any impact. Further equalities impact of the project is dependent on the implementation of the Edinburgh City Centre Transformation policy going forward. For example a number of potential transport interventions which target travel for impaired and older users (such as a local shuttle bus service) are identified, though are yet to be developed in detail at this stage.

## Equalities impacts

Access to all areas of the First New Town will be maintained and improved for pedestrians, though likely walking trip lengths to/on George Street (and journey times) may increase for some users during periods of the day. Steep gradients on Frederick Street and Hanover Street currently restrict access to George Street for mobility impaired and will continue to do so. Bus stops are proposed to be positioned closer to George Street in order to minimise required walking/wheeling distances and promote greater pedestrian comfort. Restrictions on taxi access to George Street could also have a detrimental impact on the access to the who are often reliant on these to get around. The introduction of public seating on George Street will for the first time create "rest" areas for a range of user groups whether families, older people and low mobility groups who are often reliant on these to get around.

Further engagement and an updated Integrated Impact Assessment will be produced to further explore and mitigate these impacts.

### **Low mobility groups (wheelchair users, maternity groups, older people and young children)**

The design is anticipated to enhance accessibility for these users. Features such as widened footways throughout the area, comfortable seating and spaces to rest, improved long-term air quality, reduced noise, level and quality surface finishes and improved crossing provision would promote movement around the area in future.

Physically impaired people would also likely experience a positive impact from the improved accessibility of the area and its recreational spaces.

**Sensory impairments and other non-visible disabilities** - There is likely to be a positive impact, for those with sensory impairments and other disabilities with additional footway space and a generally safer space for all users. Design features introduced above would create a more welcoming and cohesive street environment which aims to improve the quality of life of people with learning disabilities and other mental health issues. Rationalising parking and removing general traffic access to George Street is anticipated to significantly reduce through traffic volumes in the area, resulting in a less congested and more comfortable sensory environment to be in for those with mental impairments to dwell in.

## 8.5. Pedestrian Comfort, Seating and Street Furniture Design

### Wayfinding

Wayfinding information and signage within the design will also need to be improved to support pedestrian journeys in future. These features will be developed during the Stage 4 (Technical) Design. It is understood that The City of Edinburgh Council are also developing a 'Physical and Digital Wayfinding Strategy' to support the public realm interventions introduced as part of CCT going forward.

Considering current provision and the general approach to Wayfinding within Edinburgh City Centre, informational boards and maps are positioned at key bus interchanges, such as Waverley Rail Station and local destinations such as Rose Street and Princes Street Gardens. There is limited provision on George Street and adjoining First New Town streets. Despite much of the area being highly accessible for pedestrians and within a 5–10-minute walk from Princes Street and other local attractions, the area is generally not advertised or explained to pedestrians. Navigation for pedestrians in the area is therefore often reliant on local knowledge and for those which aren't familiar, online mapping, e.g. visitors and tourists.

Enhanced wayfinding can bring a variety of benefits to the pedestrian experience in the area, such as increasing comfort, safety, and familiarity for everyday journeys. Visually distinct and stylish forms also assist in the development of a local brand/identity, can further improve the coherence of the street environment and help people to orient themselves, especially visitors and tourists.

Understanding the area forms part of the Edinburgh City Centre UNESCO World Heritage Site, careful consideration will need to be given at the next stage to any final wayfinding signage and infrastructure. This is anticipated to be informed by further consultation with Edinburgh World Heritage and other local stakeholders. Under current Council guidance signage etc. is also noted to require planning consent.

### Landscaped Seating Areas

The lack of publicly available seating (outdoor seating not associated with the many bars and restaurants of the area) is known to be a barrier for access for older people and those with limited mobility. These people and those from other vulnerable groups are often put off walking in the city centre due to lack of opportunities to stop and rest when required.

Eight landscaped seating areas are proposed within each block of George Street (totalling 24 across the full length of the street). Shown in Figure 8-2 - Figure 8-4 below, these are designed to provide users an opportunity for c.150 people to pause and enjoy the street. Compared to the existing provision, there is only one permanent bench on George Street, positioned adjacent to St. Andrew's and St George's West Church. Low-level planting is also integrated to soften the streetscape; this allows these areas to also function as 'rain gardens', capturing surface water and contributing to the sustainable urban drainage strategy for the area.

The temporary use of these areas by adjacent businesses, e.g. for additional bar/restaurant seating or for local events, has also been explored at this stage. The use of such spaces will form part of a wider discussion on the future management and usage of George Street. Using these areas would require businesses to apply for Council permissions via an online application form for an Outdoor Area Occupation Permit, also known as a 'Table and Chairs Permit', and appropriate alcohol sale licenses.

### Street furniture and ergonomics

The street furniture palette (including cycle stands, bollards, and seating) has initially been developed through discussion with stakeholders including heritage and accessibility groups. The Stage 3 design features have been developed to be respectful and complimentary to the World Heritage Site environment in which the street is located, robust enough for everyday use and minimise maintenance burdens post-construction. Provision, location and styles of street furniture will be finalised within the Stage 4 (Technical) Design.

Seating areas have been developed in line with the following considerations/principles –

- **Flexible** - The provision of arm rests and back rests can mean the difference between someone with impaired mobility being able to use a seat or not. The design aims to provide a mix of different seating styles, e.g. a mix of seating within freestanding benches and more permanent seating in-set into stone ledges and a mix with higher/lower arm rests and back rests etc. This approach provides options to pedestrians based on their level of comfort and gives the space itself additional flexibility.
- **Comfortable and convenient** – seating will be designed to make the street feel comfortable and safer. Natural materials are to be provided to put the user at ease and styles selected which maximise comfort for people of all abilities. Consideration has also been given to providing circulating spaces between benches/seating, promoting a greater sense of personal comfort and providing opportunities for wheelchair users to engage with these areas.
- **Visually Distinct** - In order to aid navigation and comfort for people with impaired vision, materials of seats themselves (and adjacent walls) would contrast in colour and tone with the surrounding footways and planting areas. This assists in making the boundaries of these areas more definable, helping people identify which areas are safe to sit.

Figure 8-1 - Indicative GNT Street Furniture Designs



### Public Artwork

The provision of public artwork on George Street as part of the public realm design has been explored at this stage. This aims to increase the level of pedestrian interaction with the street, potentially introduce elements of play and help attract visitors to the area. Introducing art would also be a way to celebrate the unique and diverse community and history of the First New Town. Studies show artwork can improve public wellbeing, when provided on street this would be anticipated to naturally slow down pedestrians, giving them a greater opportunity to dwell and engage with the area.

Specific locations and provision will be agreed during the Stage 4 (Technical) Design. Initial options discussed at this stage include:

- Artwork within paving or engravings on stone surfaces
- Heritage plaques / signage within stone features or seating areas
- Art installations / bespoke stand-alone sculptures within seating areas
- Bespoke street furniture e.g. stylised benches, bollards, cycle stands, bins etc.
- Creative and interpretative feature lighting

### Summary

- The current street layouts are dominated by parking and carriageway spaces which detracts from the character and heritage of the area. Footway widths and quality vary considerably, current damage and fatigue reduces accessibility for pedestrians.
- The proposed design has been developed to support the needs of pedestrians of all ages and abilities. It has also been developed to complement the historic architecture and scenic vistas of the area.
- A zone-based approach to footway design has been used to create areas of distinct character and function on George Street. Footway widths are proposed to be increased and all crossings realigned to better meet pedestrian desire lines.
- Pedestrians within the proposed design would be provided additional priority when crossing through improved raised and continuous crossing types.
- The design of wayfinding signage, street furniture, public artwork and other pedestrian welfare facilities will be finalised within the Stage 4 (Technical) Design.



**Figure 8-2 – Proposed GNT Design – Landscaped seating areas**



**Figure 8-3 – Proposed GNT Design – Flexible use of seating areas**



**Figure 8-4 - Proposed GNT Design – Indicative seating design**



## 9. Cycling

### 9.1. Introduction

Cycle travel is suitable both to complete journeys or part of a journey. For cycle users this can lead to a range of positive individual and shared benefits; these include improved health, reduced traffic congestion, reduced pollution, and financial savings over vehicle travel. Encouraging more people to cycle would positively contribute to the City's Net Zero 2030 commitments, objectives relating to public health, quality of life and help tackle the current climate emergency.

Around 72% of journeys to work or education in Edinburgh are within a realistic cycling distance of under five kilometres (5km or approximately three miles).

### 9.2. Context

#### GNT, CCT and Edinburgh's Future Cycle Routes

The removal of parking, reduction of carriageway widths and restrictions to vehicle movements brings potential benefits for both pedestrians and cyclists in the city centre. The removal of buses from George Street also provides opportunities to further reduce carriageway geometries and provide traditional forms of traffic calming to deter through-traffic movements. The space itself can then be designed to prioritise the movement of pedestrians and cyclists.

In parallel to the GNT Project, The Meadows to George Street Active Travel Route (MGS) and City Centre West to East Link (CCWEL) are also being progressed. These would interface with the project study area at Charlotte Square, Hanover Street and St Andrew Square/St David's Street. The proposed future inner city cycle network is shown in

Figure 9-5 below.

Meadows to George Street – The MGS project proposes to provide segregated cycleway (both unidirectional and bi-directional) improvements from Teviot Place along Forrest Road, George IV Bridge and the south section of Hanover Street. Additional north-south cycle connections to the Second New Town via the north side Hanover Street to Dundas St, and areas such as Canonmills and Stockbridge are also being considered by The Council.

City Centre West-to-East Link (CCWEL) – Already under construction, CCWEL will provide fully segregated bidirectional cycle connections from Roseburn Path in the west to York Place in the east. The route is to be a safe, direct and provide an increased level of comfort over existing facilities. The CCWEL route once completed, aims to provide an attractive 'family friendly' facility to encourage less confident people and cyclists to take up cycling as an everyday mode of travel to and from work, places of education and for leisure.

Understanding the need for coherence across each cycle facility, at this stage there has been a significant level of dialogue between the three respective project teams. Each proposed design has been developed to take cognisance of each other in order to provide an active travel network of consistent standards and quality.

The GNT Project will form a central part of the city centre cycling network, though its street design must also lend itself to become a destination where pedestrians, cyclists and other users are encouraged to visit, travel through and dwell in.

### Existing Routes

National Cycle Routes 1 and 75 currently travel on-road along George Street and Hanover Street. These connect to other primarily on-road local cycle links such as the Union Canal (via Edinburgh's West End, The Meadows (via the Mound and George IV Bridge), Leith Walk (via the Trams to Newhaven project cycleways) and Easter Road. Many of the streets surrounding the GNT study area are denoted as core paths, these vary from busy main roads such as Princes Street and Shandwick Place to quieter traffic restricted streets such as Melville Street and Manor Place.

### 9.3. Cycle Street

#### Principals

The Stage 3 design measures have been developed to reinforce a new transport hierarchy, which aims to deter car and vehicle use and prioritising cycling. The George Street carriageway is proposed to become a 'cycle street' in future. The design aims to create an environment in which vehicles are treated as guests. Initially pioneered across Europe (Belgium, Denmark and The Netherlands), cycle streets operate using the following principles:

- The carriageway is reserved for bicycles and essential vehicle movements only.
- Vehicle access is limited, this is typical done using timed restrictions.
- Maximum carriageway speeds for vehicles should be the equivalent to the speed of an average cyclists, this is anticipated to be 10-20 mph. Physical and visual traffic calming would be provided to reinforce this.
- All road users should be conscious and considerate of each other and pedestrians, overtaking cyclists would be discouraged.
- In order to minimise conflicts, parking and loading should only take place within specified bays and not on the main carriageway lanes.

As the concepts involved in the operation of cycle priority streets are new to Edinburgh and Scotland. When implemented, it is anticipated that few drivers (and cyclists) will be aware of the changes. It may be necessary to develop an informational campaign via social media, the project website etc. to communicate how cyclists are intended to navigate the area.

**Figure 9-1 - Visstraat (implemented 2009) Dordrecht, Netherlands**



## Operation

The design aims to provide intuitive facilities which grant a greater level of comfort and freedom for less confident cyclists. It is proposed cyclists would travel along the carriageway as the dominant mode of travel on George Street in future, connections to adjacent cycle routes would be provided at Hanover Street and St Andrew Square using on-street segregated cycle lanes. In line with changes to the Highway Code introduced in January 2022, cyclists on George Street would also be encouraged to travel in the centre of their lane. It is noted cargo-bikes and e-cargo bikes would have unlimited access throughout the day, this is anticipated to influence delivering patterns in the area going forward.

For much of the day, from 10:00am – 7:00pm Monday to Saturday and 7:00pm – 12:00pm on Sundays, cyclists would have priority use of central carriageway facilities. During these hours' deliveries, servicing, taxis and other vehicle travel would not be permitted on George Street unless managed by cargo-bike. Only those vehicles considered exempt (such as blue badge holders) and those with consent from the Council via permit (e.g. for essential works/construction or events vehicles etc.) would be granted access.

The proposed cycle street design would also give priority to cyclists travelling east-west on George Street at junctions; vehicles travelling on Castle Street/North Castle Street and Frederick Street would be required to yield to cyclists. At Hanover Street, movements from George Street would be given equal priority using traffic signals.

Physical traffic calming measures, including raising north-south crossing points and central squares and visually narrowing carriageway lanes to 5m wide using banded materials, will be introduced in order to reduce vehicle speeds on George Street, examples of this are shown in Figure 9-3 and Figure 9-4 below. These measures aim to enhance safety and security for cyclists and promote increased vigilance of crossing pedestrians. It is anticipated that the cycle carriageway would also be constructed 50-100mm lower than footway levels, similar to a typical carriageway to provide a level of physical segregation between pedestrians and cyclists.

Additionally, road markings have not been developed as part of the Stage 3 design, it is anticipated that there will be as few markings as possible to facilitate the cycle street design.

## Cycle Parking

Accessible cycle parking is an important component of encouraging people to access the area by bicycle in future. When positioned correctly it can create convenient stopping points for work, shopping or leisure-based cycle journeys. Within the design cycle parking is proposed at locations adjacent to the central zones. This would consist of four groups of ten Sheffield-style cycle stands (totalling 40) within each of the four blocks of George Street. This would increase the formal cycle parking capacity of the area to 160 bicycles. Cycle parking is also to be located on Castle Street, Fredrick Street and Hanover Street, final locations, and capacity of these are to be agreed during the Stage 4 (Technical) Design.

Inclusion of e-bike charging points will also be investigated at the next stage.

Figure 9-2 - Sint-Antoniesbreestraat (implemented 2008) Amsterdam, Netherlands



## Summary

- The GNT Project will form a central part of the city centre cycling network, George Street will form part of the future City Centre West-to-East Link (CCWEL) and Meadows to George Street (MGS) cycle routes.
- The GNT design aims to provide intuitive feeling cycle facilities which grant a greater level of comfort and freedom for cyclists. This aims to encourage more people, especially less confident cyclists to be active and further reduce the dependency on vehicle travel in Edinburgh.
- It is proposed George Street would become a 'cycle street' allowing cyclists to travel along the carriageway as the dominant mode of travel in future. The cycle street is, in essence, a 6m wide cycle priority carriageway running along the centre George St. It would be delineated with contrasting bands of material to visually narrow the street to 5 m. While these lanes do not outline the 'carriageway' itself, these are a way to visual way to define the route for people cycling, a method of slowing vehicles and discouraging motor vehicles from overtaking cyclists.
- For much of the day vehicles would not be permitted on the street (other than exempt users such as blue badge holders), from 10:00am – 7:00pm Monday to Saturday and 12:00pm – 7:00pm on Sundays, cyclists would have priority use of the street.
- Cycle parking for up to 160 bicycles is provided with the proposed design. Within each of the four blocks of George Street 40 cycle parking is proposed at locations adjacent to the central zones and seating areas. Additional stands are to be located on Castle Street, Fredrick Street and Hanover Street, the final locations of these are to be agreed during the Stage 4 (Technical) Design.

Figure 9-3 - Proposed GNT Cycle Street Design - Central Zones



Figure 9-4 - Proposed GNT Cycle Street Design



Figure 9-5 - Edinburgh CCT Cycle Network



# 10. Public Transport

## 10.1. Introduction

A thriving public transport system is a vital part of a city’s infrastructure, increasing its accessibility, while also supporting sustainability and providing a more liveable environment for its residents. Considering existing travel patterns, the people of Edinburgh already have (most recent statistics from 2019) the lowest relative percentage of journeys to work undertaken by cars (41%, decreasing from around 45% in 2018) and the greatest percentage of people using buses or bicycles (32%, noted to be around three times the national average) when compared to other Scottish cities. The GNT Project serves an opportunity to further guide this mode shift and decrease dependence on private vehicle travel.

A review of the city centre public transport network is being conducted by The City of Edinburgh Council as part of the City Mobility Plan (CMP) and City Centre Transformation (CCT) strategic policies. This is with a view to optimise service provision within the inner city and provide journey time improvements by rerouting services, repositioning stops and turnaround locations to reduce congestion and free up footway/carriageway spaces which in turn can be used for public realm schemes.

Bus demand on George Street is understood to vary by block; between Frederick Street-Hanover Street c.16 and Hanover Street-St Andrew Square c.78 bidirectional bus movements travel on George Street per hour during peak daily operation times (7:00am – 8:00pm for most services).

Improving journey times and journey time reliability of bus services in Edinburgh, not only in the city centre, would generally make it easier for people of all abilities to access employment, education, leisure and other opportunities in the city. Considering the wider goals of Edinburgh CMP and CCT, improvements to bus services would also contribute to reducing vehicle traffic and congestion on key city centre routes such as Princes Street, Queen Street / York Place, Hanover Street and Lothian Road, also resulting in benefits for vehicle users and delivery/service providers.

In line with the objectives of the GNT Project this ‘Bus Network Review’ study would also recommend measures to enhance the quality of facilities provided at bus stops, improve the amenity for travellers in the city centre and increase capacity/number of daily users; therefore contributing to the economic attractiveness of the city centre and potentially encouraging further investment.

## 10.2. Proposed Service Provision and CCT Considerations

While the impact of the ‘Bus Network Review’ study will have on local bus routes is still to be fully realised, it is proposed that bus access, including tour buses be removed from George Street in future. This enables a reduction in carriageway areas required to facilitate vehicles turning movements and traffic lanes, allowing greater allocation of space for pedestrians and cyclists within the proposed design.

Within the study area, bus services are proposed to be retained on Frederick Street, Hanover Street and St David street. In consultation with Lothian Buses and other service providers final stop locations are to be agreed during the Stage 4 (Technical) Design process.

The seven existing stops on these streets will be retained close to their existing positions these are shown in

Figure 10-1 below, this includes

- 3 stops on Frederick Street, one north of the junction with George Street on the west side and two to the south of the junction on both sides. Each are to be retained as traditional bus stops with bus bays on the carriageway.
- 4 stops on Hanover Street, two located north of George Street on either side of the carriageway (part of the GNT Project) and two to the south junction on either side of the carriageway (part of the MGS Project). These are proposed to become a ‘floating’ bus stops.

Other potential benefits arising for the proposed changes to service patterns include:

- Improved bus service reliability and journey time savings for routes traveling north-south through the city centre.
- Refined bus stop locations (resulting in reduced walking distances to onward destinations) and improved stop designs, including real-time information and other smart technologies.
- Frederick Street and Hanover Street effectively become bus, cycle and taxi priority streets (including delivery and servicing vehicles during permitted hours) for a majority of the day.
- Reduced bus congestion on Frederick Street, Hanover Street and St Andrew Square.
- A more attractive environment for pedestrians on George Street, wider footways and greater accessibility for public transport on adjacent side streets.

### Floating Bus stops

Adjoining with the Meadows to George Street Project on the southern section of Hanover Street, ‘floating’ bus stops are provided in order to segregate cycle movements from the dominant flows of north-south traffic, therefore mitigating potential conflicts with pedestrians and other vehicles and generally promote greater safety for all users. Practically speaking, floating bus stops are a simple method to maintain access to public transport while giving cyclists and vehicles their own lanes. In this configuration (seen in Figure 10 -2 and Figure 10 -3 below), cyclists would travel behind bus stop locations giving them an added level of protection from traffic.

Following the design approach used on Leith Street and other current cycle schemes across Edinburgh, bus stop shelters and hardstanding areas for alighting passengers on Hanover Street would be positioned within a ‘floating’ island 2-3m wide. This provides a sheltered space separate from the main footway and building frontages on Hanover Street for bus passengers to stand or sit prior to boarding. The design aims to manage the high flow of pedestrians seen in the area and remove the obstructions which more traditionally designed bus stops (and their alighting passengers) are known to cause.

### Summary

- Bus services are to be removed from George Street; the realignment of existing services is to be explored as part of the CCT ‘Bus Network Review’ undertaken by The City of Edinburgh Council. No changes are proposed to the operation of St Andrew Square / St. David’s Street.
- Within the study area bus services are to be retained on Frederick Street, Hanover Street and St David Street Floating bus stops are to be provided on Hanover Street, while more conventional style bus stops with bus bays are to be provided on Frederick Street.

To aid pedestrians crossing to and from the 'floating' islands mini zebra crossings 1-1.5m wide would be provided. Coloured markings and tactile paving would be used to increase the visibility of crossing locations and provide greater priority to pedestrians. Similar to operation of a typical zebra crossing positioned on-road, this would require cyclists to slow and stop to give way to pedestrians at or already on the crossing.



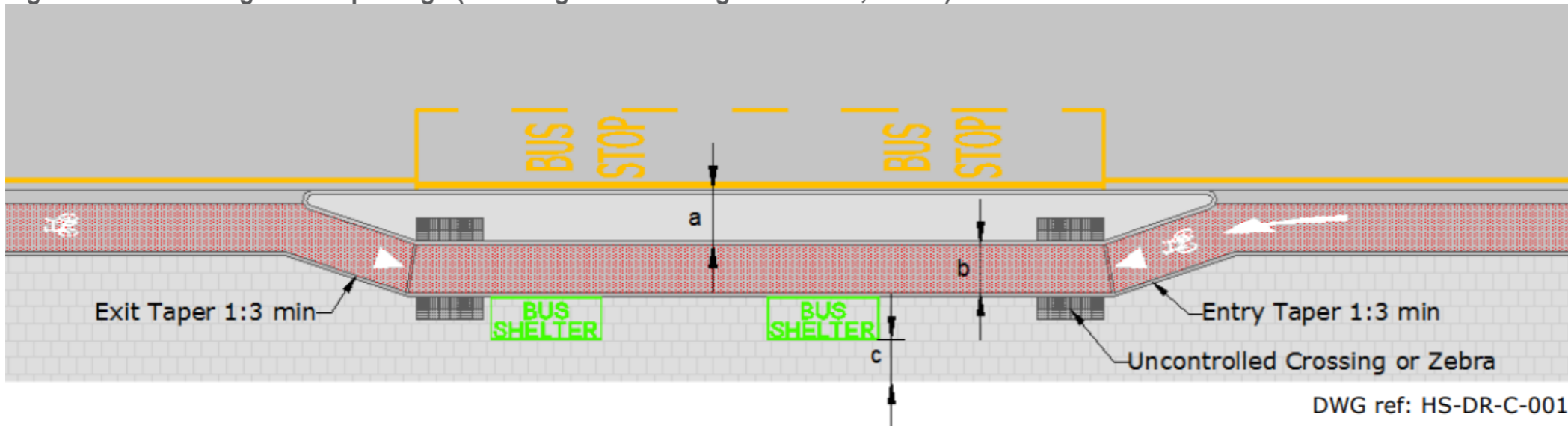
Figure 10-1 - GNT Study Area Bus Stop Locations



Figure 10 -2 - Example of a Floating Bus Stop design, Cambridge (<https://www.cambridge-news.co.uk>)



Figure 10 -3 - Floating Bus Stop design (Edinburgh Street Design Guidance, Part C)



# 11. Vehicle Access

## 11.1. Introduction

Reprioritisation of carriageway spaces and reduction of background traffic movements within Edinburgh City Centre will be essential in realising the Council’s ambitious transport and environmental policies by 2030. The City Mobility Plan and City Centre Transformation Plan aim to change the City’s transport hierarchy, reclaim spaces currently taken up by vehicles and carriageways and redesign them to be used as public realm and pedestrian spaces in future. A majority of traffic is thought to be attracted to the area due to the availability and convenience of parking. From 2019 surveys of the area, over 44% of car-based journeys were observed to originate from within the city boundary.

The GNT proposal has been developed in line with the Councils ambition to reduce on-street parking. It is thought that St James Quarter and its c.1,500 space parking capacity will generally offset any reductions to parking provision. It is likely that this new source of parking has also changed background traffic patterns within the city centre.

The removal of non-essential forms of parking (such as pay & display) on George Street is anticipated to significantly decrease the attractiveness for vehicle travel in the area and therefore reduce volumes of traffic circulating in the area. Due to existing turning restrictions at junctions (such as a ban on right turns enter George Street at Charlotte Street) George Street itself sees considerably less traffic volumes than other strategic east-west routes such as Queen Street, Queensferry Road or Ferry Road.

## 11.2. Environmental considerations

The GNT proposal has been developed in accordance with the Council’s 2030 City Plan, 2050 City Vision and proposed 2024 Low Emission Zone (LEZ), it will support the sustainable growth of the city and promote active modes and public transport over private travel. Over time, this would reduce carbon emissions within the city centre, improve public health and the attractiveness of the city.

Removing general traffic (and parking) from a route such as George Street offers the potential to significantly improve conditions for local residents and everyday commuters through improvements to air quality. Within the study area this would primarily be done by reducing congestion, reducing the time buses spend alighting in the city centre and reducing the need for buses to accelerate when in stop-start traffic.

With the implementation of the Edinburgh LEZ air quality and traffic conditions are anticipated to improve in the immediate area surrounding George Street and known hotspots such as Hanover Street, as a direct result of reducing through traffic volumes and imposing vehicle emission standards.

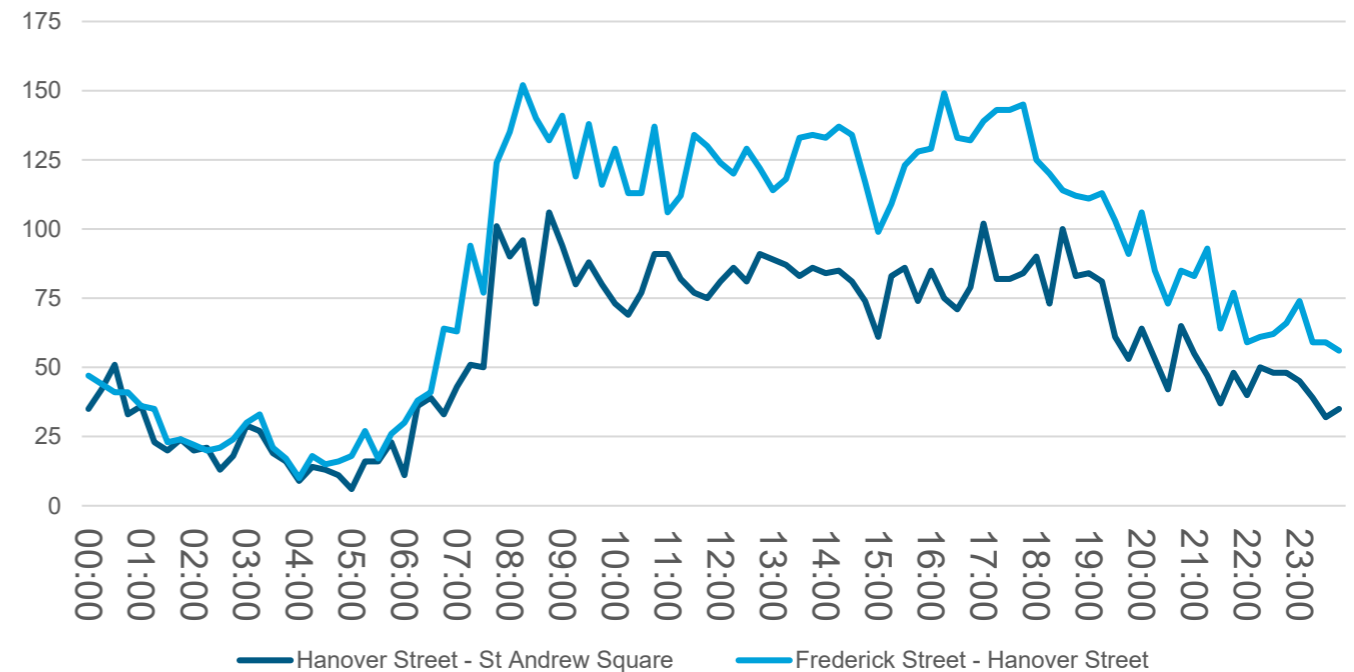
## 11.3. Current Traffic Operation

### Background Traffic Movements

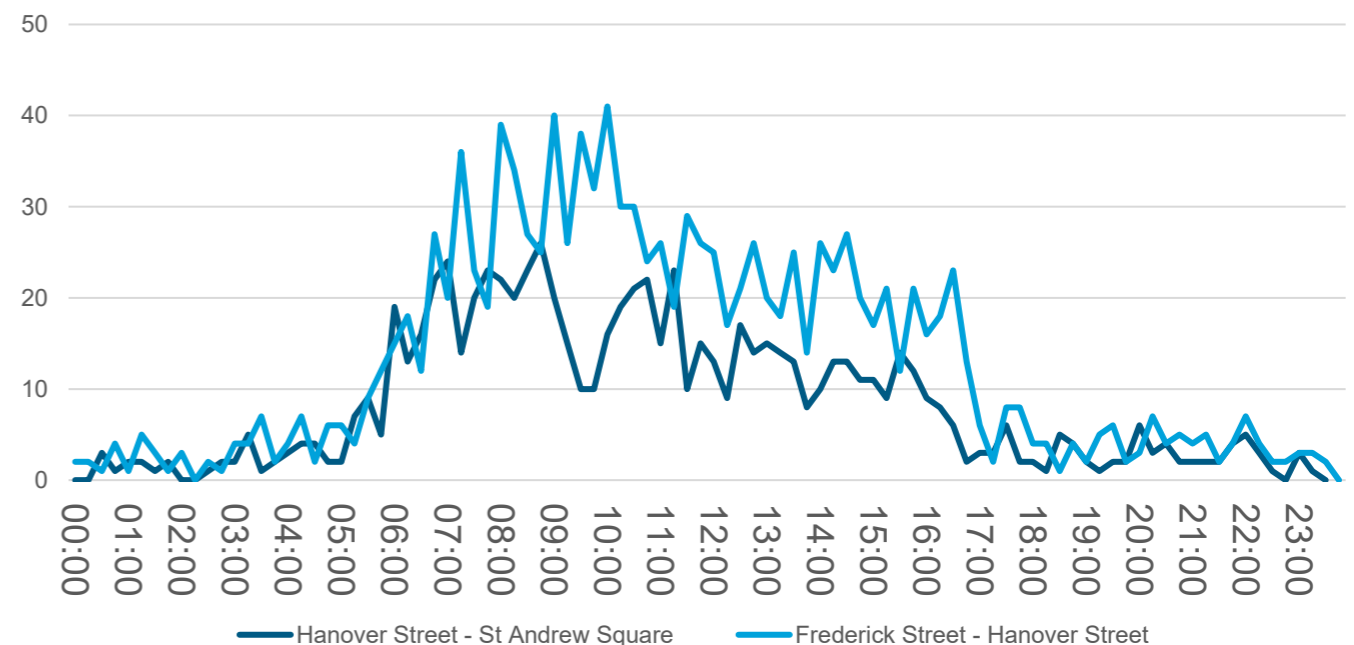
Due to the frequency of events, street closures or ongoing construction works, there is limited contemporary traffic data available for Edinburgh’s city centre network. Traffic and parking surveys undertaken from April- June 2019 have been used in this instance to understand the baseline traffic movements along the key general traffic routes in the area, George Street and Hanover Street.

Bi-directional through traffic movements on George Street, for those ‘blocks’ of the street between Frederick Street-Hanover Street and Hanover Street-St Andrew Square are show below in Figure 11-1 and Figure 11-2. These considers all vehicle movements and loading vehicles (LGVs and HGVs)

**Figure 11-1 - George Street Traffic Movements - All vehicle Types (per 15mins)**



**Figure 11-2 - George Street Traffic Movements – LGVs and HGVs (per 15 mins)**



## Current Traffic Patterns and key statistics

- Vehicle movements on George Street varies from block to block. These are generally seen to increase from east to west. Daily vehicle demand is lowest to the east (between Charlotte Square and Castle Street), c.3000 bi-directional vehicle trips per day. Daily vehicle demand is greatest to the west (between Frederick Street and Hanover Street), c.5500 vehicle trips per day. However it is unknown the quality of vehicles which travel in the area multiple times per day.
- Of these vehicles, c.1350 are vehicles parking on George Street during weekdays.
- General traffic levels are elevated from 8:00am-6:00pm, flows are observed to be c.250 bi-directional movements per hour, this is generally consistent with typical commuter patterns and local business opening hours.
- George Street sees a peak of c.570 bi-directional traffic movements per hour. This occurs during the evening peak period, between 5:00pm and 6:00pm.
- The junction of George Street- Hanover Street sees a total of c.17700 daily traffic movements.
- Hanover Street sees c.10,900 daily traffic movements, c.6000 northbound from The Mound and c.4900 southbound from Queen Street/Queen Street Gardens East.
- At the junction 30% of daily traffic from George Street (2010 vehicles) turns right (northbound or southbound) to exit the area via Hanover Street. 5% (322 vehicles) are also observed to U-turn around the George IV Statue. At the junction 12% of daily traffic on Hanover Street (1346 vehicles) currently turns right into of George Street, a further 19% (2102 vehicles) turn left into George Street.
- c.535 vehicles per day enter George Street from Charlotte Square, 86% (462 vehicles) from South Charlotte Street and 14% (73 vehicles) from North Charlotte Street.

## Current Vehicle Access routes & restrictions

### GNT Study Area

- General traffic access to George Street is currently unrestricted. Vehicles can enter the street via a number of access points including:
  - Turning right from South Charlotte Street.
  - Entering via the north side of Frederick Street and Hanover Street via Queen Street or Queen Street Gardens.
  - Entering the south side of Hanover Street via The Mound.
  - Turning left or right from St Andrew Square/St David Street.

### Wider City Centre

- There are a number of local restrictions which effect the routes of general traffic and other vehicle users including.
  - 'Authorised vehicles only' (buses, taxis and cycles) restrictions on Princes Street, including loading from 8:00pm-7:00am daily.
  - 'Authorised vehicles only' (buses, taxis and cycles) restrictions on Frederick Street at its junction with Princes Street.
  - No left turns entering George Street from North Charlotte Street
  - Westbound traffic movements only on Rose Street and its connecting lanes, prohibiting (eastbound) left turns into Rose Street at its intersections with Castle Street, Frederick Street and Hanover Street.
  - Partial pedestrianisation of Rose Street, loading only from 11:00pm -10:30am daily.

## 11.4. Proposed Restrictions and Operation

### Removing general traffic access to George Street

It is proposed general traffic access be removed from George Street and a 'pedestrian and cycle zone' be created to manage access for essential vehicle movements (e.g. blue badge holders and daily servicing and deliveries). This provides an opportunity to maximise accessibility for pedestrians and cyclists. Significantly reducing general traffic access also allows for the prioritisation of bus services on interconnecting streets including Hanover Street and Frederick Street, aiming to improve their reliability and journey times (in both inbound and outbound directions). More predictable journey times and less congestion would further improve the quality and attractiveness of bus services in the city centre, likely attracting additional patronage. While the area is currently within the City Centre 20mph zone, physical and visual traffic calming within the design aims to further reduce maximum vehicle speeds to less than 15mph, comparable to the speed of the average cyclist on-street. This aims make it impractical to use George Street as a short cut and therefore minimise the number of drivers who would potentially ignore the proposed access restrictions.

### Vehicle Access Restrictions & Future traffic routes

Proposed vehicle access restrictions within Edinburgh City Centre and First New Town upon the GNT design's opening year include:

#### GNT Proposal & GNT Study Area

- General traffic would not be permitted on George Street at any time. Vehicles traveling east-west in the area would be required to route via alternatives such as Queen Street / York Place – Charlotte Street – Lothian Road.
- Local access to first new side streets; North Castle Street, Frederick Street and Hanover Street and secondary streets Hill Street, Thistle Steet and Young Street would be retained. Existing bus and taxi only restrictions to the south of Frederick Street would also be retained.
- Right turning movements at the three key junctions with Castle Street, Frederick Street and Hanover Street.
- For permitted vehicles, George Street would be accessible by:
  - Turning left and right from St Andrew Square/St David Street.
  - Turning left from the north approach of Charlotte Street (right turn provision from the southern approach of Charlotte Street is yet to be confirmed as part of CCWEL design of George Street – Charlotte Street junction).
  - Turning left from North Castle Street, the north approach of Frederick Street and north/south approaches of Hanover Street (during permitted hours).

#### Other CCTs Proposals & wider city centre

- Vehicle access to The Mound / Bank Street from 7:00am – 11:00pm daily would be limited to buses, taxis and cyclists only. This is to be enforced using an ANPR gate.

#### 11.4.1. Managing Essential Vehicle Access to George Street

Timed restrictions are proposed to manage access for permitted vehicle movements (including daily loading and servicing, trades etc.) to George Street in future. This is in order to create times of day in which the street is largely vehicle-free, giving full priority to cycling and pedestrian movements. This vehicle 'access window' is proposed to be from **7.00pm – 10.00am Monday to Saturday and 7.00pm – 12pm Sunday** This is considerate of the variety of business types present in the area, existing servicing patterns, stakeholder feedback and the likely increase in business/staffing costs which may arise if a narrower loading period was imposed.

### 11.4.2. Restricting carriageway and junction spaces

Carriageways and spaces for vehicles travel through junctions within the design are proposed to be reduced in order to maximise spaces pedestrian and cyclists. On George Street vehicle movements are proposed to be consolidated onto a 'cycle priority' single carriageway 6m wide. This is discussed for each of the proposed junction designs above in Sections 7.2-7.5 and 9.3 above. On adjacent streets carriageways are also proposed to be reduced to c.6-8m wide. Required carriageway widths will vary between Castle St/North Castle Street, Frederick Street and Hanover Street based on each street's required function and specific context. Designs of these streets are to be finalised within the Stage 4 (Technical) Design.

### 11.4.3. Signals optimisation

At the signalised junctions of George Street – Hanover Street and George Street – St. Andrew Square signal timings would be adjusted to capitalise on the anticipated reductions in traffic along these routes and enable more 'green time' to be given to north-south movements. By revising junction designs (and introducing turning restrictions on side streets) the number of signal phases can also be reduced, therefore enhancing priority for pedestrians and cyclists. This aims to reduce delays and improve journey times for movements in each direction. Signal design specifications will be fully developed during the Stage 4 (Technical) Design.

## 11.5. Parking

### George Street

It is proposed all non-essential parking bays (pay & display, permit holders only, motorcycles) be removed from George Street, this includes kerbside parking to the north and south side and centrally positioned bays. The existing c.240 space capacity currently includes 18 spaces sporadically positioned for blue badge holders. This is to be upgraded to 24 spaces within the proposed design. Blue badge holder spaces would be positioned within extended parking bays (varying from 16.5m-26m long) to the north and south of the carriageway to the end of each 'block' of the street. Blue badge holders are noted to have unrestricted parking throughout the day. Blue badge spaces are also distributed on each adjacent street based on the number of existing spaces and their observed demand, this is to ensure those with impaired mobility have convenient places to park and required onward walking/wheeling distances are minimised. Blue badge parking locations within the proposed design are shown in Figure 11-6 below.

### First New Town Streets

Parking is proposed to be retained on each of the adjacent First New Town streets, including:

- North Castle Street – 65 residents permit spaces and 15 pay & display bays
- Castle Street - 7 resident permit spaces
- Frederick Street - 18 resident permit spaces

The above would provide short stay parking (up to 3 hours) to serve local businesses and residents permit parking throughout the day. This parking is anticipated to be patrolled and monitored by wardens. Provision and specific locations for motorcycle parking and car club spaces will be agreed during the Stage 4 Design process.

## 11.6. Taxis

### Current Operation

Unlike many of Scotland and the UK's other cities, Edinburgh currently operates with a two-tiered taxi system. There are two distinct forms of taxi travel in the city centre – licensed taxis (black Hackney cabs), and private hire cars (PHCs), e.g. Uber and other 3rd party operators. While both can be flexibly pre-booked in advance online etc., the main difference in operation is that, only licensed taxis can be hailed on-street or from taxi ranks ('plying for a hire' as described in the Council's own guidance). However this operational difference is slowly eroding, due to rising popularity of Uber and other ridesharing apps and travel changes arising from the Covid-19 pandemic. PHCs are now frequently booked immediately before their hire (e.g. at nightlife venues or local destinations such as Waverley rail station), therefore being used in a way similar to 'plying for hire'. Equally, an increasing proportion of licensed taxis now carry out pre-booked hires.

Taxis are currently a core component of public transport in the City Centre, they also provide an essential mode of access for older people, those with mobility impairments and other vulnerable characteristic groups. Taxis are also often the preferred option for the many visitors to the city travelling with luggage. Public transport has limited provision from midnight to 4:00am and is limited to several key routes. Taxis services provide a more direct, flexible and private mode of transport at all hours of the day, albeit at additional cost to the user. Engagement undertaken with stakeholders including police Scotland and nightlife proprietors during the development of the Women's Safety Audit (also discussed in Chapter 13) has also highlighted taxi access is essential in helping create a safe space.

The study area currently sees c.1550 taxi journeys (black Hackney cabs) per day, including c.760 accessing George Street (April 2019). These figures significantly increase during the Summer and Winter festivals and during specific events for example the recent Scottish Open, The Fringe and winter celebrations. Taxi surveys undertaken in 8<sup>th</sup>-21<sup>st</sup> December 2020 on North Bridge examined the split of black hackney cabs and PHCs, on average 57% (321) of daily taxi movements were conducted by black hackney cabs and 43% (239) by PHCs. From this it is estimated a further c.1170 PHCs access the area per day, including c.573 estimated to access George Street.

A large proportion of taxis currently accessing George Street and the wider area are noted to illegally park in other types of facilities such as blue badge holder spaces, loading bays, double yellow lines etc. This puts considerable pressure on these facilities often forcing those relevant vehicles (blue badge holders and larger loading vehicles to use other facilities or double park in some instances. From April / May 2019 weekday parking surveys, considering taxis which alighted for periods greater than 15 minutes, 80% (24/30) of those George Street parked inappropriately and 66% (92/139) of those on Castle Street/Frederick Street/Hanover Street parked inappropriately.

## Proposed Operation

### George Street

Licensed taxi access is proposed to be retained on George Street in future. However this is proposed to be performed only during the daily 'access window' from 7:00pm – 10:00am Monday to Saturday and 7:00pm – 12pm on Sundays. As mentioned above, this is in order to consolidate and vehicle movements to create times of day in which the street is largely vehicle-free, giving priority to cycling and pedestrian movements. Outwith these times taxis would not be permitted access and would be expected to pick-up or drop-off at kerbside areas on adjacent streets. Whilst this will introduce some inconvenience, the area will remain largely accessible with a maximum c.100-125m walk within any block. No final decision has been reached regarding future private hire car access to George Street. City of Edinburgh Council are currently conducting further investigation into the impact of PHC travel in the City Centre and surveys of current or planned restricted streets.

### First New Town Streets

Taxi access would remain unrestricted on Castle Street, Frederick Street and Hanover Street and St Andrew Square Taxis would retain the ability to alight at the kerbside for up to 5 minutes to pick-up or drop-off. Taxis entering the area would also be required to adhere to current restrictions e.g. black Hackney Cabs on Princes Street and proposed right-turn restrictions at junctions with George Street.

#### 11.6.1. Taxi Ranks

##### Current provision

**George Street** – four taxi ranks, including:

- Adjacent to the Northern Lighthouse Board, on the south side, with capacity for 5 taxis.
- Adjacent to Assembly Rooms, on the south side, with capacity for 3 taxis.
- Opposite The Standing Order, on the north side, with capacity for 5 taxis.
- Adjacent to The Dome on the south side, with capacity for 6 taxis.

**Castle Street** - A rank with capacity for 4 taxis on the east side between Rose Street and George Street.

**Frederick Street** – a rank capacity for 5 taxis to the east side close to the junction with Princes Street.

**Hanover Street** - A rank with capacity for 4 taxis on the west side south of the intersection with Rose Street.

##### Proposed taxi provision

Taxi rank locations have been proposed throughout the study area based on existing demand, key local venues and nightlife and the availability of kerbside spaces. Similar to general parking, taxi spaces on George Street have been rationalised in order to increase the capacity of blue badge spaces and loading facilities. The location of taxi ranks within the proposed design are shown in Figure 11-6 below, this includes:

**George Street** – two taxi ranks, each with capacity for 5 taxis positioned on central squares within the 'blocks of the street between Castle Street-Frederick Street and Hanover Street-St Andrew Square. Taxis would only be permitted to alight within these bays during daily operating hours 7:00pm-10:00am Mon-Sat and 6:00pm-12:00pm Sunday.

**Castle Street** - A rank with capacity for 4 taxis on the east side between Rose Street and George Street.

**Frederick Street** – two taxi ranks, including a rank with capacity for 2 taxis to the east side north of the junction with George Street and another with capacity for 3 taxis to the east side close to the junction with Princes Street.

**Hanover Street** - A rank with capacity for 2 taxis on the west side south of the intersection with Rose Street.

## Accessibility & Inclusivity Considerations

The City of Edinburgh Council has duty of care under the Equalities Act to avoid mobility impaired or disabled people being placed at a 'substantial disadvantage' when accessing local services and facilities. It is therefore essential to retain some level of taxi access to facilitate travel for these users. Taxi facilities on George Street are proposed to be located within two of the raised squares at the centre of the Castle Street – Frederick Street 'block' (on the north side, opposite The Northern Lighthouse Board) and Hanover Street-St Andrew Square 'block' (on the south side, adjacent to The Dome) as to reduce the required walking distance to access taxis from key venues and attractors nearby.

Through engagement with stakeholders and accessibility groups at this stage a lack of availability of wheelchair accessible taxis on-street was identified. This was considered as a significant barrier to access and often caused frustration for those with very limited mobility. This not only impacted those which lived within the immediate First New Town or Second New Town areas but was also the case for many of the well-known taxi ranks within the wider city centre (such as Market Street). For these users, this often meant they needed to invest more time and effort into planning their journey, for work or leisure, often requiring multiple vehicles to reach their final destination.

Consideration is being given to enable blue badge holders to potentially access George Street via licensed taxis however further analysis of potential numbers and available "online" systems to manage potential numbers will be undertaken. The availability of a new app to support exempted access for blue badge holders to the new LEZ zone will be assessed to determine if such a system could be applied to disabled taxi access.

## 11.7. Emergency Response and Access

### 11.7.1. Emergency Situations

Ensuring access for emergency service vehicles at all times is also critically important to the safety and security of local people, properties and businesses. During an emergency situation (such as a security incident or severe traffic collision on Princes Street or Queen Street) it would be possible to accommodate diverted traffic within the proposed layout. However, this would likely result in significant delays and disruption to the surrounding area. Due to the proposed design changes to the George Street carriageway such as raised crossings and other traffic calming, reductions in carriageway widths and junction turning areas the street's maximum capacity (flow of vehicles per hour) are anticipated to greatly reduce.

In the event general traffic is directed to George Street, the volume of vehicles would also temporarily make the street unsuitable for cyclists, going against one of the project's main objectives. If at any point George Street (or a given section of the street) was to be used for general traffic access, an alternative route would also need to be provided to ensure the safety of people cycling.

### 11.7.2. Emergencies during events

Similar to exiting operation, plans for emergency access during events and street closures would be set out using an 'Emergency Access Plan' or similar. Access measures etc. for each given event are discussed and agreed with members of emergency services prior to granting permission to host the event. As noted above a CCT 'Events Management Strategy' is currently in development, this document is anticipated to develop a list of operating principles for hosting events within the city centre and GNT Study Area, including safety requirements. Any large-scale street closure requires an emergency response plan, or other forms of management plan such as a Temporary Traffic Regulation Order (TTRO). In the event George Street was to be closed or traffic temporarily diverted to the street, these plans would be required to provide details including.

- Required vehicle control measures, road closures or diversions to avoid/mitigate danger to the public, and measures required (physical or otherwise) to enforce these.
- Other facilities which required suspension, e.g. parking, loading bays, taxi ranks and cycling lanes.
- Safe routes to divert traffic and active travel users, providing fully segregated routes, if required.
- Methods to restrict pedestrian access, if required.

#### Summary

- General traffic access is proposed to be removed from George Street in future. The street currently sees around c.4300 vehicle trips per day.
- Right turns are proposed to be banned at each of the three main junctions with Castle Street, Frederick Street and Hanover Street. This is anticipated to effect c.2010 vehicles per day.
- Parking on George Street is proposed to be rationalised, this proposes to remove all non-essential parking e.g. pay & display. In future, this would require vehicles to park elsewhere within the First New Town or the wider area such as St James Quarter.
- Essential blue badge parking is to be retained. Capacity of these bays is to be increased and locations made more convenient to access compared to existing provision.
- Parking capacity on adjoining streets will be optimised while providing essential spaces for blue badge holders, loading bays, taxi bays and bus stops. Parking capacity will increase on North Castle Street and Frederick Street within the proposed design.
- Taxi access to George Street is proposed to be retained during daily 'access windows' from 7:00pm–10:00am Mon-Sat & 7:00pm-12:00pm Sun.

Figure 11-3 – Existing Traffic Restrictions to be maintained

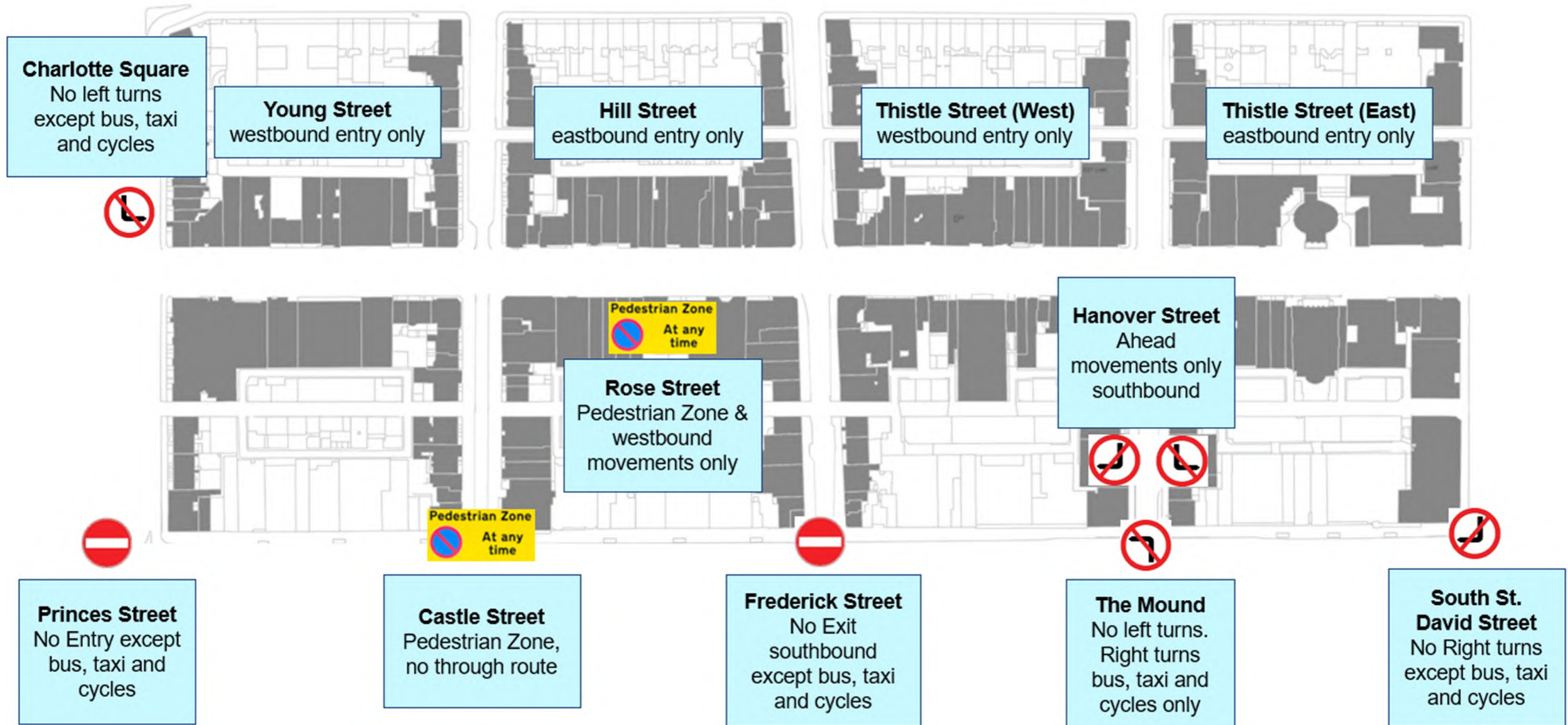




Figure 11-4 - Proposed GNT Vehicle Restrictions

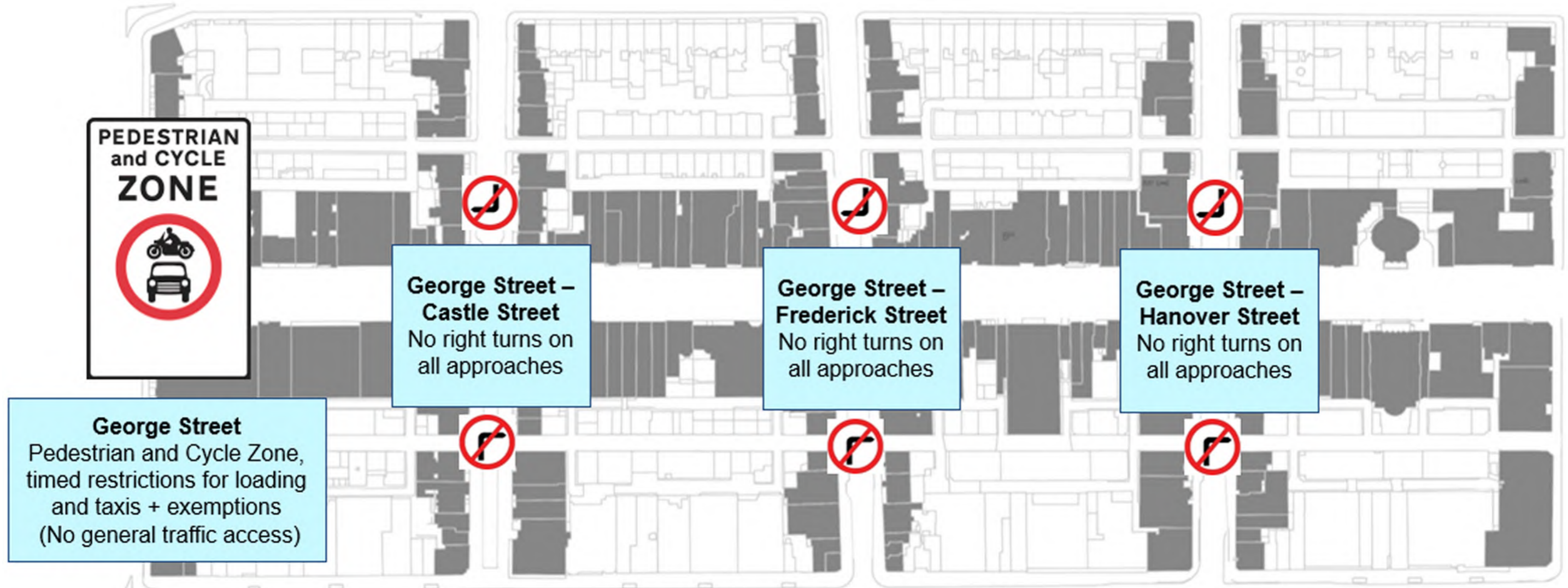
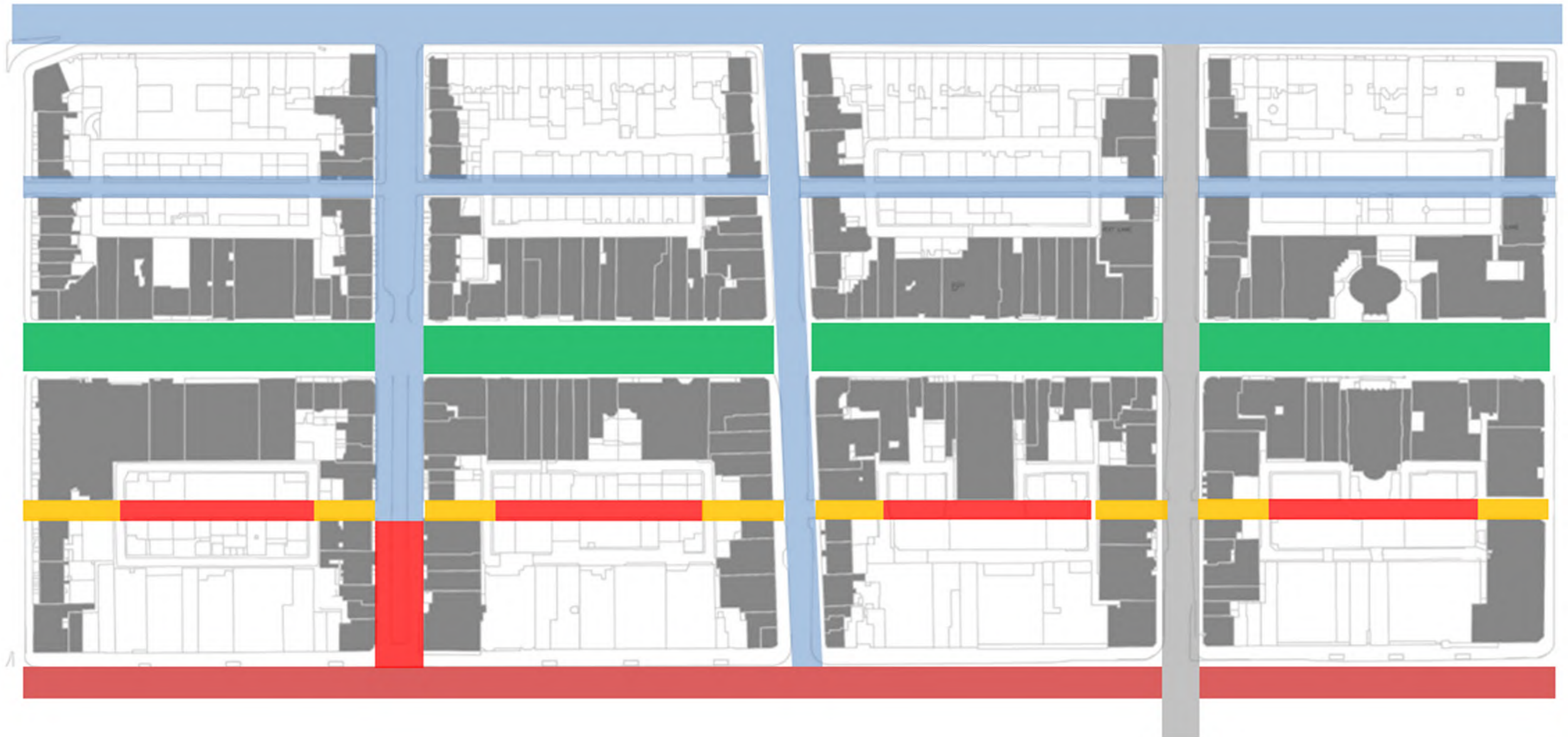


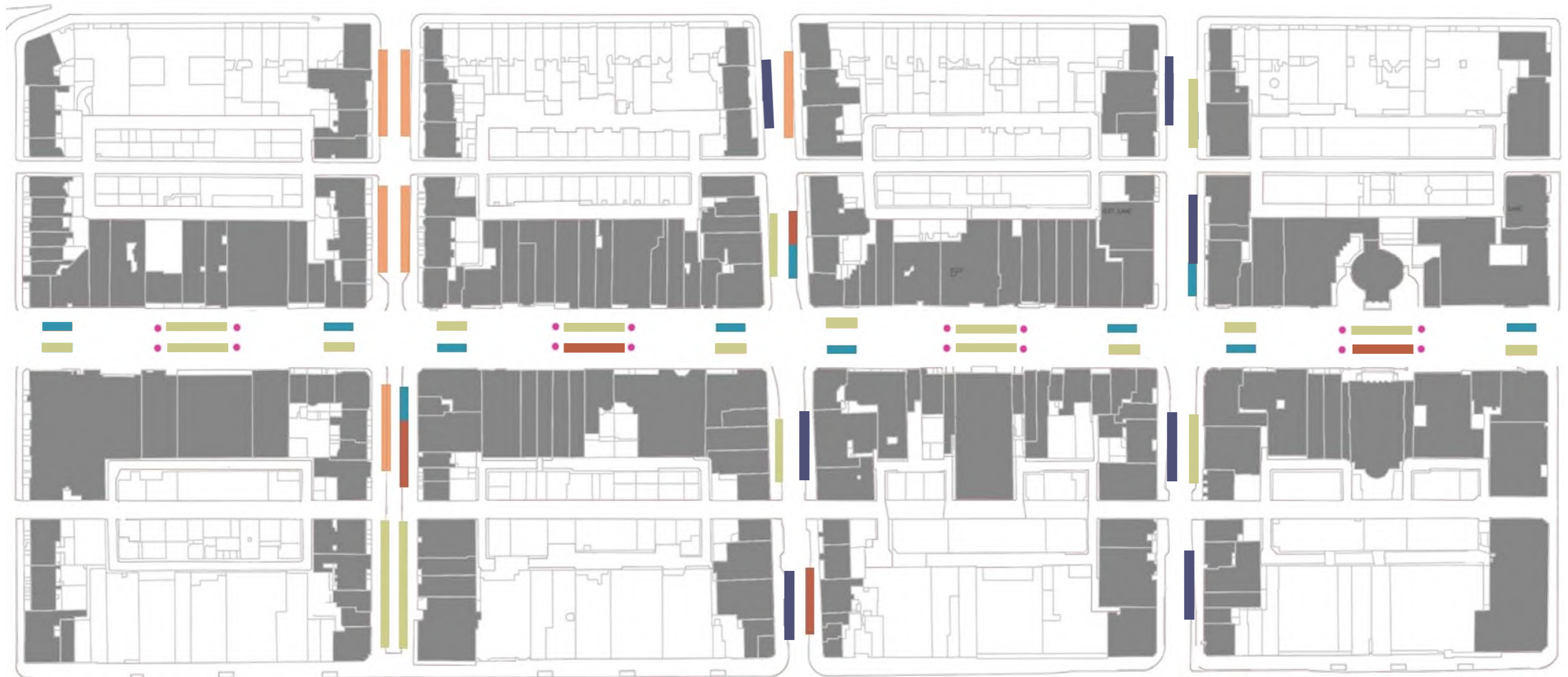
Figure 11-5 – Proposed vehicle access



- Buses, taxis and cycles only (Except Loading 8:00pm – 7:00am)
- Pedestrian Zone (Except Loading 11:00pm-10:30am)
- Local Access to lanes only, no stopping at any time

- No traffic restrictions
- Pedestrian and Cycle Zone (Except Loading and taxis 7.00pm – 10 am Mon-Sat, 7.00pm – 12.00pm Sun)
- Restrictions to be finalised as part of Meadows to George Street proposals

Figure 11-6 - Proposed GNT Parking Types and Zones



- Cycle Parking
- Disabled Parking Bays
- Loading Bays
- General Parking
- Bus Stops
- Taxi Ranks

## 12. Deliveries, Servicing and Waste Management

### 12.1. Current Operation

#### Loading Provision

**George Street** - On George Street there are currently eight dedicated loading bays with a capacity to accommodate a maximum of 20 large goods vehicles (LGVs) and c.255m of single yellow lines (maximum capacity of 28 LGVs).

**GNT Side Streets** – On Castle Street, Frederick Street and Hanover Street loading facilities significantly vary based on the function of each street.

**Castle Street** - Stopping up the southern section of Castle Street has allowed for the creation of a 'pedestrian zone', within this are loading only areas with a capacity of 14 LGVs.

**Frederick Street** - Frederick Street follows a more typical approach to loading and servicing, providing on-street loading bays and single yellow lines. Frederick Street currently has a maximum loading capacity of 10 LGVs at any time (including 1 dedicated loading bay and c.75m of single yellow lines).

**Hanover Street** – Hanover Street also has on-street loading facilities, however due to its critical function as a bus route, there is limited a limited level of provision. On the southern section, there is capacity for only 1 LGV (c.14 metres of single yellow lines), while on the northern section there is provision for 10 LGVs (including a dedicated loading bay and c.55m of single yellow lines).

#### Access Timing

All on-street loading facilities in the area currently operate from **9:15am-4:30pm and 6:30pm-8:00am daily** and are only restricted during peak commuting times, 8:00am-9:15am and 4:30pm-6:00pm. On Castle Street loading within the pedestrianised zone is permitted from 11:00pm – 10:30am daily.

#### Loading and Servicing Demand

From loading / parking surveys undertaken in April/May 2019 and engagement undertaken throughout each stage of the project, the peak loading period in the study area is typically from 8:00am-11:00am on weekdays and 11:00am-1:00pm at weekends. Surveys undertaken at this stage have highlighted 68% of business respondents typically received deliveries during this period.

The study area sees around c.251 on-street delivery and servicing vehicles per weekday and c.70 on Saturdays (including LGVs, OGVs and HGVs). This demand does not account for rear loading undertaken on Rose Street/Thistle Street Lanes etc. meaning the actual number of servicing vehicles access the First New Town each day is likely far greater. The peak flows of these vehicle types on George Street were observed to be c.10-12 bi-directional movements per hour.

#### Inappropriate and Illegal Parking

From April / May 2019 surveys 73% (183/251) of observed loading and servicing vehicles parked within other facilities such as pay & display or permit only bays and taxi ranks or double park in some instances. This suggests a large proportion of service vehicles are required to inappropriately park to access the area. This can be attributed to the high demand for pay & display parking and inappropriate/illegal parking behaviour exhibited by drivers of general traffic vehicles.

### 12.2. Proposed Operation

#### Loading Provision

**George Street** - Loading on George Street is proposed to be consolidated into eight dedicated loading bays, these would be equally distributed along the street on the north and south sides. This would provide 128m of kerbside space and capacity for 16 LGVs at any given time. Areas to the north and south of each Central Zone (which vary from 25-29m long) on George Street are also able to serve as reserve areas for loading. This would provide an additional capacity for up to c.24 LGVs during daily operation. These are shown in Figure A above and

Figure 12-1 below.

**GNT Side Streets** – Similar to the current operation loading and servicing on Castle Street/North Castle Street, Frederick Street and Hanover Street would be done at the kerbside within designated loading areas. It is noted that provision on each side street is likely to see further consideration and is to be finalised during the Stage 4 (Technical) Design process.

**Castle Street** - existing pedestrianised areas and loading facilities (with a capacity of 14 LGVs) would be retained.

**Frederick Street** - two extended loading bays with a capacity of 6 LGVs are proposed on Frederick Street. These are to be distributed on either side of the junction with George Street.

**Hanover Street** – As noted above, the GNT Project interfaces with the Meadows to George Street Project at the southern section of Hanover Street. Based on the latest designs, three extended loading bays with a capacity of 9 LGVs are proposed on Hanover Street, with one of these (space for 3 LGVs) to be provided on the northern section and two (space for 6 LGVs) to be provided on the southern section.

**Other FNT Streets** - Connections to the rear of First New Town properties and loading/parking facilities via Hill Street, Thistle Street, Young Street and Rose Street are to be maintained.

#### Access Timing

Loading within the study area is proposed to be permitted during the daily 'access window' from **7:00pm – 10:00am Monday to Saturday and 7:00pm – 12pm on Sundays**.

The proposal aims to control access for vehicular traffic only, it is noted cargo-bikes and e-cargo bikes would have unlimited access to George Street and the wider area throughout the day. This is anticipated to influence the vehicle types operating in the city centre and guide local businesses towards more sustainable methods of conducting their daily deliveries and servicing.

Other forms of servicing requiring extended periods access, particularly for larger vehicles (e.g. building renovations or furniture removals etc.) would be encouraged to occur during the access window but would be permitted at other times through consent from The City of Edinburgh Council and Local Roads Authority via a parking dispensation or a permit scheme. GNT TROs are proposed to include a permitting system to manage access to the area.

#### Consolidating Deliveries and Servicing

Under CCT the City of Edinburgh Council are investigating the provision of 'last mile' logistics and other freight consolidation centres across the city to optimise servicing methods and operation. Whilst work behind these hubs are in their inception stage and thus not likely to be available prior to the design's implementation, these facilities would reduce further the impact of delivery movements and encourage use of more sustainable methods/techniques.

A 'Delivery and Servicing Plan' for the area would also explore this, if implemented.

Figure 12-1 - Proposed GNT Loading Zones



## 12.3. Waste Collection

### Current Operation

It is understood there are many commercial and council-managed waste management service providers operating in the First New Town on a daily basis. Most already operate using a window-based approach, typically providing collection times for general waste and recycling from 08:30am-12:00pm, 3-4 times per week; with cardboard, glassware and other more specific forms of waste collected less frequently. Some business types, notably restaurants prefer evening collection times, from 9:00pm – 12:00am, as these best align with business practices and therefore minimise disruption.

Similar to delivery and servicing patterns observed in the study area, waste is also collected to the front and rear of businesses. For those properties on George Street specifically this often results in waste and bins being stored at the kerbside or at storefronts overnight for collection, cluttering and obstructing footways for pedestrians.

### Managing Commercial Waste

While specific collection arrangements (timing/frequency etc.) would be agreed by individual businesses and their preferred service provider, in future it is proposed waste collection would only be permitted during daily access windows: 7:00pm – 10:00am Monday to Saturday and 7:00pm – 12pm on Sundays.

This aims to concentrate the times in which waste service vehicles are present in the area and encourage providers to consolidate their services. This also looks to promote a clutter free and vehicle free environment out with these operational hours. Following existing CEC guidance, businesses should only present their waste on at agreed times on the agreed collection days, no 'trades waste' should be stored on the street at any time.

### Managing Residential Waste and public litter bins

While specific locations of public litter bins and other street furniture has yet to be agreed within the Stage 3 Design, ensuring streets remain clean and tidy is an important part of increasing the attractiveness of the area overall.

Collection of residential waste and on-street bins would be similar to existing arrangements. Following engagement with Council Officers at this stage, it was agreed CEC Waste Management vehicles would also service the area during the daily access windows in future. Bins would be emptied from the kerbside or wheeled from secure bin stores to a vehicle parked within a designated loading bay on the relevant collection days. Referring to CEC 'Waste and Cleansing' policies on households and public waste, any waste presented for collection, whether in bags or bins etc. should not block any footways or cycleways.

## 12.4. Good Practice Guide and promoting safety

It should be noted, all deliveries vehicles (of any given size) entering George Street during permitted hours must adhere to the highway code, including any signs, lines and other restrictions which would be imposed around the area. These road users will also have a duty of care to ensure the safety and accessibility of the area is not compromised as part of their daily activities.

It is recommended that an informational 'good practice guide' or similar be circulated prior to the design's implementation. The points below summarise the proposed operation of loading facilities within the design and the expectations of service vehicles accessing the study area during daily operational hours.

- Loading and unloading should only be performed within allocated bays during permitted hours of day, these are proposed to be 7:00pm – 10:00pm Monday-Saturday and 7:00pm – 12:00pm on Sundays.
- On George Street, to avoid conflicts with other road users, particularly cyclists, delivery vehicles should not stop on the central cycle carriageway or footways in order to load/unload goods or park at any time. This would impede other vehicles and essential services such as waste collection and could severely impact the safety of cyclists or crossing pedestrians.
- Where possible providers should alight within bays on the side of the carriageway closest to the property/business they require access to. This is to avoid crossing the carriageway with heavy goods, potentially causing obstructions for other road users and limiting pedestrian accessibility.
- To ensure adequate servicing time and access to all local businesses, servicing vehicles should not alight in loading bays any longer than absolutely necessary to conduct deliveries.
- Local businesses, service providers and suppliers will be encouraged to liaise with each other to examine how to consolidate deliveries and reduce waste collection vehicles required to service the area. It is noted at this stage that it will take time to influence servicing behaviours e.g. the type and frequency of vehicles accessing the city.
- Where feasible, businesses of the area would also be encouraged to schedule deliveries and regular maintenance outwith morning and evening commuting hours (08:00am-09:15am and 4:30pm-6:00pm on weekdays) or use alternative access via Rose Street / Thistle Street Lanes during these times in order to alleviate pressure on local roads, reduce congestion and mitigate potential conflicts with pedestrians and cyclists traveling in the area.
- Engines of vehicles should be switched off wherever practical (particularly during the evening and early morning hours) to minimise unnecessary noise and emissions.

### Summary

- The proposed design provides capacity for a maximum of 65 delivery and servicing vehicles using loading bays and other on-street facilities. This includes kerbside spaces equivalent to 40 LGVs on George Street and 25 LGVs on adjacent side streets.
- While this provides a net-decrease in provision over the current street layout (83), the design would significantly increase the capacity of formalised loading areas (currently equivalent to 37 LGVs) to exclusively be used by loading vehicles in future.
- The proposal also aims to manage the times in which delivery, servicing, waste management vehicles are present in the area. An 'access window' for permitted vehicles is proposed from 7:00pm – 10:00am Monday – Saturday and 7:00pm – 12:00pm on Sundays. This would create periods of day in which George Street would be almost entirely vehicle-free.
- Permitted vehicle access out with these times is proposed to be managed using permits and dispensation schemes. GNT TROs will include a permitting system.

## 13. Safety and Security

Independent to the Project Design Team, the Atkins' Women's Safety and Physical Security Teams were commissioned to appraise the proposal to assess risks and to ensure public safety and security elements were embedded into both the design and operational plan going forward.

### 13.1. 'Get Home Safely' - Women's Safety Assessment

The Atkins Women's Safety Team supported the development of the design and operational plan through the use their 'Getting Home Safely – design for women by women' audit tool. This audit (GNT-ATK-GHS-ZZZZZ-FN-ZS-000001) was undertaken to ensure that good design for women's safety (and other vulnerable characteristic groups) is embedded in the project, therefore giving greater consideration of gender and other characteristic nuances which impact the safety of users in public spaces. The Getting Home Safe (GHS) toolkit assesses public areas and streetscapes against six key themes: Landscape, Infrastructure, Human Presence, Digital, 'Love my Street' and Community / social.

#### Key Findings

The audit found that Stage 3 designs would likely improve the safety for women and girls compared to existing conditions through enhancing pedestrian spaces. These improvements are generally around the landscape and infrastructure themes within the GHS assessment – for example through providing formal and informal crossing opportunities, removing obstructions on footways and encouraging greater visibility through increasing positive on street activity.

#### Recommendations

The audit produced a series of design and operational recommendations which should be carried forward and implemented within the Stage 4 (Technical) Design process, a sample of these include:

- Design drawings should be prepared to consider both daylight and hours of darkness. This helps to illustrate the differences in environment between hours of light and darkness. This would assist in highlighting potential dark spots or areas in need of greater illumination.
- Wayfinding signage should be placed at key decision points on George Street to support integration with onward transport including buses and taxis. Consideration could also be given to integrated Help Points within signage.
- Include provision of digital CCTV, with sufficient lighting to ensure facial recognition on CCTV footage to support eyes on the street.

The audit also identified a number of additional opportunities outside of the scope of the GNT Project which would enhance safety for women and girls in GSNT. A sample of these include:

- Consider greater expression of the local culture and community through local artwork and involve community groups in the design - creating a sense of ownership and stewardship.
- Surrounding areas including Lanes should be considered as a wider zone when considering operations, maintenance, and safety / security programmes as well as CCTV and lighting.
- Promotion of positive behaviour campaigns and engagement with management and staff of clubs and bars in the area, additional support at closing time, staff training on addressing issues
- Promotion of apps and existing services by Police Scotland and community groups (such as Street Assist provided by Essential Edinburgh or Strut Safe) to support women and other vulnerable groups finding support when needed and getting home safely.
- Provision of safe havens such as Ask Angela and others, along the length of GSNT, to ensure there are facilities along the length of George Street (and adjacent streets) and that these are appropriately promoted.

### 13.2. Physical Security - Threat, Vulnerability and Risk Assessment

In parallel to the design work at this stage the Atkins Physical Security Team, with input from Police Scotland, have undertaken a Threat, Vulnerability and Risk Assessment (TVRA) of the proposal. This appraised the design and comprehensively analysed the resultant security risks to George Street and the First New Town. This report (GNT-ATK-PSC-ZZZZZ-RP-ZS-000001) and the proceeding Operational Requirements (OR) report (GNT-ATK-PSCGSZZZ-RP-CS-000001) and Vehicle Dynamics Assessment (VDA) document (GNT-ATK-PSC-ZZZZZRP-CB-000001) provide recommendations of design and operational measures to mitigate identified security risks, in line with current best practice Centre for the Protection of National Infrastructure (CPNI) guidance.

#### Key Findings

- The greatest safety risks were identified to potentially occur at road junctions and streets spaces (such as landscaped seating areas) in which people congregate. These primarily concerned the potential for vehicle-as-a-weapon attacks (VAW).
- There is a dynamically changing threat across the street environment depending on particular day and year, as well as the impact of the night-time economy. This relates primarily to nightclubs and major events.
- There is potential for collateral crime in the area, this is attributed to high footfall and presence of major venues.

#### Recommendations

- Hostile Vehicle Mitigation (HVM) Strategy – Development of a HVM strategy was recommended to be undertaken during the Stage 4 (Technical) Design. This would investigate the provision of additional traffic calming measures, vehicle security barriers, visual deterrents, streetscape furniture or landscaping to provide people and building-fronts in the area protection against a hostile vehicle. At present Atkins are liaising with CEC to produce a HVM Options Study.
- Supporting technology – Smart security systems including video surveillance and enhanced lighting were also recommended to protect users from security events in future. The proposed approach would be to use technical solutions to provide surveillance and the possibility of communication required to deter and detect malicious activity. The system would potentially integrate with security control facilities at Edinburgh City Chambers to enable live monitoring of the area.

### 13.3. Operational Considerations

Embedding public safety and security into the proposal is important to the design's success when implemented. The continued use of the 'Get Home Safely' tool will ensure an enhanced level of consideration is given to the vulnerabilities of people navigating the space and aims to maximise the coherence and comfort of the environment for all users in future.

Implementation of a Hostile Vehicle Mitigation (HVM) Strategy and development of an initial HVM Options Study will be critical to the safety and enforcement considerations of the proposal going forward. If static, automated, or manually retractable bollards are desired by the City of Edinburgh Council their implementation would require careful consideration. Specifically the associated maintenance burden, design feasibility and public acceptability of these methods require exploration.

Similarly, the likely benefits, drawbacks and city centre-wide implications of chosen method of access control (manually operated on-street or automated via smart systems etc.) also needs to be carefully considered.

# 14. Enforcement and Management

## 14.1. Current Traffic enforcement

Enforcement of road traffic and parking restrictions in Edinburgh are managed by both The Council and local Police services. Decriminalised Parking Enforcement (DPE) legislation enables The City of Edinburgh Council to administer its own parking penalties, including the issuing of Penalty Charge Notices (PCNs) to vehicles which breach on-street restrictions communicated by signs and road markings. From October 2008 this has meant stationary traffic offences (e.g. no waiting on double yellow lines) has ceased to be criminal offence enforced by police and has instead become civil penalties enforced by The Council itself. The Police have retained responsibility for the enforcement of ‘moving traffic violations; obstruction of roads, parking on areas such as zig-zag markings, and parking/driving on footways.

From 2012, enforcement of bus lane and bus gate restrictions were also decriminalised, allowing the Council to begin enforcement of the restrictions using cameras. From this a number of 24-hour and peak time bus lanes / bus gates were created in key locations across the city such as Johnston Terrace, Corstorphine Road, The Jewel and Commercial Street (adjacent to Ocean Terminal).

### Proposed LEZ Enforcement

With the recent approval of the Edinburgh Low Emission Zone, with full implementation from June 2024, vehicles entering the First New Town must meet a minimum emission standards. Importantly the legislation which supports this and other Scottish LEZ proposals in Aberdeen, Dundee and Glasgow, *Low Emission Zones (Scotland) Regulations 2021*, grants the Council the ability to use ANPR (automatic number plate recognition) camera-based systems to enforce emission standards, detecting vehicles as they enter and exit the LEZ cordon area.

If a vehicle is found to be in breach of these standards, the driver would be subject to a Penalty Charge Notice. Penalty structures for LEZs are generally more strict than other traffic restrictions. An initial penalty charge for all vehicles breaching emissions standards is £60, the penalty rate then doubles each time the non-compliant vehicle enters the zone within a 90-day period. Maximum penalty charges are capped (per 90-days) at £480 for cars and LGVs and £960 for minibuses, coaches, buses and HGVs. Blue badge holders and emergency vehicles are considered exempt.

This system is anticipated to reduce the flows of background traffic entering George Street, First New Town and wider LEZ cordon when implemented. Though, long-term as electric vehicles become more common in Edinburgh traffic may gradually increase again, potentially encouraging the misuse of George Street.

## 14.2. GNT Enforcement Strategy

Further to camera-based enforcement proposed to support the Edinburgh LEZ, there remains a challenge surrounding how access to George Street will be enforced. Ultimately the Council have limited legislative powers to enforce moving traffic violations (such as entering a ‘pedestrian zone’ etc.), as this remains under the control of Police Scotland.

While enforcement via ANPR is understood to be the Council’s preferred solution, legislation does not currently permit this as an option to impose restrictions. However, it is acknowledged that the City of Edinburgh Council are engaging with Transport Scotland and others to seek changes in primary legislation to achieve this. Indicative enforcement options considered at this stage are discussed in Table 14-1.

Looking towards the Stage 4 Design process and submission of statutory orders, to ensure the most effective enforcement of the design the project will likely rely on physical restrictions such as automated bollards (similar to Option 2) in order to control vehicle access during restricted hours.

The implementation of TROs during subsequent stages will make restrictions (such as timed vehicle restrictions, banning right turns etc) enforceable. Enforcing the proposal in cooperation with Police (during an initial period) post implementation also may be a method to deter misuse.

The public realm design solution for the street itself aims to self-enforce and introduce a new transport hierarchy and change the priority of traffic routes, retaining north / south routes while discouraging the use of George Street by general traffic or as a through route. This relies on the provision of physical deterrents such as traffic calming which would limit the speed and capacity vehicle movements, removing parking sources and providing clear and coherent signage to communicate restrictions.

**Table 14-1 - GNT Enforcement Options**

GNT Enforcement Options			
Option	1	2	3
<b>Description</b>	<b>Traditional Enforcement</b> - Signage strategy to communicate restrictions. Council wardens and police presence enforce restrictions	<b>Hostile Vehicle Mitigation / Physical interventions</b> - Signage complemented by bollards (manual or automatic) or barriers in order to physically enforce restrictions.	<b>Camera-based enforcement</b> - ANPR cameras automatically read number plates, recording a vehicle’s entry and exit into an area.
<b>Benefits</b>	Proposed restrictions are simple to understand using signage Allows for unrestricted access for blue badge holders. Low implementation and maintenance costs Proposing limited vehicle access exceptions aids compliance of the design. Tried and tested penalty charge and legislative system	Provides a high level of control Access for blue badge holders restricted unless supplementary measures including additional permits and cameras, or intercom are included. Several types of access control available including manually operated bollards, automatic bollards and barriers etc. Can serve as an opportunity to encourage local groups to ‘self-manage’ access to the area.	Enables use of smart systems such as ticketless parking, the ability to track the number of available spaces, and crime prevention. Effectively facilitates emergency and exempt vehicle access during restricted hours and can penalise inappropriate / nuisance vehicles. Tried and tested bus gate / lane enforcement and LEZ enforcement (June 2024)
<b>Challenges</b>	Risk of lack of enforcement during evening / night TRO regulations do not allow restrictions to be applied to private coach travel without restricting all bus services. TRO regulations specify that access exceptions allowing for ‘taxi access only’ apply to black cabs and not private hire cars. Need to manually manage and log requests for scheduled and unscheduled vehicle access.	Existing examples of automated control in Edinburgh are subject to frequent maintenance issues and a high maintenance burden. Costly ‘smart’ control systems would be required to facilitate scheduled and unscheduled vehicle access. The speed and flexibility of barriers / bollards can limit access in emergency situations. Manually operated barriers can be resource intensive Access for blue badge holders would potentially be restricted unless “white-list” style permits are introduced.	The Council have limited powers to enforce “moving traffic offences”. Camera enforcement is unable to determine blue badge access, badges are registered to a person not a vehicle. A zone-based – access permit scheme tied to vehicle registrations would be required to enable essential access in combination with camera enforcement Costly ‘smart’ control systems would be required to facilitate scheduled and unscheduled access.



### 14.3. Signage and Road Marking Strategy

A comprehensive signage strategy would be required to effectively communicate the intended function of the proposed design and vehicle restrictions to all users when entering and exiting the area. As discussed above it is proposed George Street would become a 'Pedestrian and Cycle Zone' in future, removing general traffic access and introducing timed restrictions for essential vehicle access. Corresponding timed waiting/loading restrictions would also be introduced on connecting streets.

#### Current guidance

Under *Traffic Signs Regulations and General Directions 2016 (TSRGD)*, *The Traffic Signs Amendment (Scotland) Regulations and General Directions 2018* and recently proposed amendments *Regulations and General Directions (Scotland) 2022* there are a variety of zone/area-based methods which can be used to prohibit vehicle movements and impose timed restrictions etc. This includes schemes such as 'Controlled Zones', 'Restricted Zones', 'Pedestrian Zones' / 'Pedestrian and Cycle Zones' and 'Restricted Parking Zones'.

Within more recent amendments to TSRGD, the requirements to provide signs and markings in combination at the kerb side has been removed (however exceptions are still made for situations such as signalised junctions and crossings). Beneficially to the GNT Project these changes reduce the potential number of signs required to communicate the design, minimising street clutter and promoting greater comfort for pedestrians.

#### Edinburgh Specific Context

There are currently three 'Pedestrian Zones' in Edinburgh city centre; Castle Street, Rose Street and The Grassmarket. The methods of enforcement and approach to signs and road markings within these varies. All provide a combination of entry/exit signs (to communicate access timings and permitted vehicle types) and physical restrictions (fixed/removable bollards and providing no through route on Castle Street) to deter vehicle traffic during non-operational hours.

The design of Castle Street differs as traditional post-mounted signage is not used. The design instead relies on the material palette of the street (such as using bands of material to highlight loading areas) and markings (studs and engraved materials at parking bays) to communicate its use. With the enforcement of the Edinburgh LEZ from June 2024 onwards, it is anticipated signage to reinforce this scheme will also be introduced at entry/exit points to the First New Town such as Queen Street/York Place.

#### GNT Design

During the Stage 4 design signage and road markings regarding blue badge spaces, cycle lanes and cycle facilities at junctions, taxi ranks, loading bays, permitted and pay & display parking and signalised junctions and signalised pedestrian crossings will also be finalised. It is also noted brown signs indicating George Street as a 'tourist attraction' / destination may also be required in future.

Understanding the First New Town forms part of the Edinburgh UNESCO World Heritage Site it is anticipated obtrusive street signage and use of double and single yellow lines within the design will be kept to a minimum so as to not distract from the heritage value and aesthetics of the area. Where possible waiting and loading restrictions would be communicated using signs alone either post-mounted or integrated with landscape features or bollards where possible. Ultimately the density of signs and markings provided within the design at the discretion of the City of Edinburgh Council in line with their duties as Roads Authority under TSRGD.

### 14.4. Management of Events

#### Facilitating Events

The Stage 3 design creates a flexible street design and would support use for on-street events, although the scale of events is likely to change. The proposed zoned footway design promotes opportunities for small scale events to take place on-street within flex-zones and landscape seating areas such as art exhibitions, pop-ups etc. Each of the four central squares would also support event footprints of up to c.30x15m, although these would not support larger scale events seen in the past such as fairgrounds etc. This is also understood to be the general preference from businesses and residents within the area. There is the option to close entire 'blocks' of George Street to create linear-style events, subject to Council permissions. Additional consideration has been given to provision of utility and service connections within the fabric of the design as to reduce the reliance of temporary water/power sources. Though provision of such infrastructure is not without its challenges in respect of standing charges, servicing and billing. A detailed review of utilities will be undertaken as part of the Stage 4 design process.

Regardless of a given event's location or proposed size on George Street emergency vehicle access must be retained. This would be achieved through the narrowing of the central carriageway, to a minimum legal width of 4m, this would also facilitate the needs of cyclists in future. The management and enforcement of these spaces during events would be the responsibility of events organisers, their on-street security personnel / stewards and Police Scotland.

#### Events Management

Events in Edinburgh City Centre are organised in line with the Council's Cultural Strategy and guidance from the Events Planning and Operations Group (EPOG). EPOG is currently chaired by members of the Council's Culture Services Team, it focuses on solving the access and operational issues associated with events and aims to ensure all events are well-planned, safe and successful. It is understood that The City of Edinburgh Council are currently developing an 'Events Management Plan' which would set out the 'principles' involved in coordinating events (e.g. required vehicle access routes/timings and required permissions/permits, facilities available on-street, methods to access utilities etc.) in key city centre areas like the First New Town and methods to consolidate the permissions/permits required to host events. Considering events on George Street, it is anticipated this 'Events Management Plan' would require event organisers to provide *transport-related* details regarding.

- **Event set-up** - including information such as the number and types of vehicles which require access, requested hours of access and time expected to load/unload equipment, lead times to erect temporary structures or stages and any required on-street parking suspensions to facilitate the event.
- **Operation** – access arrangements for pedestrians, cyclists and emergency vehicles (including safe segregated routes, if required), loading and servicing procedures for effected areas and supporting measures to mitigate disruption, signage and other measures to communicate proposed restrictions,
- **Post-event** – Access arrangements required for post-event clean up, dismantling of temporary structures etc. including information such as the timing, number and types of vehicles which require access.

While events are anticipated to continue on-street in the area, approval ultimately will lay with Council Officers and may not be given where events may significantly impact daily operation, access to residential areas, road safety and emergency access, local businesses or the local road network generally. Under the Road Traffic Regulation Act 1984, the law which governs the process of temporarily closing roads and Temporary Traffic Regulation Orders, at least 8 weeks' notice is needed to process requests to host on-street events allow sufficient time to co-ordinate with local stakeholders and any other activities which may be proposed nearby.

## 15. Access Requirements and Exemptions

### 15.1. Introduction

Edinburgh's City Centre offers a unique experience, providing a true variety of functions and local business types including retail/shopping, bars/restaurants, nightlife, hotels and events; all within a historic medieval and Georgian architectural setting. Considering George Street specifically, it serves as one of the city's premier and main shopping thoroughfare and is known for its historic architecture, many cafes, restaurants, bars and use during the summer and winter festivals as an on-street event space.

One of the main challenges of the existing city centre's operation is the required level of maintenance, construction and servicing works (scheduled/unscheduled) on a daily basis alongside management of parking sources. A large percentage of parking in the area is currently utilised by trades vehicles, as noted previously, often resulting in excessive pressure on other types of parking e.g. blue badge bays, loading bays, taxi ranks etc.

### 15.2. Existing permitting methods in Edinburgh City Centre

The study area will partially rely on existing City of Edinburgh Council permitting and dispensation schemes to manage parking and vehicle access within the area and facilitate ad-hoc access to the proposed George Street 'pedestrian and cycle zone'. This includes but is not limited to.

**Resident's parking permits** – Parking permits for local residents of a Controlled Parking Zone, this grants access to park within 'Permit holders only' spaces throughout the day. It is noted being provided a residents' parking permit does not guarantee someone a parking space.

**Visitors Parking Permits** – Permits which grant others permission to park within a permit holders' space. One permit is valid for 90 minutes. These are sold in 'books' on the Council's website.

**Blue Badges** – Permits which allow people with disabilities or health conditions to park for an unlimited time within blue badge allocated spaces, 'Permit holders only' spaces and up to 3 hours on single/double yellow lines, either as the driver or passenger.

**Retail/Business and Trades permits** - A permit which grants access to 'Permit holders only' spaces for vehicles associated with a qualifying list of business types and trades such as joinery, masonry, electrical etc. These are currently valid between the hours of 9.00am - 4.30pm Monday-Saturday and 12.30pm - 6.30pm on Sundays. To be granted a retail/business permit, the vehicle must be essential for daily business use. A maximum of two retail/business parking permits may be issued per business. For trades permits, these are noted not to be used for commuting and the parked vehicle should be strictly essential to be used as a base for materials or equipment. A single trades' permit can be used by several registered vehicles (typically granted to a given contractor/business etc.); however only one vehicle may use the permit at any given time. These types of permit also do not guarantee the permit holder a parking space.

**Parking dispensations** – A form of permit which grants vehicles the ability to parking or load/unload for extended periods on yellow lines or loading bays in situations where vehicle access is required to undertake works/business. This is typically used in situations such as delivering large/heavy goods, furniture/home removals and building retrofits. This type of permit requires communication with The Council's Roads Authority to grant permission a minimum of 24 hours prior to the proposed time of access.

**Parking suspensions** – A method to restrict use or give priority access to parking/loading areas for a limited time. This method is typically used to facilitate on-street events, carry out essential highways, utilities or building works, for weddings/funerals, filming etc. This process requires communication with The Council's Roads Authority to grant permission a minimum of 48 hours prior to the proposed time of access, this is in order to ensure the proposed space is made accessible.

### Access Considerations

**Vehicle access** - George Street has a complex set of daily access requirements (scheduled and unscheduled) which the GNT design will be required to facilitate and manage during restricted hours of operation. Examples of these include:

**Scheduled** - christenings, weddings, funerals and other religious services, secured deliveries (e.g. banks and high value goods), coach pick-up/drop-off, building maintenance work, furniture removals / building retrofits

**Unscheduled** – hotel pick-ups and drop-offs (typically taxis or private vehicle travel), emergency access for building maintenance and other works, emergency services

Considering the proposed changes to the streetscape within the GNT design and wider ambitions of CCT, management of trade vehicle access is anticipated to be an ongoing challenge. Given the historic context of the area e.g. building age, the diversity of businesses and access requirements of key venues and businesses, requests for access permits and ad-hoc access are also anticipated to be significant. Further investigation of facilitating access to the extents of George Street between Hanover Street and St Andrew Square is anticipated to be undertaken during the Stage 4 design process.

**Buses** - Restrictions to tour bus access on George Street would likely increase the number of buses per day operating on Frederick Street Hanover Street, Charlotte Street and St David Street which could result in capacity issue for existing routes and bus stops on these streets. It is understood coach access and future coach parking areas will be addressed as part of the Council's 'CCT Coach Strategy'.

**Pedestrians** - Access to all areas of the First New Town would be maintained and improved for pedestrians, though walking trip lengths (and journey times) would increase for some users during certain periods of the day. Timed restrictions on taxi access to the street could also have a detrimental impact on the access to the street for those who are often reliant on taxis to get around. On Frederick Street and Hanover Street bus stop locations closest to George Street have been repositioned closer to the junction with George Street to minimise required walking/wheeling distances and promote greater pedestrian comfort.

### 15.3. GNT Management Strategy

It is proposed that the GNT traffic regulation orders (TROs) will also include a 'controlled zone' permit (in addition to physical restrictions) as a method of managing ad-hoc vehicle access in future. This would operate in addition to existing permitting schemes currently employed in the area.

This would provide the City of Edinburgh Council a mechanism of granting access to essential vehicles during daily restricted hours of operation and penalise those which do not have permission. This would be supported in future by vehicle restrictions (including ANPR) associated with the Edinburgh Low Emission Zone and Hostile Vehicle Mitigation measures developed during further design stages. This notwithstanding, the system would also be required to be supported by appropriately robust Council infrastructure and IT services. This is to ensure all requests for access can be managed quickly and fairly.

Those requesting access in future would be required to contact The Council's Roads Authority to a minimum of 24 hours prior to the proposed time of access. This is the preferred way forward based on the Council's current guidance/policy guidelines. The implementation and operation of permit-based systems is also well understood by the Council and are readily used throughout the City. It is noted these schemes are typically supported through physical enforcement measures and vehicle routing/turning restrictions.

## 15.4. Access Exemption

There are a number of vehicle types and users which are typically given 'exempt' status from traffic restrictions enforced using Traffic Regulation and Road Orders. Detailed below, are some examples of road users which would be granted access to George Street during daily restricted hours. This includes but is not limited to:

### ***No permits or permissions required***

- Blue badge holders.
- Cyclists (including e-bikes and cargo-bikes).
- Emergency vehicles (Police, Fire Brigade, Ambulance).
- Funeral or undertaker service vehicles.
- Governmental (including Non-departmental Public Bodies) and City of Edinburgh Council vehicles undertaking their statutory duties.
- Medical practitioners (GP, nurse and midwife) administering care to a local resident.
- Post Office vehicles delivering to local residences and business premises.
- Secured Cash deliveries

### ***With appropriate Council permits or permissions in advance***

- Events vehicles (e.g. large and heavy goods vehicles required to transport equipment)
- Coach travel, facilitating pick-up and drop-off opportunities at events venues, hotels and St. Andrew's and St. George's Church.
- Trades vehicles required to conduct building, construction or excavation works, the maintenance, improvement or reconstruction of roads and utilities works.
- Special events e.g. weddings, funerals, conference facilitators, VIP visits

Following existing Council processes and guidance, access for events vehicles, trades and construction vehicles is granted by request to the Council's Road Authority up to forty-eight hours in advance. This permission can also be subject to conditions, such as imposing specific time-based or location-based restrictions.

## 16. Summary, Recommendations and Next Steps

### 16.1. Summary

This report develops the proposed Operational Plan to support the effective management and function of the GNT public realm design proposal. This document and the Stage 3 (Detailed) Design act together to put forward a package of measure which would reallocate and reprioritise spaces within the public realm to improve accessibility, promoting active travel, manage traffic access to the First New Town and prioritise essential public transport. These proposals also aim to support the Council's ongoing City Centre Transformation strategy and Net-Zero 2030 commitments. The plan discusses the methods of access and operation of all travel modes within the First New Town study area, and how people will come to interact with and navigate the city centre following the implementation of the design. Proposed measures such as the creation of a 'pedestrian and cycle zone' on George Street and the redistribution and reallocation of parking and loading areas will also inform the development of amendments to Road and Traffic Regulation Orders (RSOs & TROs) current governing the operation of the city centre

### 16.2. Recommendations and Next Steps

#### 16.2.1. GNT Hostile Vehicle Mitigation Strategy / Enforcement Strategy

Implementation of a Hostile Vehicle Mitigation (HVM) Strategy and development of an initial HVM Options Study during the Stage 4 (Technical) Design will be critical to the safety and enforcement considerations of the proposal going forward. If desired, additional traffic calming measures and security features such as vehicle barriers or bollards, would provide physical means to control vehicle access and deter misuse use of the street during proposed access hours. While the feasibility and public acceptability of these methods are still to be explored, it is anticipated these would also mitigate concerns regarding the enforceability of the design. While ANPR systems are already committed to support the Edinburgh LEZ, to facilitate the enforcement of 'moving traffic violations' it is understood changes to primary legislation as the 'National ANPR Standards' etc are required.

#### 16.2.2. GNT / CCT Smart Permitting/Parking Management System

In order to facilitate the likely high number of requests for vehicle access to George Street during restricted hours of operation and demand for deliveries, creation of an app-based (or Council website-based) booking and permitting system may be required.

This would seek to create a location-based timetabling system which could manage requests based on vehicle type, time/duration of access and function (e.g. vehicles required for building works, conducting events etc.), and generate an automated permit (corresponding to a vehicle registration). If developed for GNT, this could be expanded for use in all controlled parking zones across the city.

#### 16.2.3. GNT Monitoring and Evaluation Plan

While existing city centre travel patterns, servicing patterns and their demand are thought to be well understood, a programme of monitoring and surveys pre- and post-construction are recommended to identify potential benefits and drawbacks of the proposed Design and Operational Plan in future, servicing and delivery trends and where servicing efficiencies could be achieved (e.g. consolidation deliveries in those situations where a particular supplier visits the area more several times per day or attempting to reduce the number of different companies delivering similar products).

This plan would promote communication between CEC, local businesses and their service providers and help identify 'quick wins' for the daily users of the scheme. The evidence-base for this plan would likely require a mix of interviews with local businesses and on-street observations. Examples of baseline data and key performance indicators (KPIs) which could be agreed in advance and monitored throughout this process include.

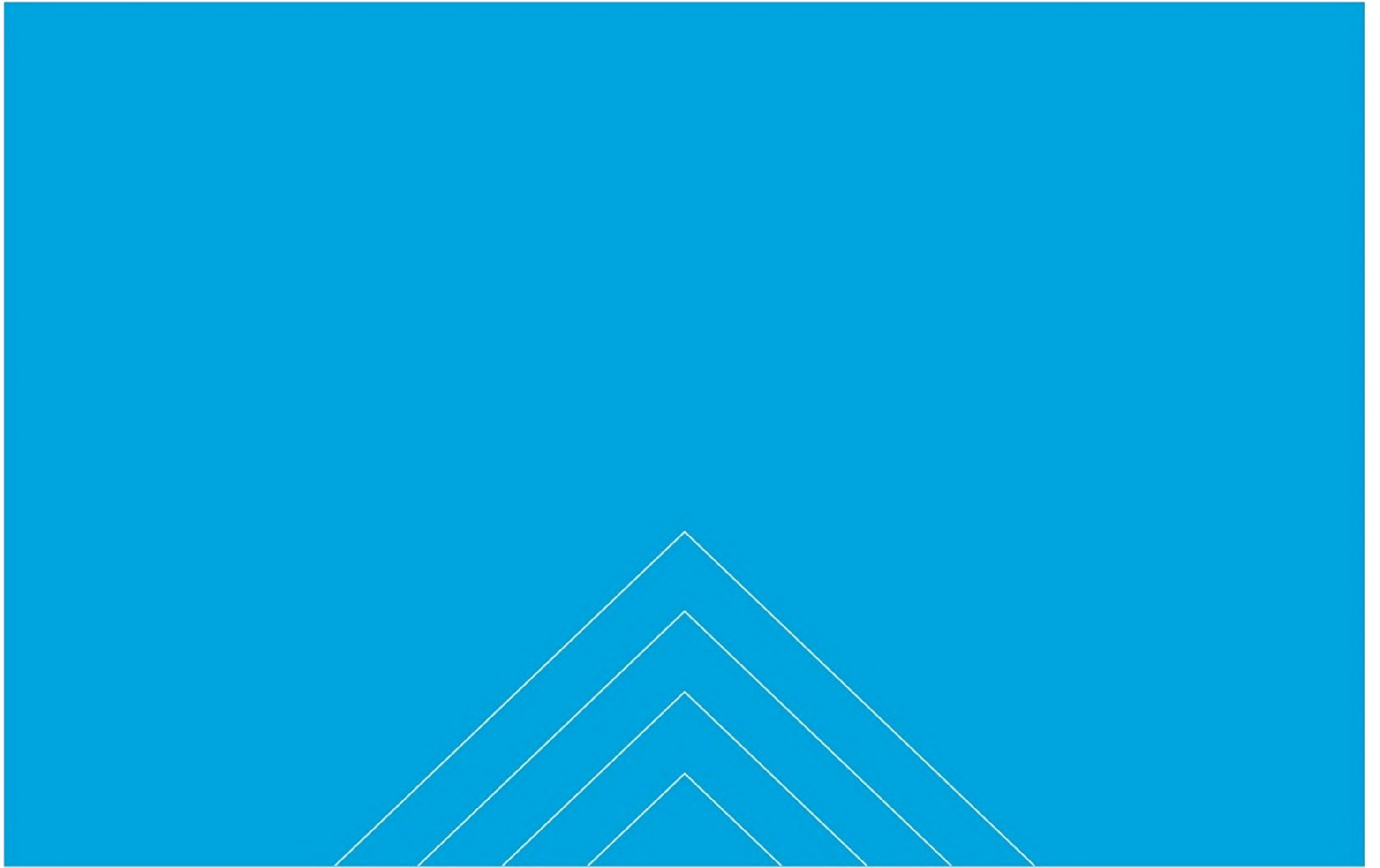
- Volumes of pedestrians, cyclists and public transport journeys (incl. alighting passengers) traveling in the area at peak times and throughout the day.
- Public transport reliability and journey times for key services on Hanover Street.
- Number of taxi trips accessing George Street and the area (pickup and drop-offs)
- The frequency and number of vehicles required (per provider/supplier) to service the area.
- The required vehicle sizes to transport goods.
- The quantity and relative size / weight of goods being moved.
- The urgency and scheduling of goods (e.g. for restaurants is fresh produce is required or whether this can be stored overnight.).
- Preferred access routes favoured by service providers.
- Background traffic levels on adjacent city centre routes, e.g. Queen Street and Charlotte Street.

This is also thought to assist in the development of a wider 'CCT Operational Plan' and 'Digital and Smart Cities Strategy', pedestrian and cycle counters could be implemented within the street.

#### 16.2.4. GNT Construction Management Plan

Looking to the construction and implementation stage, a construction site traffic management plan (CSTMP) would be required to minimise the disruption caused by the works and mitigate the interface wherever possible between site traffic and general traffic. The current Stage 3 Design programme forecasts a construction period of around 24 - 36 months in duration. With an anticipated start date in mid to late 2024 subject to the sign off of the Stage 4 (Technical) Design and the approval of the project's traffic regulation orders (TROs) and redetermination orders (RSOs). Generally, mitigating risks and eliminating hazards during construction works are a core component of the construction design and management process (CDM). Development of these documents would be informed by the Project Risk Register (GNT-ATK-GHS-ZZZZ-QA-ZM-000001), which is continually updated throughout the life cycle of the project.

Taking on board lessons-learned from the Trams to Newhaven Project and the construction management approach used, methods to support access for daily servicing and deliveries e.g. local delivery hubs, staging areas for deliveries, cargo bike libraries etc. would be required to help ensure continuity of service for effected businesses and manage vehicle movements entering the area.



# George Street New Town

## Getting Home Safely Technical Note

City of Edinburgh Council

August 2022



# Notice

This document and its contents have been prepared and are intended solely as information for City of Edinburgh Council and use in relation to George Street New Town project

Atkins assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 28 pages including the cover.

## Document history

Document title: Getting Home Safely Technical Note

Document reference: GNT-ATK-GHS-ZZZZZ-FN-ZS-000001

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft technical note	KC	AM	SS	UF	20/05/22
2.0	Revised technical note	KC	AM	JA	JA	17/08/22

# 1. Introduction

## 1.1. George Street New Town Project

George Street (GS) and the wider First New Town (FNT) area supports a wide range of City functions, serving as a key role for the local economy, residents, events and tourism. It is also a key element in the city centre's travel network for non-motorised users, public transport and vehicle users. The FNT is an important destination in terms of experiencing Edinburgh and it has a critical economic, cultural, and functional role in shaping the City's national and international profile.

The design seeks to deliver a high-quality public realm environment which will enhance the area's identity as a world class destination. The rationale is to provide an adaptable yet robust design which will prioritise the movement of pedestrians walking and wheeling, cyclists and public transport users. The ambition of the design is to generate increased footfall and to create a space which supports increased dwell times.

Core elements of the design include:

- Delivering a design solution which gives priority to pedestrian movement, considering set periods of the day where the streets operate without non-essential vehicle access but permitting bus services and blue badge access where appropriate.
- Incorporation of wider city Active Travel ambitions and form part of the City Centre West-to-East Cycle Link (CCWEL) Route and Meadows to George Street. Use of this facility is to be retained year-round.
- Maintaining the current local bus passenger services within the area; with limited bus stop and route realignments, in-keeping with City of Edinburgh Council's wider Bus Network Review plans.
- Prioritising blue-badge parking within the GSNT area and essential resident parking within the scheme area, to support close access for those who most need it, and reallocating parking bays from GS within the First New Town where this may be possible.
- Reducing vehicle traffic movements at all junctions including George Street, Hanover Street and Frederick Street, to support essential access requirements through the First New Town.

## 1.2. Getting Home Safely Assessment

Women's safety in public spaces is at the forefront of the political, public and community agendas in Edinburgh. The City of Edinburgh Council (CEC) has taken the opportunity to transform its city centre to ensure these spaces are safe and comfortable for vulnerable users, including women and girls of all ages and abilities, and the Equally Safe strategy for women and girls supports and progresses these aims.

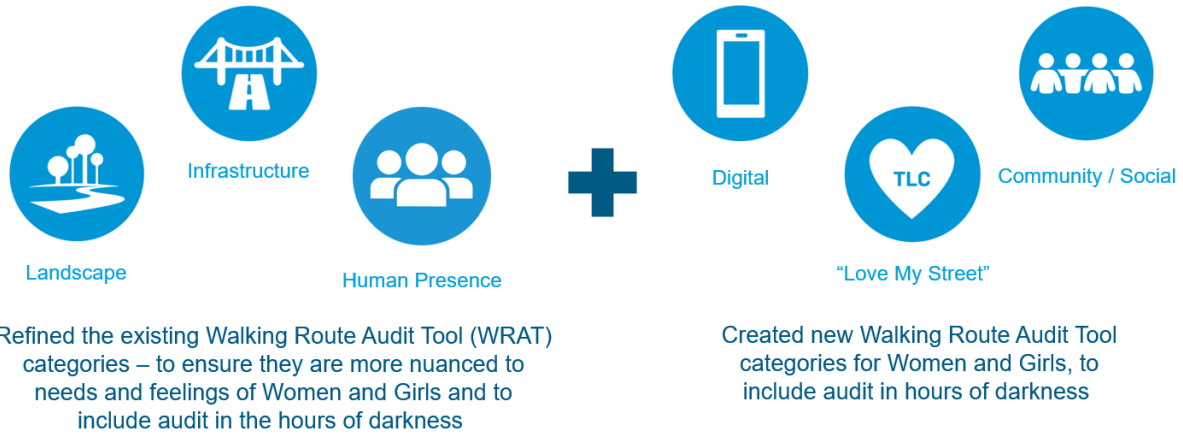
Atkins have been enrolled on the George Street New Town (GSNT) project to support this vision, and use their 'Getting Home Safely – design for women by women' approach to ensure that good design for women's safety is embedded in the project, by taking into account gender nuances which impact the safety of users of public spaces.

The Getting Home Safely (GHS) toolkit has been developed by Atkins, using best practice from other widely available assessments of public space (i.e. Walking Route Audit Tool, Healthy Street etc), and has been adapted and extended to cover gender nuances in public space design. The GHS toolkit assesses public areas and streetscapes against six key themes:

- Landscape
- Infrastructure
- Human Presence
- Digital
- 'Love my Street'
- Community / social

This audit therefore goes above and beyond more conventional streetscape audit tools by DfT, Transport Scotland and others. A full list of the metrics considered within each of the GHS themes is provided in Appendix A.



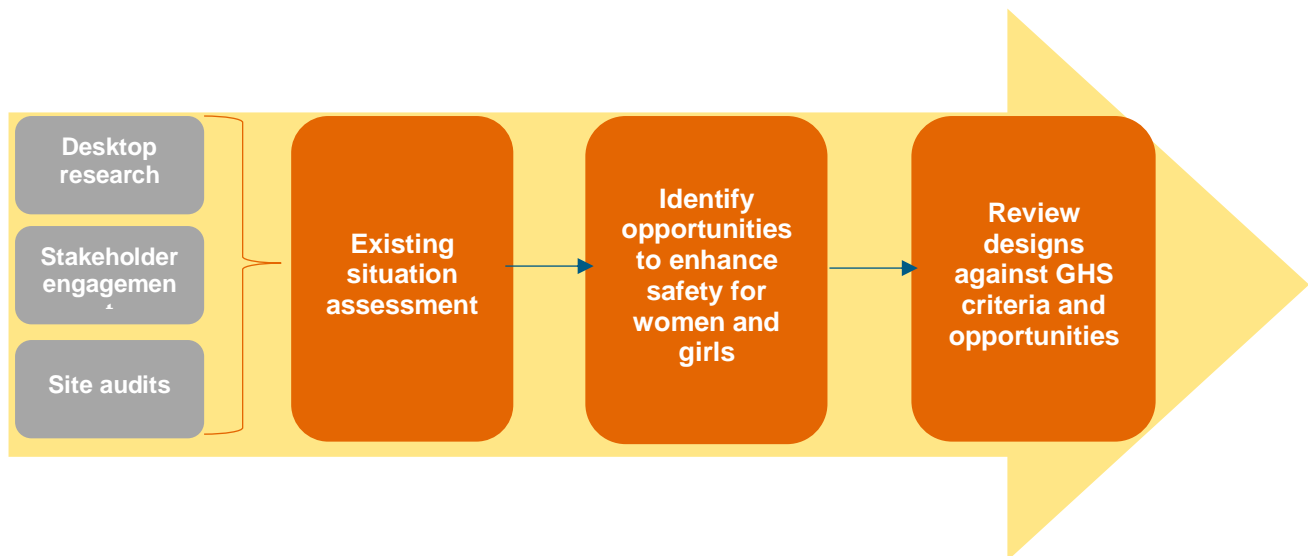


**Figure 1 - Getting Home Safely Toolkit criteria goes above and beyond existing audits to consider multiple factors surrounding women's safety.**

This document outlines the approach and findings of our 'Getting Home Safely' – women's safety assessment - of GSNT, covering the existing baseline conditions and a review of Stage 2 and Stage 3 proposals for the area.

## 2. Approach

The GHS approach for GSNT has used the following approach:



The following data sources were used to inform the assessment:

- **Desktop research** – focussing on understanding the socio demographic context, crime levels, area context and supporting evidence for the GHS themes.
- **Stakeholder engagement** – to provide context and local knowledge to inform the baseline review of GS.
- **GHS site audits** – conducted in both daylight (10/03/2022) and hours of darkness (09/03/2022).

Using the insight collected from the above sources, the GHS toolkit has been used to assess the existing situation on GS against the 30 GHS metrics, using a red-amber-green (RAG) approach<sup>1</sup> to assess the public

<sup>1</sup> Where a range of scores are applicable to a public space, the assessment score presents the weakest score within to ensure a fair evaluation and highlight the least optimum areas within a public space.

space against our GHS metric criteria. The RAG approach provides a visual tool to assess and prioritise areas for improvements, supported by qualitative comments / reasoning behind the RAG rating.

The GHS assessment on the existing situation in GS highlights the key issues for women’s safety in the area, and identifies opportunities to improve safety for all in the redevelopment of GSNT.

Following on from this, the Atkins GHS toolkit has been used to review the proposals for GSNT (both Stage 2 and Stage 3 designs), to ensure that opportunities identified to improve safety for women and girls are met in the current stage of design or highlighted for inclusion as the scheme develops.

### 2.1.1. Stakeholder engagement

Table 1 summarises the engagement with stakeholders that has been used to inform the GHS assessment.

**Table 1 - GHS Stakeholder engagement**

Date	Format	Attendees	Key themes discussed
07/03/2022	Video call	<b>Daisy Narayanan</b> (CEC Mobility and Placemaking Senior Manager)	GHS methodology and audit process. High level considerations for the GHS audit themes.
09/03/2022	In-person event	<b>Heather Clark</b> (Police Scotland, Women’s Safety Portfolio) <b>Lynsay Claxton</b> (Police Scotland, Disability Portfolio Holder) <b>Shona Clelland</b> (CEC Culture, runs Assembly Rooms) <b>William Duncan</b> (George Street Assembly, Chair) <b>Katherine Henebry</b> (Sustrans) <b>Tony Holsgrove</b> (CEC, GNT Project Manager) <b>Kirsty Lewin</b> (Spokes, InfraSisters) <b>Emily Noble</b> (Police Scotland, Race & Religion Portfolio Holder) <b>Angela Voulgari</b> (CEC, Edinburgh Equally Safe)	Wide ranging discussion at stakeholder event, covering issues such as: <ul style="list-style-type: none"> <li>• Importance of operations (including access / servicing) and maintenance to the functioning of GS;</li> <li>• Safety for cyclists, including well-lit cycle parking;</li> <li>• Essential Edinburgh currently fund a rapid response police team, which should be retained. Some concern over safety on Rose Street and The Lanes;</li> <li>• Concern over lack of CCTV, lighting and surveillance on the street, which are considered important to women’s safety;</li> <li>• Police Scotland have a training, “Don’t Be a Bystander”, which they could adapt for local staff;</li> <li>• Construction environments should also be considered for women.</li> </ul>
09/03/2022	Site visit	<b>Lesley McInnes</b> (CEC, Transport & Environment Convener) <b>Jo Mowat</b> (Conservative Councillor for Edinburgh City Centre) <b>Claire Miller</b> (Green Councillor for Edinburgh City Centre)	Walk through of George St during hours of dusk / darkness, with councillors highlighting key areas and considerations for women’s safety in the area based on personal experience or reported issues.
10/03/2022	In-person event	<b>Grant Stewart</b> (Essential Edinburgh, Projects Manager)	Key issues from Essential Edinburgh BID (Business Improvement District), including the need for more police coverage outside of events (Edinburgh festival etc), as police presence was indicated to be valued in local surveys. Noted cleaning and maintenance should be part of operation proposals (also

Date	Format	Attendees	Key themes discussed
11/03/2022	Video call	<p><b>Heather Clark</b> (<i>Police Scotland</i>)  <b>Judith Cowie</b> (<i>CEC Active Travel Lead</i>)  <b>Shirley McLaren</b> (<i>CEC Community Safety</i>)  <b>Angela Voulgari</b> (<i>CEC, Edinburgh Equally Safe</i>)  <b>Neil Whiteside</b> (<i>Police Scotland</i>)</p>	<p>noted seating if often frequented by drinkers). Safety and security of the area is a top priority for BID members.</p> <p>Discussions on issues / initiatives including:</p> <ul style="list-style-type: none"> <li>• City-wide CCTV being upgraded to digital;</li> <li>• Working with BT to put in a 5G network which will be present on GS and Princes Street;</li> <li>• City Free Wi-Fi is now available;</li> <li>• Eight wayfinding signs are planned for the city centre;</li> <li>• Considerable change in atmosphere on George St with different activities including the Festival and outdoor dining;</li> <li>• There was a desire to expand the project to review the New Town more broadly and consider impacts of George St proposals on surrounding streets;</li> <li>• It was noted that the WSPP group was already working on mapping crime levels.</li> </ul>
05/04/2022	Video call (held as stakeholder was unable to attend in person event on 09/03/2022).	<p><b>Annette Pollock</b> (<i>Edinburgh Access Panel - EAP</i>)</p>	<p>Discussion on GHS including the need to consider women of all ages and abilities, with specific needs for visibility and good lighting with few shadows, non-slip paving material in a limited colour palette. Emphasised importance of taxis and other vehicles for mobility impaired individuals. EAP supports seating and CCTV.</p>




## 3. Existing conditions GHS assessment






### 3.1. Existing conditions

Table 2 summarises the findings of the GHS existing conditions assessment. It encompasses insight from desktop research, stakeholder engagement and site audit.

The Red-Amber-Green (RAG) score has been added to each of the metrics within the GHS themes to provide a visual indication of how the area performs against GHS categories. It therefore identifies where there are opportunities for improvement in the area. Areas marked in grey indicate the categories are not applicable in this assessment or are not considered in the GHS toolkit. Opportunities identified through the assessment are indexed within Table 2 and are detailed further in Table 3.

Table 2 - Existing conditions GHS assessment

Theme	Category	Daytime assessment		Night time assessment		Supporting photographs
		GHS score	Comments	GHS score	Comments	
Landscape	Vegetation		N/A. A few planters noted in the middle of GS, placed by the BID. There are however a number of planters, privately owned by venues along the street. These are generally under a metre in height but do include small trees. Whilst these provide an enhanced softer environment along the street, they do provide some hidden areas at points along the route. <b>Opportunity L1.</b>			
	Seating		No public seating along the route. One bus stop with a resting place noted. Hospitality venues place private seating outside premises, solely for use of customers. <b>Opportunity L2.</b>		No real change between daytime and night time conditions. <b>Opportunity L2.</b>	
	Walls or barriers		No walls or barriers along the route. With the exception of one set of guard railings (which offer clear visibility through the railing posts) around the junction of GS and Hanover Street.			
	Legibility of routes		Route is legible, with good visibility. No wayfinding signage at present, but street names, known venues and monuments at each junction provide natural wayfinding. <b>Opportunity L3</b>		No real change between daytime and night time conditions noted as the street has a general level of ambient lighting.	
	Large obstructions		Several large obstructions noted on footways, including phone boxes, utility boxes, and large public and commercial bins. There are a number of unsightly utility boxes / cabinets which, if their use is redundant, could be removed. <b>Opportunity L4.</b> Servicing vehicles / loading often presents large obstructions to footway and highway. <b>Opportunity L5.</b>		No real change between daytime and night time conditions. <b>Opportunity L4.</b>	
						 <p>Servicing vehicles present obstructions to footway (periodically)</p>

Theme	Category	Daytime assessment		Nighttime assessment		Supporting photographs
		GHS score	Comments	GHS score	Comments	
Human Presence	Positive On street activity	Green	Good pedestrian flow along the majority of sections of the street, particularly heavy at the points of intersection with side roads. The lowest pedestrian flow was at the Charlotte Square end of the street. Broad range of uses - people accessing work, hospitality venues and facilities along the route. <b>Opportunity HP1</b>	Yellow	Some pedestrian flow related early evening uses of the street such as outdoor drinking and dining, with more pedestrian traffic at intersections. Level of activity dependent on peak time (i.e., higher at weekends). <b>Opportunity HP1</b>	 
	Negative On street activity	Green	No negative on street activity observed during daytime hours.	Red	Negative on-street activity observed, in particular from male customers leaving hospitality venues. Noted by stakeholders that this is a common occurrence and there is a change in use / activity from 9pm onwards. Observations of vomit on street in pre-dawn hours prior to street cleaning activities. <b>Opportunity HP2</b>	
	Active building frontages	Yellow	Active frontages are mixed. Architecture of some buildings means window height is very high at ground level in many buildings and reduces the eyes on the street. There is also a higher intensity of office and residential use on the upper floors of buildings. The Charlotte Square end of George St has hospitality venues, although it was very quiet and isolated during the night-time audit. The mixture of retail, hotels, restaurants etc along George St means that there are likely to be pedestrians at all times of the day. <b>Opportunity HP3</b>	Yellow	Natural surveillance is likely to be higher at all times of the day in the summer when there is seating outside hospitality venues. The mixture of retail, hotels, restaurants etc along GS means that there are likely to be pedestrians at all times of the day. <b>Opportunity HP3</b>	
	Glass frontages	Red	Few buildings have full glass frontages in the ground and first storey levels. Windows in other buildings are often at high levels that prohibit viewing activity on street. <b>Opportunity HP3</b>	Red	No real change between daytime and night-time conditions.	
	Overlooking by residential properties	Yellow	Residential properties along the route are not at ground level which reduces potential for natural surveillance. Noted that many are rented as office space or short term let (i.e., Airbnb) and do not provide consistent surveillance. <b>Opportunity HP4</b>	Grey		Example active building frontages (including high level windows that reduce eyes on street)
	Presence of hidden corners / areas	Red	The nature of the buildings with large entrances, staired entrances, columns and staggered frontages results in multiple areas where people could lurk / hide. There is little CCTV along GS to alleviate concerns around hidden / dark areas. <b>Opportunity HP5</b> A passageway adjacent to the Assembly Rooms which links to Rose Street was identified as a particular hazard by stakeholders - although this does not have public access rights and is generally locked during the hours of darkness. <b>Opportunity HP6</b>	Red	Multiple building frontages presented opportunities for hidden corners. <b>Opportunity HP6</b>	 
	Presence of staff / support	Yellow	Traffic warden observed in the daytime audit. Reported that the BID fund a police officer to patrol the area in periods of peak activity, and that other staff are in place at certain time periods including taxi marshals and voluntary groups such as Street Assist. These were not evident at time of audit but may be focussed on weekend peak periods. <b>Opportunity HP7</b>	Yellow	Some private members of security staff noted at establishments along the route. Reported that the BID fund a police officer to patrol the area in periods of peak activity, and that other staff are in place at certain time periods including taxi marshals and voluntary groups such as Street Assist. These were not evident at time of audit but may be focussed on weekend peak periods. <b>Opportunity HP7</b>	






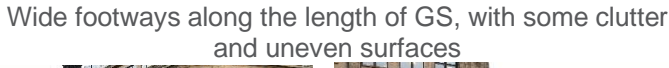




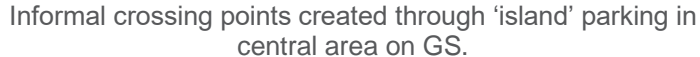


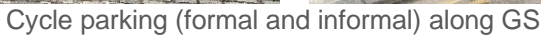
Architecture along George St presents multiple hidden and dark corners/areas

Example active building frontages (including high level windows that reduce eyes on street)



Some glass frontages providing eyes on the street

Passageway between GS and Rose Street

Theme	Category	Daytime assessment		Nighttime assessment		Supporting photographs
		GHS score	Comments	GHS score	Comments	
Digital	Mobile voice coverage	Green	Good mobile voice coverage at present, and city-wide free Wi-Fi is also available now. <b>Opportunity D1</b>	Grey		
	Mobile data coverage	Green	Good mobile data coverage at present. <b>Opportunity D1</b>	Grey		
	Local use of safety reporting apps	Green	Whilst there is local use of several different safety reporting apps (Hollie Guard, Follow It, Bright Sky, Circle of 6, Kitestring), none are promoted by the Local Authority. However, Hollie Guard is promoted by the Edinburgh division of Police Scotland.	Grey		
	Promotion of tracking / emergency contact apps or programmes	Red	No evidence of promotion of tracking apps or services in site audit. Several apps are noted in the area (both national and local apps), but usage levels are unknown. Noted in the desktop review that Edinburgh residents have been encouraged to download the Hollie Guard app by Edinburgh Police, however no evidence of this in site audit. <b>Opportunity D2</b>	Red	No evidence of promotion of tracking or safety apps noted in night-time audit. <b>Opportunity D2</b>	
	Accurate digital wayfinding / mapping of local area	Green	George St and surrounding areas are well-mapped and accurate on all major platforms including Google Maps, City Mapper, Transport for Edinburgh. TfE have also developed pdf maps available online. <b>Opportunity D3</b>	Grey		

Theme	Category	Daytime assessment		Night time assessment		Supporting photographs
		GHS score	Comments	GHS score	Comments	
Infra-structure	Network connectivity and permeability		George St is well-connected to surrounding areas, with intersecting streets approximately every 200m. However, the central car parking areas create a barrier to pedestrian crossings away from these formal crossing areas. <b>Opportunity I1</b>			
	Width of footways		Wide footways throughout route extent. Footway use by hospitality venues for outside drinking and dining and for queuing for entrance to night time entertainment establishments is well controlled and does not unacceptably narrow footway width.			
	Street lighting		Lighting is consistent along the route from wall mounted lights, however, is not at a great intensity along the centre of the route. <b>Opportunity I2</b>		No complete dark spots observed during night time audit	
	Footway condition		Evidence of uneven surfaces in paving along the route and crossing points which could present mobility challenges to any users on wheels (e.g., wheelchair, buggy, child's scooter). Some significant defects noted through cracked paving and uneven tactile paving. <b>Opportunity I3</b>			
	Pedestrian-friendly crossings at street-level that meet desire lines		Formal crossing points at all intersecting roads, and along the street in line with current car parking provision in street. Parking in central area on GS allows more informal crossing points but can present a safety hazard. Area is not heavily trafficked.		Informal crossing more challenging in hours of darkness due to parking in central area.	
	Cycle / scooter parking		Cycle / scooter parking is located at the ends of the central parking zone, which require crossing two lanes of traffic to access. Non-standard cycle parking is not available. Evidence of informal "fly parking" suggests demand higher than existing provision. <b>Opportunity I4</b>		Parking benefitted from ambient lighting but not particularly well-lit during hours of darkness.	 
						
					 	
					 	
						
						



Theme	Category	Daytime assessment		Night time assessment		Supporting photographs
		GHS score	Comments	GHS score	Comments	
Community / Social	Presence of community groups		Evidence of presence of BID through planters located at crossing points, but no other evidence of active community groups observed. <b>Opportunity CS1</b>			
	Positive behaviour campaigns		Several campaigns within Edinburgh to encourage positive behaviour, however no evidence of promotion or use of these noted on site. <b>Opportunity CS2</b>		Again, no evidence of promotion of positive behaviour campaigns to target reported problematic evening behaviours.	
	Presence of Safe Havens		No evidence of safe havens or other similar schemes. <b>Opportunity CS3</b>		No evidence of safe havens or other similar schemes.	
Love My Street	Artwork / public space design		No evidence of local artwork or public involvement. <b>Opportunity LMS1</b>			 <p>Artwork on passageway between GS and Rose Street; approach could be used to create community involvement in GS</p>  <p>Graffiti on doorways, litter boxes and other furniture along GS</p>
	Maintenance reporting		No evidence of maintenance reporting, although desktop research identified options through Council website or "Fix My Street" app. <b>Opportunity LMS2</b>			
	Area maintenance		Litter noted along extent of GS. Vomit along street in early hours of morning. Graffiti noted on bins and other signage / property along extent of route. <b>Opportunity LMS3</b>		As per daytime audit.	
	Community involvement		BID provides some community involvement but minimal. <b>Opportunity LMS1</b>			

## 4. Existing situation - Opportunities

Through the GHS assessment of the existing situation, a number of opportunities have been identified to improve safety for women and girls in the development of GSNT. These have been developed through consideration of the RAG status of the assessment of the existing situation, as well as recognised measures to enhance safety for women and girls (and all). These are shown below, ordered by theme:

**Table 3 – Opportunities / recommendations identified to enhance women’s safety from baseline situation**

<b>Landscape</b>	<b>L1</b>	Provision of vegetation <1m in height, if well-maintained, will provide a softer and more ambient environment along the street. Engagement with businesses to ensure any vegetation is well-maintained and does not present any opportunity for hiding places or infringe on street space.
	<b>L2</b>	Seating along the route in well lit, open, and high footfall areas will provide resting points and enhanced pedestrian environments. Use of natural materials should be considered to provide more ambient environments and a variety of arrangements to suit different needs.
	<b>L3</b>	Wayfinding signage would assist in directing pedestrian flow along the route, identifying onward transport including buses and taxi ranks, and maximising footfall to local venues. George Street should be included in the roll out of wayfinding signage in the area.
	<b>L4</b>	No real evidence of use of phone boxes, so consider removing, or re-siting / redesigning. Commercial litter bins are large and present obstructions. Lower-level bins with recycling facilities would provide less obstruction along the route. There are a number of unsightly utility boxes / cabinets which, if their use is redundant, could be removed.
	<b>L5</b>	Consider operations of the street – including disabled parking, loading, and servicing requirements along the street in an operations plan to ensure these activities do not present obstructions to footfall or impact on environment along GS and promote accessibility.
<b>Human Presence</b>	<b>HP1</b>	Opportunities to increase the level of footfall at the Charlotte Square end of the street, including potentially discussions with the private owner to see if public access rights for the Square can be secured.
	<b>HP2</b>	Behaviour campaigns and staff presence along the route, particularly during periods of peak activity from hospitality venues, may assist in reducing negative behaviour on the street.
	<b>HP3</b>	Any new buildings introduced to the street should consider the need for eyes on the street (facilitated by planning policy).
	<b>HP4</b>	Planning policies should encourage street level development uses which support greater surveillance, as well as greater residential density on upper floors.
	<b>HP5</b>	Provision of CCTV would support surveillance and feelings of safety along the route, specifically where there are hidden / dark corners due to building architecture and high-level windows which do not allow for natural surveillance.
	<b>HP6</b>	Ongoing engagement with building owners / venue operators should be undertaken to ensure that passageways with no public access rights continue to be locked during the hours of darkness.
	<b>HP7</b>	Opportunity to increase staff / support presence (i.e., help points) to enhance safety, particularly during night time hours and hours where there is negative on street behaviour.
<b>Digital</b>	<b>D1</b>	CEC is working with communications providers to identify priority areas for 5G roll out. GS should be considered as a priority candidate.

	<b>D2</b>	Promotion of safety apps along the route, in establishments and on public transport / cycle parking to widen awareness and use of these apps.
	<b>D3</b>	Ensure wayfinding maps are continually updated to reflect changes to the streetscape, land uses and venues.
<b>Infrastructure</b>	<b>I1</b>	Removal of central car parking to improve legibility for pedestrians crossing the street.
	<b>I2</b>	Overall improvement to paving condition on footways required, along with regular maintenance to fix cracked and loose paving.
	<b>I3</b>	There is an opportunity to introduce additional street lighting, which could be focussed in certain areas or activities, such as at cycle parking.
	<b>I4</b>	Provision of enhanced and additional cycle parking to match requirements, and place appropriately to provide easy access along GS and to remove safety hazards of crossing highway. Cycle usage surveys could be undertaken to understand current usage levels.
<b>Community / Social</b>	<b>CS1</b>	Engage with community groups to provide sense of ownership and involvement along the route. Community artwork and small 'parklets' provided and maintained by community groups would provide a positive community-owned feature.
	<b>CS2</b>	Further promotion of positive behaviour campaigns to assist in reducing negative behaviour on street particularly during night time hours.
	<b>CS3</b>	Engage with BID to develop safe havens along the extent of GS covering daytime and night time hours.
<b>Love My Street</b>	<b>LMS1</b>	Engage with local community groups and artists to provide on street art works and features like small parklets to create a more welcoming environment.
	<b>LMS2</b>	Appropriate information displayed at key points along the route to enable efficient maintenance reporting.
	<b>LMS3</b>	Improve maintenance approach along the street extent. Requirements for continuing a high level of street cleaning (particularly around dawn) to ensure a clean and ambient environment, encouraging positive on street activity.

## 5. Stage 2 and 3 design GHS assessment

Stage 2 and 3 design proposals for GS were reviewed by the GHS team in March 2022. The following documentation was used to inform the assessment:

- Stage 2:
  - 2021-05-10\_GNTST2 WYG Draft Concept GA including Junction Layouts
  - 7035\_GNTST2\_Rendered Plan-A0 L
  - GNTST2 Operational Plan FINAL
- Stage 3:
  - GNT-ATK-HGN-ZZZZZ-DT-CH-000001 through GNT-ATK-HGN-ZZ-DR-CH-000104 (dated 18/03/2022)
  - 2022.03.21\_George Street Fly Through - Hi-res

It should be noted that night time assessments of Stage 2 and 3 designs are indicative, as a complete set of design drawings had not been created to show hours of darkness. This is a further **recommendation for design teams and CEC to ensure that all future design drawings created for the scheme** (and indeed on all projects) **are prepared to show both daylight and darkness** to enable a clear understanding of the streetscape in both conditions.

Table 4 provides a RAG summary of the Stage 2 and 3 design proposals, in comparison to the existing baseline conditions. A full breakdown of the GHS design assessment for the Stage 2 and 3 designs is presented in Appendix B and C.

Table 4 – GHS assessment summary, Stage 2 and 3 designs compared to existing situation.

Theme	Category	Daytime			Night time			Comments
		Existing	Stage 2	Stage 3	Existing	Stage 2	Stage 3	
Landscape	Vegetation	Grey	Green	Green	Grey	Green	Green	Stage 2 and 3 design proposals include vegetation planters, to provide zones in GS. Exact height specifications are not included in the designs, but currently considered to be under 1m in height.
	Seating	Red	Green	Green	Red	Green	Green	Stage 2 and 3 design proposals include landscaped seating areas along both sides of the street. Increasing footfall and eyes on the street and providing a more welcoming environment for social interaction.
	Walls or barriers	Green	Green	Green	Grey	Grey	Grey	No walls or barriers over 1m in height included in the design proposals.
	Legibility of routes	Green	Green	Green	Green	Green	Green	Landscaped seating areas with a different character for each block in GS will assist in making the environment more legible for all. Increase in pedestrian space and removal of vehicular space along GS will assist in improving the environment and legibility for pedestrians.
	Large obstructions	Yellow	Green	Green	Yellow	Green	Green	Stage 2/3 design proposals remove large obstructions along the length of GS previously identified in existing situation (phone boxes, large litter bins etc). Further items are placed within the design (seating, bollards etc), but these are all under 1m in height.
Human Presence	Positive On street activity	Green	Green	Green	Yellow	Yellow	Yellow	No considerable change from existing conditions. The Stage 2/3 designs provide an enhanced pedestrian environment, with seating and space for social interaction that should assist with increasing pedestrian flow and positive on street activity. However, the movement of vehicles, bus stops and taxi services / cars from GS will however reduce natural surveillance – which may reduce benefits of natural surveillance and positive on street activity, particularly during the hours of darkness.  CEC is minded enabling access to licensed taxis aligned to service Windows especially to support night time economy. Buses only service two blocks of the Street currently. Buses will remain on interconnecting streets of Hanover/Frederick and South St Andrews Street. Project team will aim to ensure bus stops on interconnecting streets are as close to George St junctions as possible.
	Negative On street activity	Green	Green	Green	Red	Red	Red	No considerable change from existing conditions. The Stage 2/3 designs provide an enhanced pedestrian environment, with seating and space for social interaction that should assist with increasing pedestrian flow and positive on street activity. The movement of bus stops and taxi services during day time hours will reduce presence of passing vehicles. Taxis access is proposed to remain during the evening/night, and service/loading vehicles will remain present especially during evening and early morning service windows, so there will be some natural surveillance along the street during evening hours. Emergency service vehicles will have improved visibility of George Street with removal of parked cars/vans.
	Active building frontages	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	No change from existing situation as designs do not include any changes to buildings along the length of GS.
	Glass frontages	Red	Red	Red	Red	Red	Red	No change from existing situation as designs do not include any changes to buildings along the length of GS.
	Overlooking by residential properties	Yellow	Yellow	Yellow	Grey	Grey	Grey	No change from existing situation as designs do not include any changes to buildings along the length of GS. Currently, there are private security cameras throughout George Street which do not provide consistent coverage along the route. The stage 3 proposals state these will be replaced without enhancement.

Theme	Category	Daytime			Night time			Comments
		Existing	Stage 2	Stage 3	Existing	Stage 2	Stage 3	
	Presence of hidden corners / areas	Red	Yellow	Yellow	Red	Yellow	Yellow	As per the existing situation, the architecture on GS presents hidden corners and dark areas. However, the designs show there will be a clear line of sight along GS, with large obstacles and parking removed to create clutter free areas with increased visibility and a reduced number of hidden corners.
	Presence of staff / support	Yellow	Red	Yellow	Yellow	Red	Yellow	There will be a reduction in parking attendants along the route due to the removal of parking in the central area. However, there will be increased presence and footfall along the route due to provision of seating and hospitality venues having more space to provide outside seating. (Stage 2 designs did not have any evidence of this, hence Red status). In addition, there may be further staff presence through landscaping / maintenance staff and taxi marshals, but this has not been confirmed at this stage.
Digital	Mobile voice coverage	Green	Green	Green	Grey	Grey	Grey	Stage 2/3 designs do not alter the current provision of mobile voice / data coverage, hence scored as per existing situation.
	Mobile data coverage	Green	Green	Green	Grey	Grey	Grey	Use of local safety reporting apps is scored as per existing situation.
	Local use of safety reporting apps	Green	Green	Green	Grey	Grey	Grey	Promotion of tracking / emergency contact apps would not be included in the Stage 2/3 designs, hence not assessed.
	Promotion of tracking / emergency contact apps or programmes	Red	Grey	Grey	Red	Grey	Grey	No change from existing situation – local digital wayfinding / mapping of local area is accurately mapped for pedestrian accessibility.
	Accurate digital wayfinding / mapping of local area	Green	Green	Green	Grey	Grey	Grey	Both Stage 2 and 3 increase pedestrians' space and make improvements to crossing facilities / opportunities on adjoining streets, improving connections to other routes, and allowing greater route choice. The designs will connect several cycle routes.
Infra-structure	Network connectivity and permeability	Yellow	Green	Green	Grey	Grey	Grey	Stage 2 and 3 designs significantly increase pedestrian footways (to approx. 4.5m on each side of GS), as vehicular space decreases.
	Width of footways	Green	Green	Green	Grey	Grey	Grey	Street lighting is outside of the remit of the current design proposals, hence not assessed for Stage 2 or 3.
	Street lighting	Yellow	Grey	Grey	Yellow	Grey	Grey	Increased size of footway with smooth finishes and clear designation between footway and vehicular / cycle area. Designs create clear pedestrian space with zoning of areas. Granite is proposed at Stage 3 to provide robust and durable material that should stay in good condition for longer than alternatives.
	Footway condition	Red	Green	Green	Grey	Grey	Grey	Designs have considered desire lines and improves freedom of movement through the reduction of vehicular space (including parking) and improves crossings with adjacent streets.
	Pedestrian-friendly crossings at street-level that meet desire lines	Yellow	Green	Green	Yellow	Green	Green	Cycle parking will be adjacent to the cycleway at regular intervals along both sides of George Street. There would be an increased capacity of 150 bicycles, however these are based on standard cycles only.
	Cycle / scooter parking	Red	Yellow	Yellow	Red	Yellow	Yellow	
Community / Social	Presence of community groups	Red	Grey	Grey	Red	Grey	Grey	N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	Positive behaviour campaigns	Red	Grey	Grey	Red	Grey	Grey	
	Presence of Safe Havens	Red	Grey	Grey	Red	Grey	Grey	
Love My Street	Artwork / public space design	Red	Grey	Grey	Red	Grey	Grey	
	Maintenance reporting	Red	Grey	Grey	Red	Grey	Grey	
	Area maintenance	Red	Grey	Grey	Red	Grey	Grey	
	Community involvement	Red	Grey	Grey	Red	Grey	Grey	

**Table 5 – Opportunities tracker**

Theme	Opportunity / Recommendations		Addressed	Outstanding	Action
Landscape	L1	Provision of vegetation <1m in height, if well-maintained, will provide a softer and more ambient environment along the street. Engagement with businesses to ensure any vegetation is well-maintained and does not present any opportunity for hiding places or infringe on street space.	✓		Ensure these design elements are included as the design for GS is further developed to maintain current benefit of Stage 3 design for women's safety.
	L2	Seating along the route, in well lit, open, and high footfall areas will provide resting points and enhanced pedestrian environments. Use of natural materials should be considered to provide more ambient environments, and a variety of arrangements to suit different needs.	✓		
	L3	Wayfinding signage would assist in directing pedestrian flow along the route, identifying onward transport including buses and taxi ranks, and maximising footfall to local venues. George Street should be included in the roll out of wayfinding signage in the area.		✓	CEC to engage with wayfinding teams to ensure George Street is included in wayfinding scheme
	L4	No real evidence of use of phone boxes, so consider removing, or re-siting / redesigning. Commercial litter bins are large and present obstructions. Lower-level bins with recycling facilities would provide less obstruction along the route. There are several unsightly utility boxes / cabinets which, if their use is redundant, could be removed.	✓		Ensure these design elements are included as the design for GS is further developed to maintain current benefit of Stage 3 design for women's safety.
	L5	Consider operations of the street – including disabled parking, loading, and servicing requirements along the street in an operations plan to ensure these activities do not present obstructions to footfall or impact on environment along GS and promote accessibility.		✓	CEC to work with BID and other landowners to consider operations plan for GSNT
Human Presence	HP1	Opportunities to increase the level of footfall at the Charlotte Square end of the street, including potentially pursuing discussions with the private owner to see if public access rights for the Square can be secured.		✓	CEC to engage with landowners.
	HP2	Behaviour campaigns and staff presence along the route, particularly during periods of peak activity from hospitality venues, may assist in reducing negative behaviour on the street.		✓	CEC to engage with Police, BID and premise owners to roll out positive behaviour campaign and on GS (and surrounding areas). This should include a review of existing programmes in which venues/businesses are engaged, Police Scotland programmes, and outside opportunities.
	HP3	Any new buildings introduced to the street should consider the need for eyes on the street (facilitated by planning policy).		✓	CEC to engage with planning teams and as appropriate with landowners.
	HP4	Planning policies should encourage street level development uses which support greater surveillance, as well as greater residential density on upper floors.		✓	CEC to monitor going forwards.
	HP5	Provision of CCTV would support surveillance and feelings of safety along the route, specifically where there are hidden / dark corners due to building architecture and high-level windows which do not allow for natural surveillance.		✓	CEC to consider placement of CCTV along GS (currently outside of scope of Stage 3 designs) Whilst private CCTV does exist on George Street, project team are speaking to CEC CCTV team to discuss improved coverage. CEC currently rolling out upgrade to existing CCTV network and GNT will be highlighted as area for potential enhancement as part of upgrade.
	HP6	Ongoing engagement with building owners / venue operators should be undertaken to ensure that passageways with no public access rights continue to be locked during the hours of darkness.		✓	CEC to engage with landowners.
	HP7	Opportunity to increase staff / support presence (i.e., help points) to enhance safety, particularly during night time hours and hours where there is negative on street behaviour.		✓	CEC to engage with BID, premise / landowners Police and community partners to ensure appropriate support is in place in GSNT, particularly during peak night time hospitality hours.
Digital	D1	CEC is working with communications providers to identify priority areas for 5G roll out. GS should be considered as a priority candidate.		✓	CEC to engage with teams involved in 5G roll out
	D2	Promotion of safety apps along the route, in establishments and on public transport / cycle parking to widen awareness and use of these apps.		✓	CEC to engage with BID, Police, premise owners and local safety app providers to promote apps and trackers and encourage use.
	D3	Ensure wayfinding maps continually updated to reflect changes to the streetscape, land uses and venues.		✓	CEC to monitor going forwards.
Infra-structure	I1	Removal of central car parking to improve legibility for pedestrians crossing the street.	✓		Ensure these design elements are included as the design for GS is further developed to maintain current benefit of Stage 3 design for women's safety.
	I2	Overall improvement to paving condition on footways required, along with regular maintenance to fix cracked and loose paving.	✓		

Theme	Opportunity / Recommendations		Addressed	Outstanding	Action
	I3	There is an opportunity to introduce additional street lighting, which could be focussed in certain areas or activities, such as at cycle parking.		✓	Lighting is currently outside of the scope of the GSNT designs, however additional localised lighting would provide tangible impacts on feelings of safety in the area and should be considered. CEC are currently assessing current lighting levels in street to identify if enhancement required, and this will be included in scope if required at a later stage.
	I4	Provision of enhanced and additional cycle parking to match requirements, and place appropriately to provide easy access along GS and to remove safety hazards of crossing highway. Cycle usage surveys could be undertaken to understand current usage levels.	✓	✓	Ensure this is included as the design for GS is further developed to maintain current benefit of Stage 3 design for women's safety. Further surveys to understand current and estimated future cycle use. Provision for parking of non-standard cycles including trailers and cargo bikes.
Community / Social	CS1	Engage with community groups to provide sense of ownership and involvement along the route. Community artwork and small 'parklets' provided and maintained by community groups would provide a positive community-owned feature.		✓	CEC and BID to engage with community groups to investigate inclusion local artworks and displays to GSNT and approach roads
	CS2	Further promotion of positive behaviour campaigns to assist in reducing negative behaviour on street particularly during night time hours.		✓	CEC to engage with Police, BID, premise owners and organisations such as St Andrews and George Church, New Town, and Broughton Borough Council (NTBCC), and George Street Association to roll out positive behaviour campaign and on GS (and surrounding areas)
	CS3	Engage with BID to develop safe havens along the extent of GS covering daytime and night time hours.		✓	CEC and BID, New Town, and Broughton Borough Council (NTBCC), and George Street Association to work with premise owners to create safe havens along length of GSNT and surrounding roads.
Love My Street	LMS1	Engage with local community groups and artists to provide on street art works and features like small parklets to create a more welcoming environment.		✓	CEC and BID to engage with community groups to investigate inclusion local artworks and displays to GSNT and approach roads
	LMS2	Appropriate information displayed at key points along the route to enable efficient maintenance reporting.		✓	CEC to ensure that mechanisms for maintenance reporting are clear and provided at key points along GSNT and surrounding streets to ensure redevelopment of GS does not negatively impact on surrounding area
	LMS3	Improve maintenance approach along street extent. Requirements for continuing a high level of street cleaning (particularly around dawn) to ensure a clean and ambient environment, encouraging positive on street activity.		✓	CEC and BID to develop appropriate maintenance plan for GS, to include dawn cleaning specifically around periods of peak night time activity on GS.



## 6. Conclusions and Recommendations

The Getting Home Safely assessment has used background data, stakeholder feedback and GHS public space audits to provide an understanding of the existing situation on GS, which has allowed identification of several opportunities to enhance safety for women and girls in the development of GSNT. The Stage 2 and 3 design proposals for GSNT have been reviewed following the GHS themes and metrics, to understand what opportunities identified to enhance safety have been addressed in design, and where there is the potential to make further improvements.

Overall, the Stage 3 designs to date improve the current situation in terms of safety for women and girls compared to existing conditions through enhancing pedestrian space. These improvements are generally around the landscape and infrastructure themes within the GHS assessment – for example through providing formal and informal crossing opportunities, removing large obstructions in the pedestrian footway and with greater eyes on the street through encouraging positive on street activity. CEC should seek to ensure that the good elements of Stage 3 designs in terms of women’s safety are taken forward into Stage 4 and onwards into construction.

There are several additional opportunities that sit outside of the design remit at this Stage which would enhance safety for women and girls in GSNT. These include:

### Design:

- Design drawings should be prepared to consider both daylight and hours of darkness. This helps to illustrate the differences in environment between hours of light and darkness. Illustrating lighting levels along the street would assist in highlighting potential dark spots or spots in need of greater illumination. Localised lighting may be required at cycle parking and wayfinding.
- Consideration of non-standard cycles including for cycle parking and that all hotspots of demand for cycle parking are met through cycle parking provision.
- Wayfinding signage should be placed at key decision points on George St and should support integration with onward transport including buses and taxis. Consideration could also be given to integrated Help Points within the signage.
- Include provision of enhanced digital CCTV, with sufficient lighting to ensure facial recognition on CCTV footage to support eyes on the street.

### Operations:

- Ensure GSNT benefits from an upgraded 5G network being rolled out in Edinburgh, to enhance mobile and data access in addition to the city free Wi-Fi available.
- Confirm appropriate operations plans to balance needs of communities and user groups as well as businesses. This includes loading as well as public transport, including taxis and accessibility. This will help pedestrian flow along GSNT and remove large barriers in the footway that present hidden corners.
- Surrounding areas including the Lanes will be impacted by changes on George St and are part of the New Town commercial and hospitality neighbourhood, so should be considered as a wider zone when considering operations, maintenance, and safety / security programmes as well as CCTV and lighting.
- Develop a maintenance plan to ensure a high standard is retained in vegetation, street furniture, and public realm, including day-to-day cleanliness of public spaces as well as regular upkeep and repairs. This will create a more welcoming public space, remove barriers along the street and ensure facilities are fit for purpose. This should be discussed with Essential Edinburgh BID in the first instance, as they provide an existing maintenance service for GS. An easy-to-use maintenance reporting mechanism such as a city-wide mobile phone app would also be useful, ensuring that local people can quickly and easily report issues.

### Policy / planning:

- CEC should engage with Planning to improve eyes on the street and provision of glass frontages for intervisibility in any new developments along GSNT (and indeed across the city).
- Consider greater expression of the local culture and community through local artwork and spaces and involve community groups in the design and usage of public spaces - creating a sense of ownership and stewardship.
- CEC to engage with BID, landowners, community groups and Police to consider and develop the following (non design solutions) to ensure a comprehensive support network for women and girls visiting GSNT

(noting that a range of support options would be more inclusive for all, as not everyone feels comfortable with Police presence):

- Additional staff training for prevention of issues such as the *Don't Be a Bystander* training available from Police Scotland.
- Promotion of positive behaviour campaigns and engagement with management and staff of clubs and drinking establishments on GS on behaviour of male customers, through campaigns targeted toward men (e.g., London's *#HaveAWord* campaign), additional support at closing time, staff training on addressing issues
- Promotion of apps and existing services by Police Scotland and community groups (e.g., Street Assist provided by Essential Edinburgh, Strut Safe) to support women and other vulnerable groups finding support when needed and getting home safely. It should be acknowledged that not everyone feels comfortable seeking help or support from Police.
- Provision of safe havens such as Ask Angela and others, along the length of GSNT, to ensure there are facilities along the length of GS (and surrounding roads) and that these are appropriately promoted.
- Support for staff should be considered alongside customers, including for travel during hours of darkness and late at night.

## Appendix A – GHS Toolkit elements

Theme	Category	Criteria
<b>Landscape</b>	Vegetation	Vegetation in the area is generally less than 1 metre in height, is not dense and comprises of trees rather than shrubs
	Seating	If present, seating / benches are positioned where there is good lighting, natural surveillance, CCTV surveillance and good visibility
	Walls or barriers	Walls or barriers are kept to a minimum along the perimeters of the route and are generally less than 1 metre in height
	Legibility of routes	Presence of measures to provide route legibility, i.e., natural wayfinding measures, street signs, wayfinding signage, fingerpost signs etc.
	Large obstructions	Presence of large obstructions in or around footways (i.e., footway parking, refuse containers, advertising signs)
<b>Human Presence</b>	Positive On street Activity	Presence of activities on the route which make people feel safer e.g., people waiting at bus stops, other pedestrians (walking), people sitting outside cafes
	Negative On street Activity	Presence of activities on the route which may make people feel unsafe / uncomfortable e.g., antisocial behaviour
	Active building frontages	Presence of a mix of land uses fronting the site and a mix of hours that they are operational
	Glass frontages	Presence of transparent (not privacy) glass frontages at ground level allowing people to see into and out of the building
	Overlooking by residential properties	Presence of residential properties that overlook the site to provide human presence, more natural surveillance, and private security camera systems.
	Presence of hidden corners / areas	Presence of hidden corners / areas where people could hide e.g., alleyways, recesses; hiding places created by poor positioning of large items on street e.g., commercial bins / contractors' containers, parked cars, grit bins
	Presence of staff / support	Presence of transport staff / PCSOs / Police officers / Private security guards / BID on street teams / Car Park staff Staffing likely to vary so suggest this is audited at daytime and night time
<b>Digital</b>	Mobile voice coverage	Presence of good mobile networks to enable phone calls
	Mobile data coverage	Presence of good mobile networks to enable data sharing (i.e., for maps, tracking or safety apps)
	Local use of safety reporting apps	Presence and use of local safety reporting apps in the area. Examples include: SafetiPin, Hollaback, Safe and The City, Shake2Safety, bSafe, Circle of 6, or Kitestring, OneScream, Life360, Red Panic Button, What3Words. Are their active safety reporting apps commercially available or provided by the local authority
	Promotion of tracking / emergency contact apps or programmes	Local promotion of tracking and emergency contact apps, such as on bus stops, at local venues (cafes, shops, restaurants / pubs, supermarkets, doctors' surgeries), presence on local authority website
	Accurate digital wayfinding / mapping of local area	Digital methods provide accurate wayfinding in the site. e.g., Google Maps, iMaps, Bing Maps, Waze, City Mapper.
<b>Infrastructure</b>	Network connectivity and permeability	Presence of routes / connections within site that allow users frequent route choices.
	Width of footways	Physical width of footways for pedestrian movement
	Street lighting	Presence and quality of lighting within the area, is lighting to current design standards and levels for the location?
	Footway condition	Condition and maintenance of footways
	Pedestrian-friendly crossings at street-level that meet desire lines	Frequent highway crossing points that are welcoming, on desire lines, and provide multiple opportunities for crossing a highway route without requiring users to wait excessive lengths to cross highway.
	Cycle / scooter parking	Presence of cycle / scooter parking that is well lit, accessible and encourages use.
<b>Community / Social</b>	Presence of community groups	Presence of community groups (Community Watch etc)
	Positive behaviour campaigns	Presence of positive behaviour campaigns (giving space, being considerate, looking out for people, crime etc) Noted these may be venue specific and therefore review in daytime and night time hours is relevant.
	Presence of Safe Havens	Presence of Safe Havens or schemes such as "Ask Angela" at suitable venues in the site area and evidence of how they are promoted to those who may need them. Noting that Safe Havens may only open during certain times.
<b>Love My Street</b>	Artwork / public space design	Presence of art / murals etc in public spaces, creating more welcoming community spaces
	Maintenance reporting	Presence of reporting mechanisms for when maintenance is required.
	Area maintenance	Consideration of whether public spaces are clean and well maintained.
	Community involvement	Presence of community involvement in planning and / or design or streets or public spaces

## Appendix B – Stage 2 GHS assessment

Theme	Category	Daytime assessment			Night time assessment		
		Existing score	Stage 2 score	Comments	Existing score	Stage 2 score	Comments
Landscape	Vegetation			There are vegetation planters in the designs which line the carriageway in the centre of George Street and provide segregation between the road and pedestrian and cycle area. It is unclear how tall these are from the plans, but there are gaps in between planters which ensures they do not become obstructions.			As per daytime assessment. Planters included in design should not provide any dark / hidden areas due to the indicative height.
	Seating	1		There will be landscaped seating areas along both sides of the street.			Seating provides dwell areas around hospitality locations along GSNT. Lighting along the street should cover the seating areas but additional lighting may be needed.
	Walls or barriers			The designs don't feature any walls or barriers >1m in height, assuming planters are small. Thomas Chalmer statue is in the centre of George Street, this may prevent people from being able to see to the other side of the street for a limited area. Vegetation plan along central route to use planters as 'barriers to assist in demarcation of zones' does not support natural surveillance if over 1m in height. Few zones may provide respite and feelings of security if in the direction of open areas that are staffed or covered by natural surveillance.			
	Legibility of routes			Landscaped seating areas with a different character for each block in George Street will help to make the environment more legible for all. No information on wayfinding and street signs is available in the stage 2 designs.			No change from daytime assessment. Lighting and size of street provides open routes to support legibility at night.
	Large obstructions			The designs will widen footways and minimise street clutter on all adjoining streets. Clearly delineated seating areas will reduce the potential for conflicts between commercial seating areas, slow moving pedestrians and faster moving pedestrians travelling elsewhere within the study area. This could potentially give an increased feeling of security by providing a clear line of site without obstructions. Car parking in the centre of George Street is removed in the Stage 2 Designs, this will prevent unwanted natural surveillance of people sitting in cars or standing between cars and facilitate informal road crossings. Loading / service bays could reduce on-street visibility when in use and make crossing more challenging, however there will be an overall decrease in vehicles on George Street.			Removal of large obstructions (as discussed in daytime assessment) will be particularly appreciated during hours of darkness as there will be fewer hidden corners / dark areas.
Human Presence	Positive On street activity			Designs to include dwell space and encourage on street activities should create more welcoming spaces for social interaction and positive on street activity.			Evening activity including outdoor hospitality in summer months should encourage positive on street activity in the expanded pedestrian space in GSNT. No specific campaigns included in design for encouraging positive on street activity. There may be less on street activity in winter months during darkness.
	Negative On street activity			Largely unchanged from review of existing situation. There are two-night clubs along GS which may lead to antisocial behaviour during the night, these close at 3am outside of the festival period. Potential negative interactions and behaviours with staff on construction sites, general visitors (unwanted behaviours). Car parking in the centre of GS is removed in the Stage 2 Designs, this will prevent natural surveillance of people sitting in cars, however, create more space for crossing and social interaction.			No provision for reduction in negative on-street activity during night time in Stage 2 designs. The additional pedestrian space along GSNT should encourage social interaction, and this may continue negative behaviours experienced during hours of darkness along GS in existing situation.
	Active building frontages			No change to active building frontages from existing situation as these is outside of the remit of the designs. However, there may be			No change to active building frontages from existing situation as these is outside of the remit of the designs. However, there may

Theme	Category	Daytime assessment			Night time assessment		
		Existing score	Stage 2 score	Comments	Existing score	Stage 2 score	Comments
				some benefit from more on street activity from the hospitality venues due to the provision of additional seating and dwell space.			be more on street activity from the hospitality venues due to the provision of additional seating and dwell space.
	Glass frontages	1		No change from existing situation as this is outside of the remit of the designs.			No change from existing situation as this is outside of the remit of the designs.
	Overlooking by residential properties			No change from existing situation as this is outside of the remit of the designs.			
	Presence of hidden corners / areas	1		The designs show there will be a clear line of site from one end of GS to the other. Moving large obstacles to create clutter free areas with increased visibility and a reduced number of hidden corners. The designs show that parking throughout the centre of GS has would be removed which will reduce the number of hidden places and stop people being able to sit in cars / create unwanted surveillance.  The buildings have a range of projection onto the street which means opportunities to lurk at intervals where shop / building fronts aren't vertically level. Some residential properties / offices have basement level entry from the street.			No considerable change from daytime assessment.
	Presence of staff / support			There are private security cameras dotted throughout GS, however there is no reference to CCTV cameras in the stage 2 designs so it is not understood how this may differ following construction.  There are potentially no staff likely to be present on the street, as parking attendants who currently monitor parking on GS will not likely need to be present.			As in daytime assessment, but with potentially less support and staffing.
Digital	Mobile voice coverage			Same as review of existing. There is good mobile voice and data coverage throughout all of GS for all networks, including good voice and data coverage.			
	Mobile data coverage						
	Local use of safety reporting apps			Evidence of local usage of local safety reporting apps.			
	Promotion of tracking / emergency contact apps or programmes	1		N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses			N/a - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	Accurate digital wayfinding / mapping of local area			No change from existing situation.			
Infra-structure	Network connectivity and permeability			The designs will connect several local cycling routes including National Cycle Routes 75 and 76, Golden acre Cycle Path and Leith Walk.  The designs will provide more opportunities to cross in between junctions on George Street. This will allow pedestrians to travel more directly to their destination. Providing more informal crossing points and removing the vehicles parked in the centre of George Street will contribute to making crossings safer.			
	Width of footways			The stage 2 designs show that the width of footpaths will increase dramatically to 4.5m wide as the amount of space for vehicles decreases.			
	Street lighting			Lighting is outside of the remit of the Stage 2 design, therefore not included in design proposals.			Lighting is outside of the remit of the Stage 2 design, therefore not included in design proposals.
	Footway condition	1		The condition of footways on George Street is assumed to be good following construction, the maintenance of the area has not been outlined at this stage of the project. Kerb provision expected to be 60mm which will provide a distinction between footpaths and cycle lanes / roads.			

Theme	Category	Daytime assessment			Night time assessment		
		Existing score	Stage 2 score	Comments	Existing score	Stage 2 score	Comments
	<b>Pedestrian-friendly crossings at street-level that meet desire lines</b>			Designs have considered desire lines and freedom of movement which are currently restricted due to the number of vehicles and a streetscape which prioritises vehicle parking. The design seeks to provide pedestrian friendly crossings by promoting indirect crossing of the street to follow desire lines and reducing the width of the central carriageway space and maximising footway space, supporting more direct crossing behaviours at the junction, with opportunities for diagonal crossing of able-bodied pedestrians. Restricting and timing vehicles access GS will also make crossing easier and safer. Junction proposals facilitates pedestrian / vehicle interaction at consistent intervals and provides direct opportunities to cross or leave the immediate vicinity via A-roads such as Lothian Road / A700.			As per daytime assessment.
	<b>Cycle/scooter parking</b>			There is increased cycle parking provision, including cycle hire stations and e-bike charging on each of the streets in the Stage 2 designs. Cycle parking will be adjacent to the cycleway at regular intervals along both sides of George Street. There would be an increased capacity for 150 bicycles. The demand for cycle parking now and following the scheme is unknown, so it is unclear whether this would be operating at capacity. The parking would only be able to store standard bicycles.			Lighting at parking locations should be considered, both as a preventative measure and to support levels of comfort in using cycle parking
<b>Community / Social</b>	<b>Presence of community groups</b>			N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses			N/a - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	<b>Positive behaviour campaigns</b>						
	<b>Presence of Safe Havens</b>						
<b>Love My Street</b>	<b>Artwork / public space design</b>			N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses			N/a - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	<b>Maintenance reporting</b>						
	<b>Area maintenance</b>						
	<b>Community involvement</b>						

## 7. Appendix C – Stage 3 GHS assessment

Theme	Category	Daytime				Night time			
		Existing score	Stage 2 score	Stage 3 score	Comments	Existing score	Stage 2 score	Stage 3 score	Comments
Landscape	Vegetation				The Stage 3 design (fly-through video) shows that planters included in the design will not be above shoulder height when sitting. The Council will have maintenance responsibilities for the planters to ensure these stays below 1m.				As per daytime assessment. Planters included in design should not provide any dark / hidden areas due to the indicative height.
	Seating	1			There are no significant changes from the stage 2 review – there will be landscaped seating areas along both sides of the street.				Additional seating provides dwell areas around hospitality locations along GSNT. No localised lighting around seating areas included in the design proposals.
	Walls or barriers				There are no significant changes from the stage 2 review.				
	Legibility of routes				Landscaped seating areas with a different character for each block in George Street will help to make the environment more legible for all. No information on wayfinding and street signs is available in the stage 2 or 3 designs.				No change from daytime assessment. Lighting and size of street provides open routes to support legibility at night.
	Large obstructions				There are no large obstructions included in the Stage 3 designs, however there are bollards, which are small obstructions (under 1m) which line the parts of GS which could be used for loading / disabled parking.				Removal of large obstructions (as discussed in daytime assessment) will be particularly appreciated during hours of darkness as there will be fewer hidden corners/dark areas.
Human Presence	Positive on-street activity				As per Stage 2 design review, provision of additional seating and dwell space provides larger areas for social interaction on GS – but these benefits are more likely to be realised in summer and hours of daylight than at night.				As per Stage 2 design review - Evening activity including outdoor hospitality in summer months should encourage positive on street activity in the expanded pedestrian space in GSNT. No specific campaigns included in design for encouraging positive on street activity. There may be less on street activity in winter months during darkness.
	Negative on-street activity				There is no change from the Stage 2 assessment. Additional pedestrian space on GS provides more opportunity for social interaction.				As per Stage 2 assessment. Additional pedestrian space on GS provides more opportunity for social interaction – which may continue negative behaviours experienced during hours of darkness along GS in existing situation.
	Active building frontages				No change to active building frontages from existing situation as these is outside of the remit of the designs. However, there may be some benefit from more on street activity from the hospitality venues due to the provision of additional seating and dwell space.				No change to active building frontages from existing situation as these are outside of the remit of the designs. However, there may be some benefit from more on street activity from the hospitality venues due to the provision of additional seating and dwell space.
	Glass frontages	1			No change from existing situation as this is outside of the remit of the designs.				No change from existing situation as this is outside of the remit of the designs.
	Overlooking by residential properties				Currently, there are private security cameras dotted throughout George Street which provide poor coverage and the stage 3 proposals state these will be replaced without further improvement.				
	Presence of hidden corners /areas	1			Generally, as per Stage 2 design assessment. The stage 3 proposals formalise existing seating areas and remove some of this seating from the main circulation area which widens the street. The				As per daytime assessment –improvements to lines of sight through removal of large obstructions, and and more space on the footway to walk away from building

Theme	Category	Daytime				Night time			
		Existing score	Stage 2 score	Stage 3 score	Comments	Existing score	Stage 2 score	Stage 3 score	Comments
					buildings have a range of projection onto the street which means there are opportunities to lurk at intervals where shop/building fronts aren't vertically level – additional pedestrian space will provide more room between building frontages and walking routes.				architecture will have benefits during hours of darkness.
	Presence of staff / support				As there are seating areas on the side of the footway opposite to the building frontages, restaurant staff will likely be present on the street and frequently crossing the footway. This is likely to be most common during the day and in the evening.				As per daytime assessment – hospitality staff would be more present on footways than current existing situation (or marked in Stage 2 designs) specifically at night when there is a lot of evening activity.
Digital	Mobile voice coverage				Same as review of existing. There is good mobile voice and data coverage throughout all of GS for all networks, including good voice and data coverage.				
	Mobile data coverage								
	Local use of safety reporting apps				Evidence of local usage of local safety reporting apps.				
	Promotion of tracking / emergency contact apps or programmes	1			N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses				N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	Accurate digital wayfinding / mapping of local area				No change from existing situation.				
Infra-structure	Network connectivity and permeability				Network connectivity remains good, with connections to cycle routes, improved informal crossing provision through removal of the central car parking, and improved formal crossing provision.				As per daytime assessment
	Width of footways				There are no significant changes from the Stage 2 proposals. The stage 3 proposals show that the width of footway will increase dramatically to 4.5m wide as the amount of space for vehicles decreases. There will still be some seating on the street which restricts the footway width slightly but still provides generous footway space.				
	Street lighting				Lighting is outside of the remit of the Stage 3 design, therefore not included in design proposals.				Lighting is outside of the remit of the Stage 3 design, therefore not included in design proposals.
	Footway condition	1			The condition of footways on George Street is assumed to be good following construction, the maintenance of the area has not been outlined at this stage of the project. Kerb provision expected to be 60mm which will provide a distinction between footpaths and cycle lanes / roads. Portuguese Granite is proposed as one of the footway materials in some sections. This is a dark material which is robust and not susceptible to abrasion which means it will stay in good condition for longer. Lighter material may make the area feel brighter; however, the durability of this material is of primary importance. Slip resistance should be considered.				
	Pedestrian-friendly crossings at street-level that meet desire lines				There are no significant changes from the Stage 2 proposals. At the junction with Castle Street and Frederick, there are Zebra crossings which reduce the time which pedestrians have to wait before crossing. There is a signalised crossing at the junction with Hanover				As per daytime assessment. Crossing points reducing waiting times will be beneficial during hours of darkness to ensure swift movement along GS.



Theme	Category	Daytime				Night time			
		Existing score	Stage 2 score	Stage 3 score	Comments	Existing score	Stage 2 score	Stage 3 score	Comments
					Street and St David Street, which is a busy street and central bus corridor.				
	Cycle / scooter parking	1			The demand for cycle parking now and following the scheme is unknown, so it is unclear whether this would be operating at capacity. The parking included in the designs would only be able to store regular bicycles.				As in daytime assessment. No localised lighting present in Stage 3 designs around cycle parking.
Community / Social	Presence of community groups	1			N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses				N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	Positive behaviour campaigns	1							
	Presence of Safe Havens	1							
Love My Street	Artwork / public space design	1			N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses				N/A - These elements would not be included in Stage 3 designs, but should be considered as the GSNT project progresses
	Maintenance reporting	1							
	Area maintenance	1							
	Community involvement	1							



## **RESEARCH & CONSULTANCY**

### **ECONOMIC IMPACT ASSESSMENT FOR GEORGE STREET AND FIRST NEW TOWN PROPOSALS**

**CITY OF EDINBURGH COUNCIL**

DATE OF REPORT: 29<sup>TH</sup> SEPTEMBER 2022

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# 1 REPORT OUTLINE

Rettie & Co. was commissioned by the City of Edinburgh Council (CEC) to undertake research to establish the economic impact of its proposed George Street and First New Town (GNT) public realm proposals.

GNT is a major public realm project that aims to reconfigure the use of space in George Street and reconsider how its junctions work with intersecting streets and squares, to create a high-quality placemaking environment. The aim is to make the area attractive for people of all ages to visit, shop, rest, and make active and sustainable travel choices.

Rettie & Co.'s work involves estimating the gross and then the net economic impact of the proposed development options by considering the likely direct, indirect and induced impacts of the development, taking into account local and national multipliers, leakage and displacement levels. This provides impact figures in terms of quantifiable economic indicators (output, employment and Gross Value Added).

## 1.1. STUDY METHOD

Our methodology for calculating economic impact is based on the HM Treasury Green Book<sup>1</sup> guidance and Additionality guidance that has been developed for the UK Government and regional development agencies<sup>2</sup>. We calculate the gross and then the net economic impact of the proposed development by considering the likely direct, indirect and induced impact of the development, taking into account local and national multipliers and displacement levels.

The **gross economic impact** of the development is a measure of the total economic benefit generated and can be divided into the following elements.

- The jobs created through the construction of the development
- The additional incomes / expenditure attracted to the area by new employees
- The indirect jobs created through the purchases of supplies and services
- The induced jobs created by the wages and salaries of the direct and indirect jobs created.

The **net additional economic impact** takes account of a variety of factors to ensure that the proportion of the gross economic impact attributed to the development is not understated or overstated. Additionality involves assessment of a number of factors.

- **Leakage** – i.e. that part of the total economic benefit that ends up outside the area. This is informed by the local industrial/economic profile, i.e. any impact occurring in sectors where there is no local representation will be lost, e.g. expenditure on supplies from suppliers outside the area.

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<sup>1</sup> HM Treasury, *Green Book: Appraisal and evaluation in central government*. London: TSO.

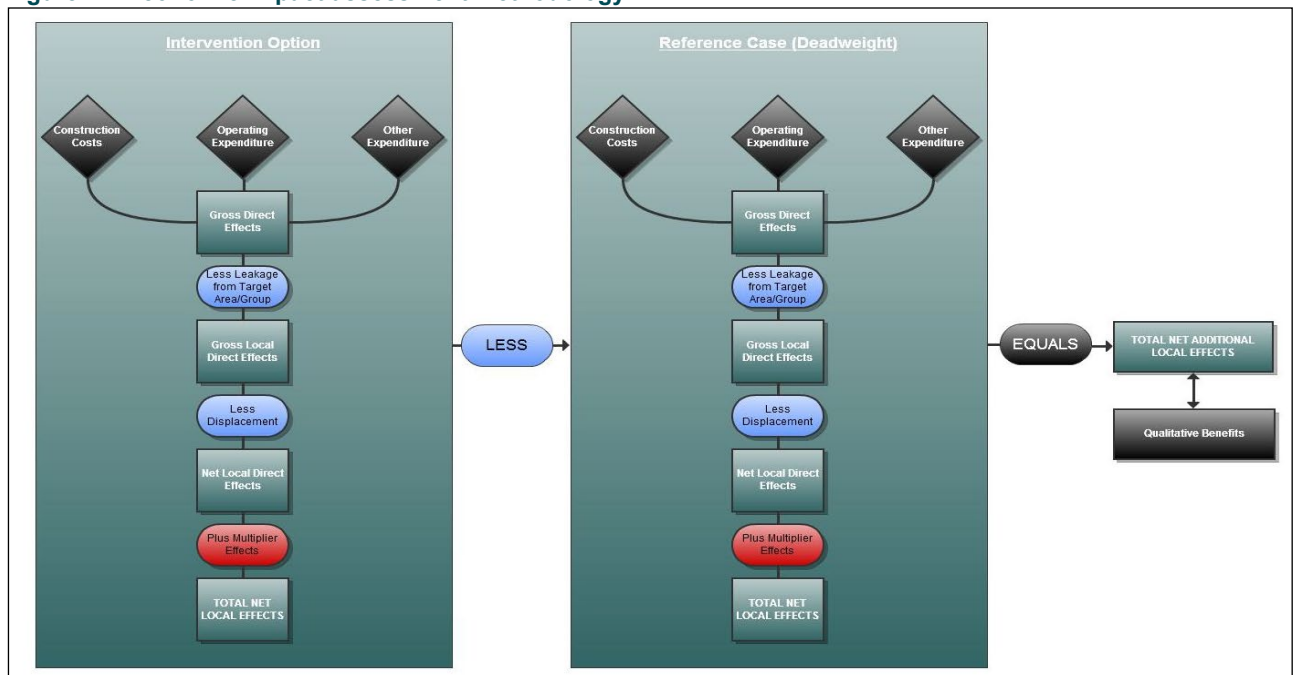
<sup>2</sup> Department for Business, Innovation & Skills, *Research to improve the assessment of additionality*. BIS Occasional Paper No. 1. October 2009. Homes & Communities Agency, *Additionality Guide*. 4<sup>th</sup> edition. 2014. Department for Communities & Local Government, *DCLG Appraisal Guide*. 2016

- **Displacement** – i.e. loss of any activities that are in direct competition with the new development. For example, other developments that are competing for the space may not go ahead or may be reduced in size. This loss of income is offset against the final impact.
- **Deadweight** – i.e. impacts that would still have accrued regardless of the development. If there are competing developments, the new development may simply result in a redistribution of benefits away from alternative sites, therefore reducing the attributable local expenditure and employment impacts, i.e. new businesses may have arrived in the area regardless of the new development.
- **Substitution** – i.e. when a firm substitutes one activity for another in order to take advantage of public sector assistance, e.g. when a firm substitutes a jobless person to replace an existing worker via a public sector grant.
- **Multipliers** – i.e. the impact that the new businesses, residents and employees have as they spend money in the area. Bespoke local multipliers will be derived from the analysis to determine the knock-on effects that the direct expenditure injection has throughout the economy. This process utilises the Scottish Input-Output tables, adjusted to take account of the local industrial profile and corrected for the issues highlighted above.

This economic impact assessment is a high level exercise, which uses national averages and proxies.

All economic impact assessments have a similar method, outlined below.

**Figure 1.1 Economic impact assessment methodology**



Source: Rettie & Co adaptation of English Partnerships' Additionality Guide, 2008

At a high level, broad assumptions can be made about costs and expenditure, national average multipliers can be used and assumptions can be made about leakage, displacement, etc. based on appraisal and additionality guidance and secondary research.

To avoid optimism bias, conservative assumptions should be used in both the assessment of costs and benefits of the project. For example, relatively high levels of leakage and displacement are assumed to ensure that the overall appraisal results also err on the conservative. Combined, these factors are between

c.45-90% for each of the benefits. The inclusion of a Do Minimum option as the counterfactual also reduces the net additional effects of the Reference Case.

The economic impact is calculated at a city level and a City Centre (neighbourhood). This is a City Centre project designed for the benefit of the neighbourhood and the city as a whole. In terms of investment, it is not large enough to consider wider regional or national impacts.

The remainder of this report is structured as follows.

- **Section 2** outlines the GNT proposals
- **Section 3** examines the project rationale
- **Section 4** looks at the GNT area, providing baseline information on occupancy and visitors
- **Section 5** considers the variety of international literature on the impacts of public realm improvements on cities, including drawing out lessons of similar schemes
- **Section 6** details the economic impact assessment
- **Section 7** provides a qualitative assessment of the proposals based on elements of the literature and the criteria they judge to be required for good urban design to generate favourable outcomes
- **Section 8** provides the conclusions.

## 2 GNT PROPOSALS

The GNT study area consists of George Street, Castle Street, Frederick Street and Hanover Street and the junctions with Charlotte Square and St Andrew Square.

Figure 2.1 Map of GNT project area



Source: Faithful & Gould

A report by Ironside Farrar<sup>3</sup>, on behalf of CEC considered design principles for George Street back in 2016. It produced a SWOT analysis of the street based on an engagement and consultation exercise, where it provided the key inherent strengths and weaknesses of the street as well as the opportunities and threats that are present.

Although the diversity of the offer, street profile and preservation of historic architecture were all clear strengths, notable weaknesses were also highlighted, particularly around the lack of a clear vision for the street, the lack of public investment, the dominance of the car and the poor quality of much of the street landscape.

The street was facing some clear threats, especially from the loss of commercial investment, the lack of investment to maintain it adequately and the emergence of other locations such as the St James Quarter.

Opportunities were spelled out, particularly around creating a new vibrant City Centre destination with a people focus that was more accessible and inclusive and had higher quality infrastructure supporting it.

<sup>3</sup> Ironside Farrar, *George Street – a special place*. May 2016.

**Figure 2.2 SWOT analysis of George Street**

Key Strengths	Key Weaknesses
<ul style="list-style-type: none"> <li>▪ backbone and the key axis of James Craig’s First New Town Plan</li> <li>▪ established partnership of public and private sector interests</li> <li>▪ diversity of commercial activity including evening economy</li> <li>▪ profile of the street – gateway / thoroughfare / destination</li> <li>▪ mixed-use activity (retail / café / licensed leisure / hotels / offices / residential)</li> <li>▪ well preserved and high quality historic architecture and statues – an exceptionally high quality built environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ absence of clear vision and strategy for street as public realm</li> <li>▪ lack of public investment</li> <li>▪ constrained accessibility / mobility / poor user safety / legibility</li> <li>▪ micro-climate and winter levels of activity</li> <li>▪ levels of footfall / animation / activity / flexibility</li> <li>▪ dominance of car</li> <li>▪ poor quality paving and street clutter</li> </ul>
Key Opportunities	Key Threats
<ul style="list-style-type: none"> <li>▪ enable the street to function as a ‘street piazza’ and new vibrant city destination</li> <li>▪ re-define the street around people</li> <li>▪ ensure place that supports accessibility and mobility</li> <li>▪ promote stronger commercial investment around premium mixed-use activity</li> <li>▪ create a public infrastructure that is adaptable, welcoming and addresses user needs</li> <li>▪ make street more inclusive, welcoming and safe for all users</li> <li>▪ reinforce the historic qualities of the street and the hierarchy of the First New Town Plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ progressive loss of commercial investment to stronger locations</li> <li>▪ reduced investment in building fabric / place quality</li> <li>▪ adverse impact of St James Quarter (1.7 million square feet of mixed retail/leisure/ hotel &amp; residential development / 1,600 parking spaces)</li> <li>▪ reduced quality of user experience with resulting reduced footfall</li> <li>▪ lack of recognition of capacity to enhance city / ad-hoc - low quality interventions</li> </ul>

Source: Ironside Farrar

## 2.1 CONCEPT DESIGN

The broad design objectives for GNT are set out below. This attempts to set the vision and strategy for the area that was identified as being absent in the Ironside Farrar (2016) report, as well as building on the concept and design principles included in that report.

- **Create a world class place** that respects and enhances the existing Edinburgh City Centre World Heritage Site.
- **Improve the pedestrian experience** through an enlarged and enhanced public and pedestrian space, creating a safe, vibrant space for all.
- Promote **sustainable transport** by prioritising active travel and access for people with a disability or impairment, with public parking on George Street seen as lowest priority.
- Deliver **flexible space** by developing an adaptable street design and enabling use for appropriate events.
- Make for a more **vibrant local economy** by enhancing the First New Town as a place where businesses can thrive.

The GNT concept design consists of the following core elements and design principles.

- *Wider pavements* on both sides of George Street along the entire street length to increase circulation space and accessibility for all pedestrians. This is to be primarily achieved by the reduction in the road width, obtained from the removal of parking bays. Wider pavements and narrower road space are intended to make pedestrian crossing more convenient in all directions, and to allow for direct, safer and easier access to these junctions.
- *A substantial scale of greenery*, including hedges, large multi-stem shrubs and other low-level shrub planting contained within raised granite planters, with sensitively balanced landscaped seating areas on the north and south sides of George Street to provide designated areas where people can relax or rest in comfort and safety. These additions are designed to make the street more welcoming, with the potential to include some informal play elements within



these spaces. Increasing the volume of greenery is part of the Council's commitment to be a zero-carbon city by 2030 and enhance the overall biodiversity of a street.

- *The creation of a very low traffic area.* Bus services will continue to operate within the GNT area but will not travel along George Street itself as part of the city-wide bus network review. Bus services will be able to directly cross George Street via north and south routes on interconnected streets, including Hanover and Frederick Streets. St Andrew Square will continue to be an important transport interchange for users to work in and visit GNT, with access to the expanded tram network, local bus services and Edinburgh Bus Station. The proposal to remove local bus routes along George Street will allow the creation of a final design proposal that removes all but essential traffic from the street. This low traffic area will enable cycling to be located within the centre of George Street and provide opportunities for additional placemaking including landscaped, play and seating areas.
- *Creation of a cycling street* within the central carriageway of the newly designed street to provide a high-quality approach to cycling in the First New Town area, interfacing with both the CCWEL and MGS active travel projects to create a network of strategic cycling routes to the west of the city from Charlotte Square to the east through St Andrew Square and south via George IV Bridge. To accommodate the new cycleway, the junctions of George Street will be redesigned, which will also improve the visual setting around the central statues, help slow down remaining vehicle movements within the First New Town streets and reduce potential for cycle/pedestrian/vehicle conflict.
- *The removal of parking bays from George Street* to free-up space for non-motorised uses. The ECCT strategy highlights the removal of on-street parking in the Edinburgh's historic core as necessary to reallocate space for high quality public realm.
- *An integrated Sustainable Urban Drainage System (SUDs) within the designated landscaped areas*, which will allow surface water to drain naturally, replenishing ground water and having zero impact on the capacity of existing drains and sewers. The varied landscape planting for the area will also slow the rate of surface water as plants filter, reuse and reduce flood risks.
- *Repositioning of the James Clerk Maxwell statue* at the gateway into George Street, adjacent to the western entrance to St Andrew Square gardens, creating a more sympathetic and prominent position.
- *Incorporation of largely 'clutter free' spaces outside key iconic George Street buildings on each block*, including areas outside the Assembly Rooms and St Andrew's and St George's West Church. This will provide clear and uninhibited views of prominent buildings. The spaces located outside key buildings will also create a flexible and multi-functional environment that could support appropriately scaled events that are sympathetic to the unique setting and built form of George Street.

## 2.2 OPERATIONAL PLAN

Below are outlined the draft current fundamental principles of an operational plan for First New Town, which are aligned to the ECCT Strategy. A final operational plan for the First New Town will be endorsed by the Council's Transport and Environment Committee at a future date.

- Delivering pedestrian and cycling priority, where George Street operates without non-essential vehicle access through set periods of the day but permitting blue badge access at all times where appropriate
- Preserving the use of cycling infrastructure all year-round

- Maintaining local bus passenger services within the First New Town area including direct crossing points with George Street (but not along George Street)
- Prioritising blue-badge parking within the GNT area and essential resident parking within the wider scheme area (but not on George Street), to support access for this group of key users
- Removing all but essential vehicle traffic movements from George Street with access for service vehicles only permitted during servicing and loading windows, except for certain essential services
- Taxi and private hire services are unlikely to be permitted to access to George Street when enforcement restrictions are in place, but additional taxi rank spaces are proposed in the wider First New Town interconnecting streets and St Andrew Square
- Pre-agreed exemptions will apply to users who require access during service windows, for example weddings, funerals and emergency utility/building works.

### 3 PROJECT RATIONALE

There need to be grounds for market failure to justify any type of public sector intervention in the supply of property or land by any public sector agency.

#### 3.1 JUSTIFICATION FOR PUBLIC SECTOR INTERVENTION

The HM Treasury Green Book identifies four clear types of market failure, summarised below.

- **Public Goods** – Goods to be enjoyed by all, where there is no incentive to pay, therefore there is no incentive for the market to supply. Examples include public realm projects, national parks and the place itself (i.e. the environment in which people and businesses have to operate). Possible interventions to correct the failure would include public provision of the good and a competitive tendering process for a private provider to provide the good, possibly with some element of public subsidy.
- **Externalities** – These are production or consumption effects that impact on others. These spill-over effects are not reflected in market prices, leading to sub-optimal production or consumption of a good. Externalities can be positive or negative. Positive examples would include a development that improves tourism in an area and brownfield development that reduces deprivation. Negative examples would include pollution and congestion. Possible interventions to correct the market failure would include taxes or subsidies to adjust prices nearer to market levels.
- **Information gaps** – This is where economic agents have difficulties in accessing sufficient information to inform transactions. Examples would include difficulties in agents pricing risk and asymmetric information, where one economic agent is advantaged by having much more information than others. Possible interventions to correct the market failure include regulation to ensure quality thresholds are met, direct provision of information and accreditation procedures.
- **Market power** – This is a situation where lack of competition deters potential entrants, e.g. through land banking or setting-up high barriers to market entry. Possible interventions to correct the market failure include regulation, removing market barriers and imposing competitive tendering on markets to ensure other suppliers are considered.

Essentially, these all provide grounds for intervening in markets to ensure economic efficiency. The grounds for intervention are also justified on equity and environmental grounds. The Department for Communities and Local Government (DCLG)<sup>4</sup> states that there are three broad grounds for justifying market intervention.

- **Efficiency**, i.e. the market failure grounds discussed above
- **Equity**, to allow for a fairer distribution of resources
- **Environmental**, to ensure sustainable standards of living.

These grounds can be compatible, but there may also be occasions when they are competing considerations and some trade-off between two (or three) of them is required.

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<sup>4</sup> DCLG, *Community and local government economics, Paper 1: a framework for intervention*. DCLG: London. 2007.

The DCLG goes on to outline four different levels, or types, of intervention that public bodies may employ to meet these broad objectives.

- **Enabling local solutions** – Enabling flexibility in the implementation of policy to provide integrated and tailored solutions to the way in which problems come together and interact in specific places.
- **Ensuring costs and benefits are considered across economic areas** – Formulating economic policies at the level that the market operates, e.g. to ensure that the costs and benefits of decentralisation are balanced.
- **Exploiting economies of scale and scope** – For example, clustering economic activity to raise productivity.
- **Establishing effective co-ordination** – Joining-up and co-ordinating effective delivery.

In terms of traditional grounds of market failure, the GNT scheme proposals would largely be due to infrastructure as a public good and the positive externalities that should arise from it, but there are also clear environmental grounds to justify public sector intervention, e.g. through reducing pollution and congestion and promoting sustainable travel solutions.

## 3.2 GNT - ADDRESSING MARKET FAILURE

This project is aimed primarily at creating a world class space, improving the visitor experience and promoting sustainable transport. There are also clear potential economic benefits in enhancing space for businesses to operate in and through provision of appropriate events.

The GNT project components are characterised by a requirement for the public sector to facilitate, lead and fund the associated works. This can be broadly summarised as investment in public goods.

1. **Public goods:** A public good is a good that, once produced, is (1) undiminished by being used by one or more users (it is non-depletable); and (2) available to all (it is non-excludable). These two characteristics prevent markets from functioning, since the provider/seller is unable to ensure that only those who pay for the good can obtain it. This means that, by definition, the marginal cost of supplying the public good to the next user is zero. As a result, public goods tend not to be provided by private sector agents given the number of other non-contributing beneficiaries. Although the benefits that accrue from public realm and other improvements may be captured by reduced development costs (and in some cases this can be very site specific), in many cases the benefits can be hard to attribute directly to the public sector investment if there are multiple users. Since the beneficiaries are often fragmented, this makes it difficult to value and even more difficult to extract financial contributions.

Businesses and residents within the city look to the public sector to provide the underpinning infrastructure to facilitate public realm improvements. There are reasons for this.

2. **Low awareness of the benefits and free-riding:** even supposing that developers and property owners could be convinced of the private property benefits deriving from public realm schemes, many know that they will still benefit even if they do not contribute.
3. **Short-termism:** commercial pressures often militate against long-term investment in strategic infrastructure. This is not unique to the GNT project. Often, where the benefits of the investment are not realised for many years, developers will seek to invest in sites with fewer constraints (and therefore costs) with shorter payback periods.

In addition, there are positive externalities of the intervention.

4. **Externalities:** reducing levels of road traffic in the area will improve air quality and reduce accidents and pollution, which will have positive health benefits. The improvements are also

intended to help the area better compete for inward investment and visitors.

### 3.3 BENEFICIARY GROUPS AND KEY PRIORITIES

There are a number of intended beneficiary groups from this strategy, as outlined in the infographic below.

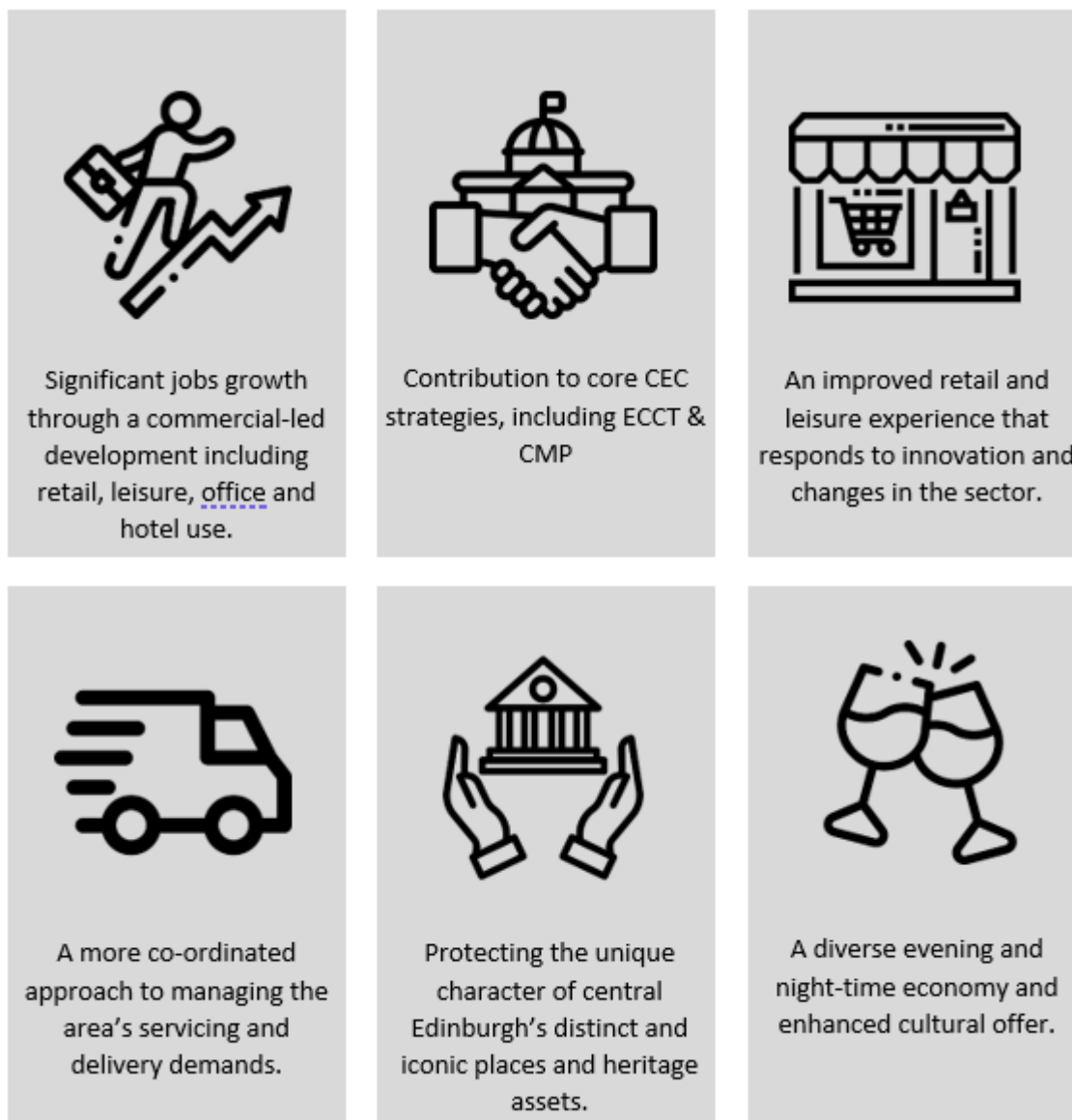
**Figure 3.1 Examples of intended beneficiary groups**



Source: Rettie & Co.

The GNT project will aim to deliver the following key priorities as illustrated below.

Figure 3.2 Key priorities of the GNT scheme



Source: Rettie & Co.

### 3.4 FIT WITH OTHER PLANS AND STRATEGIES

GNT is a key component of the Edinburgh City Centre Transformation (ECCT) strategy and delivery plan. ECCT seeks to unify City Centre projects into a singular holistic delivery plan. It seeks to deliver an exceptional street environment that is welcoming and accessible for all users.

The ECCT Strategy identifies key quiet zones in the City Centre where people will have priority, with vehicles given access as 'guests'. George Street is identified as one of these areas, where significant public realm improvements and pedestrian priority will be delivered. GNT is one of the earlier programmed projects within the ECCT delivery plan and is intended to make a significant contribution towards realising the vision of transforming the City Centre as a revitalised, more vibrant and people focused place.

The proposals align with city strategic priorities including the recently approved City Mobility Plan (CMP) and form an integral relationship with other key City Centre active travel projects including Meadows to George Street (MGS) and the City Centre West to East Link (CCWEL).

The CMP is underpinned by a Council target for the city to be net carbon zero by 2030. It sets out a basis for significant tram, bus network and active travel interventions to improve mobility and address key challenges. The strategy will mean car and heavy bus dominated traffic within the City Centre will be replaced by walking and cycling infrastructure, and by smaller cleaner passenger vehicles for those with mobility constraints. A core objective of CMP is to make the City Centre largely car free by 2030. The final concept design for the GNT project aligns with many of the CMP aims, especially the aim to create a people focused City Centre.

## 4 THE GNT AREA

This section outlines what the GNT area consists of in terms of businesses and visitor traffic.

As well as providing valuable context, this also provides a baseline assessment of existing uses that is required for the later impact assessment.

### 4.1 BUSINESS BASELINE

An analysis was conducted of the Valuation Roll for George Street and the selected neighbouring streets in the GNT area to provide a baseline of existing use. This analysis generated 745 commercial premises, including 453 offices, 151 retail outlets, 94 food & beverage (F&B) establishments, 14 hotels/guesthouses and 6 public/religious buildings.

Based on rateable value and poundage rates, business rates for these properties can be estimated. On this basis, including small business relief, the rates income across the identified commercial properties totals c.£22.4 million. Of this, retail is the major contributor, with c.£9 million paid in rates, followed by £7 million by offices and £4 million from F&B. Hotels and guesthouses generate around £2 million in rates based on these records.

This information was also used to estimate the size of the various use classes in the GNT area and UK Government job density figures<sup>5</sup> were used to then estimate the number of jobs associated with this space by use class. In our estimates, there are around 160,000 sq m of commercial space in the GNT area, the bulk of it (nearly 100,000 sq m) for offices, with c.31,000 sq m of retail and c.24,000 sq m of F&B. This translates into around 8,000-10,000 office jobs, 1,000-1,500 retail jobs and 1,500-2,000 F&B jobs.

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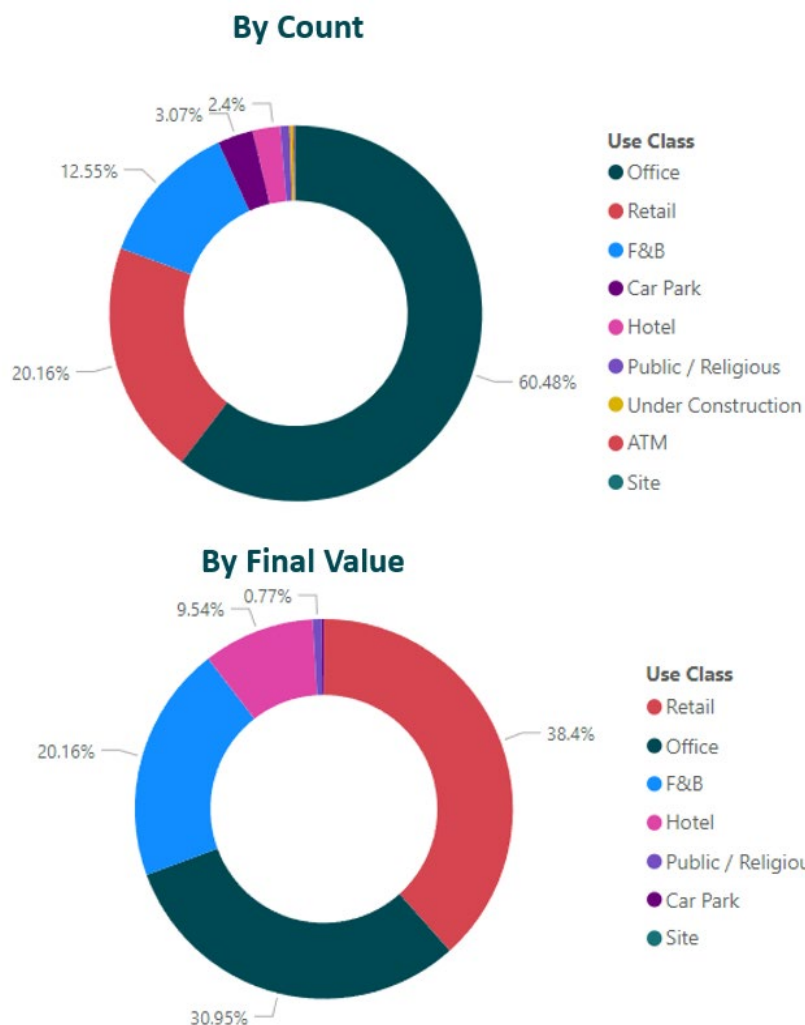
<sup>5</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/484133/employment\\_density\\_guide\\_3rd\\_edition.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484133/employment_density_guide_3rd_edition.pdf)



**Figure 4.1 Breakdown of Valuation Roll analysis**

Use Class	Count	%
Office	453	60%
Retail	151	20%
F&B	94	13%
Car Park	23	3%
Hotel	14	2%
Public / Religious	6	1%
Under Construction	2	<1%
ATM	1	<1%
Other	1	<1%



Source: Scottish Assessors / Rettie & Co.

**Figure 4.2 Estimates of space and jobs of GNT businesses**

Use Class	Units		Area		Jobs Estimate		
	Count	%	Total Sqm (Est)	%	Sqm Per Job	Low	High
BANK	8	1.2%	5,412	3.4%	15-20	271	361
F&B	84	12.5%	23,519	14.7%	15-20	1,176	1,568
Health	3	0.4%	483	0.3%	15-20	24	32
Office	451	67.3%	99,456	62.1%	10-13	7,650	9,946
Retail	122	18.2%	31,201	19.5%	15-20	1,560	2,080
<b>Totals</b>	<b>670</b>		<b>160,130</b>			<b>10,681</b>	<b>13,987</b>

Source: Scottish Assessors / Rettie & Co.

In 2007, a study was undertaken by Edinburgh City Centre Management (ECCM) to understand views on a Business Improvement District (BID) in the city<sup>6</sup>, which provides some baseline measures although it is a little dated.

The main advantages of being located in the City Centre given by employers were:

- *prestigious location;*
- *busy area/lots of customers; and*

<sup>6</sup> Edinburgh City Centre Management, *Business Improvement District: benchmark of attitudes – report of key research findings. 2007.*

- *convenient for customers/client.*

The main disadvantages were:

- *difficult to park;*
- *high cost of rent/rates; and*
- *too quiet/not enough customers.*

The vacancy rate in the City Centre is rising. According to Essential Edinburgh, among the 552 BIDS businesses<sup>7</sup>, 62 were vacant in the latest (January 2022) audit, i.e. a vacancy rate of 11.2%. This is up from 8.7% recorded in a previous audit in November 2020.

The bulk of the vacancies are in the retail sector (61%), with 39% in the office sector and 6% in hospitality. George Street accounts for 37% of these vacancies, the highest of any City Centre location, followed by Princes Street at 21%. Castle Street, Hanover Street and Frederick Street each account for around 5-6% of vacancies.

The new St James Quarter has displaced a proportion of retail businesses that had operated in the GNT area. The office sector is also changing, with many offices in hybrid mode of allowing a mix of flexible office space working alongside working from home. There is also the emergence of new bespoke quality office space in the city, including at the likes of Haymarket nearby.

## 4.2 RESIDENTS

Analysis of the Council Tax register returned 179 residential units, with the highest concentrations located on the northern roads leading to Queen Street. Analysis of the distribution by Council Tax bands shows a high concentration of upper tier properties, with 41% in the F band and 20% in the G band.

Based on the count of properties and banding, the estimated gross Council Tax revenue for the area would be just under £500,000 at current Council Tax rates.

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<sup>7</sup> Those businesses in the Business Improvement District (BID), which is a business-led and business funded body formed to improve the commercial area.

Figure 4.2 Council Tax analysis



Council Tax Bands 2022/23

Band	Council Tax	Water	Sewerage	Total	Count	%	Revenue
A	£919.17	£147.60	£171.36	£1,238.13	0	0%	£0
B	£1,072.36	£172.20	£199.92	£1,444.48	1	1%	£1,444
C	£1,225.56	£196.80	£228.48	£1,650.84	6	3%	£9,905
D	£1,378.75	£221.40	£257.04	£1,857.19	11	6%	£20,429
E	£1,811.52	£270.60	£314.16	£2,396.28	51	28%	£122,210
F	£2,240.47	£319.80	£371.28	£2,931.55	74	41%	£216,935
G	£2,700.05	£369.00	£428.40	£3,497.45	35	20%	£122,411
H	£3,377.94	£442.80	£514.08	£4,334.82	1	1%	£4,335
					179		£497,669

Source: Scottish Assessors / Rettie & Co.

### 4.3 PROPERTY VALUES

The Council Tax bands were used to assess the values of the George Street properties in April 1991, with price thresholds inflated from these values to July 2022 using the average house price for Scotland percentage change. This provided a residential property value in the GNT area of c.£84 million.

**Figure 4.3 Estimate of 2022 residential property values in the GNT area**

Band	1st April 1991 Valuation Band	1991		2022			Count	Total Value
		Low	High	Low	Mid	High		
A	Up to £27,000		£26,999			£133,266		0
B	Over £27,000 and up to £35,000	£27,000	£34,999	£133,271	£153,012	£172,754	1	£153,012
C	Over £35,000 and up to £45,000	£35,000	£44,999	£172,758	£197,436	£222,113	6	£1,184,615
D	Over £45,000 and up to £58,000	£45,000	£57,999	£222,118	£254,199	£286,281	11	£2,796,192
E	Over £58,000 and up to £80,000	£58,000	£79,999	£286,285	£340,579	£394,872	51	£17,369,506
F	Over £80,000 and up to £106,000	£80,000	£105,999	£394,877	£459,042	£523,206	74	£33,969,072
G	Over £106,000 and up to £212,000	£106,000	£211,999	£523,211	£784,815	£1,046,418	35	£27,468,513
H	Over £212,000	£212,000		£1,046,423			1	£1,046,423
<b>Avg / Totals</b>						<b>£396,987</b>	<b>179</b>	<b>£83,987,334</b>

Source: Rettie & Co

For commercial rents, an estimate was made based on floorspace figures from the Valuation Roll and assumptions of £ per sq ft for each of the use classes. This provided a range of £50-59 million.

**Figure 4.4 Estimate of 2022 commercial rents in the GNT area**

Rent							
Use Class	Units		Area		Rent Estimates & Generation		
	Count	%	Total Sqm (Est)	%	Sqm Per Job	Low	High
BANK	8	1.2%	5,412	3.4%	£27.50-£32.50	£1,602,110	£1,893,402
F&B	84	12.5%	23,519	14.7%	£17.50-£22.50	£4,430,146	£5,695,902
Health	3	0.4%	483	0.3%	£32.50-£38.00	£143,078	£169,092
Office	451	67.3%	99,456	62.1%	£32.50-£38.00	£34,792,382	£40,680,324
Retail	122	18.2%	31,201	19.5%	£27.50-£32.50	£9,235,776	£10,915,008
<b>Totals</b>	<b>670</b>		<b>160,130</b>			<b>£50,203,492</b>	<b>£59,353,728</b>

Source: Rettie & Co

## 4.4 VISITORS

### 4.4.1 Essential Edinburgh research

Essential Edinburgh conducts regular surveys of trends in the City Centre BID area, the last of which was for 2019<sup>8</sup>. Footfall in the area typically runs at around 4.5 million to 5.5 million a month, although it tends to be higher (c.6 million per month) in December during the Winter Festival. This provides an estimate of around 58 million visitors per year. For estimating a share to the GNT area, we used research findings from an ECCM survey<sup>9</sup>. This is somewhat historical but is the best available evidence that we could find. In this survey, the bulk of visitors reported using the BID area for shopping, with 17% for entertainment (pubs/clubs) and 10% for eating out. Of the areas visitors tend to use most, the GNT streets were selected by 38% of shoppers, 71% for those visiting clubs/pubs and 78% of those eating out. Applying these figures allows us to make an approximate estimate of the number of visitors who use the GNT streets for different types of activity. We estimate that there are around 27 million visits to the area in a year, around 47% of all visits to the City Centre BID area.

**Figure 4.5 Estimated visitor numbers in GNT area**

Visitor type	Estimated visits to GNT area (per annum)
Shoppers	15.4 million
Clubs/pubs	7.0 million
Eating Out	4.5 million
<b>TOTAL</b>	<b>27.0 million</b>

Source: Rettie & Co

The same research stated that there was no single prevalent problem with the City Centre as a destination, although a quarter of the visitor sample did raise crowds and parking as concerns. Among non-visitors, the lack of parking and expense of parking was mentioned by around 20-25% of respondents as reasons why they did not visit more often.

### 4.4.2 Research on ETRO on George Street

Between July 2014 and August 2015, CEC introduced an Experimental Traffic Regulation Order (ETRO) on George Street, which partially pedestrianised the street, introduced a cycle lane and tested the transport implications and wider impacts of these measures on street users. Over this period, a survey of visitors was conducted<sup>10</sup>.

<sup>8</sup> Essential Edinburgh, *Essential trends – BID market intelligence*. Issue 105.

<sup>9</sup> ECCM, *BID: Benchmark of Attitudes – Report of Key Research Findings (2007)*

<sup>10</sup> Research Resource, *George Street ETRO Survey*. City of Edinburgh Council. Sept 2015.

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The survey found that the main reasons for visiting George Street were browsing/window shopping (41%), dining/eating (30%) and meeting friends and family (25%). Only 16% travelled in by car, with 25% arriving on foot, 24% getting in by train, 19% by bus, 11% by bicycle, 4% by tram and 2% by taxi.

For the majority, George Street was rated highly for most of the criteria considered including feelings of safety and quality and range of shops and businesses. Satisfaction was lower for ease and availability of parking (for cars and bikes).

Over 60% of respondents believed that the ETRO measures had improved the overall appearance of George Street, while only 9% believed that they had worsened the street's appearance. However, the bulk of respondents (72%) said that the changes had made no difference to their likelihood of visiting George Street, although 22% said that the changes had increased their likelihood of visiting while 3% said that they had made them less likely to visit.

There was broad support in the survey for introducing pedestrianised spaces on George Street, with 65% of respondents supporting and just 7% opposing. 47% supported pedestrianised places in George Street 'all of the time'. However, 43% said availability of car parking was 'very or fairly important', with 24% saying 'very important', although only 16% had actually travelled in by car.

### 4.4.3 Estimates of visitor spending

Estimates for visitor spending were based on estimates of retail floorspace and turnover produced by Ryden in 2019<sup>11</sup>. These were extrapolated for the GNT area to produce a retail turnover range of £250-£374 million, with a mid-range estimate of £312 million.

An equivalent estimate for F&B space could not be as readily assessed. Instead, an estimate was produced for F&B based on estimates of rent generation of F&B space in the GNT area against retail space. These estimates suggested that F&B space was around half of the rents in the retail sector. This proportion was applied to F&B turnover to provide an estimate of £156 million of F&B turnover in the GNT area.

This provided a total spending figure of £468 million made by the 27 million visitors to the GNT area each year, i.e. around £17 per visit. A study on the *Value of Parks* for CEC in 2015<sup>12</sup> estimated that the average spend in the local economy from a premier park visit was £9.68, or £11.81 uprated to 2024 prices. Given the spending opportunities are greater in the City Centre than at a premier park, this small level of premium for a City Centre visit is believed to be justifiable.

Although the Ryden estimates are at 2017 prices, no uprating was undertaken on these figures given the volatility in the retail sector in recent years. This is believed to be the most recent benchmark evidence on spending levels and the best available for these purposes.

<sup>11</sup> Ryden & Roderick MacLean Associates Ltd., *Edinburgh City Plan 2030 commercial needs study: retail & leisure*. City of Edinburgh Council. April 2019.

<sup>12</sup> City of Edinburgh Council, *The value of City of Edinburgh's parks*. 2015.

## 5 REVIEW OF LITERATURE

There is an array of international literature that has considered the impact of public realm improvements in cities to create improved spaces that enhances the visitor experience and promotes sustainable transport.

The literature has also considered the economic and social impacts of this type of investment.

A summary of the relevant literature is provided below. Findings from these types of exercises should be treated with some caution as none could be described as being fully comparable with the GNT plans in terms of design, implementation and context. The implementation of these initiatives is occurring in different types of area at different times and in different economic circumstances. Nevertheless, there is some commonality in the findings that are relevant for the GNT proposals.

- The research shows that better place quality provides positive economic, environmental, social and health outcomes over the short- to long-term across different socioeconomic strata.
- There is a strong perception among street users and local businesses and households that street improvement schemes enhance street character and vibrancy.
- Improving walking and cycling conditions improves the convenience, comfort and affordability of access to destinations. It is also accessible and inclusive, helping all in the community to share the benefits.
- Replacing on-street parking with bike lanes has little to no impact on local businesses and may even increase business levels. Although cyclists tend to spend less per trip than car users, they also tend to make more trips.
- Business owners tend to over-estimate the volume of car customers and underestimate bicycle levels in their streets.

There is also evidence from other locations that such improvements can translate into measurable positive outcomes. Appendix A provides summaries of some of the best case study evidence. Given the methodological difficulties in measuring the impacts of public realm interventions on an *ex ante* basis, there is a reliance on case studies, using an *ex post* approach to support investment in the public realm.

- In Altrincham in Greater Manchester, a £15 million increase in public realm, a new market and increasing food & drink premises has been credited with reducing vacancy rates from 30% in 2010 to just 8% by 2017. Better quality streets, pavements and cross pointing were also credited with increasing footfall in the town by 25% over 2010-17 (summarised in Trafford Council, 2017).
- In Stoke-on-Trent, a £10 million investment to make the area more pedestrian friendly led to a 30% rise in footfall and the opening up of new businesses. These improvements included widening pavements, renewing footpath surfaces and installing trees and seating (summarised in Living Streets, 2018).
- In Melbourne, renovating pavements and street furniture and turning narrow back alleyways into a walkable network increased pedestrian traffic by 40% and boosted café numbers in the area by over 600 (summarised in Living Streets, 2018).

- In New York, the Department of Transport partnered with community organisations to create a number of new public plazas in the city, including in Times Square. This led to an 11% increase in pedestrian traffic in Times Square and 74% of Times Square users saying that the area had ‘improved dramatically. There was also a 40% reduction in particulate matter in the project area, 35% fewer pedestrian injuries and 63% fewer injuries to motorists and passengers (summarised from Arup, 2019).
- In Chicago, investment of \$86 million to improve the quality of the city’s theatre district is estimated to have produced \$6 billion of economic benefits (summarised from Arup, 2019).

Living Streets (2018) identified three performance indicators for public realm improvements in the literature.

1. Impact on existing business performance (footfall and retail)
2. Urban regeneration (new businesses, retail income, employment and social exclusion)
3. Improved customer and business perceptions.

Benefits are not just economic but also environmental, safety and health.

Kada Research (2018) estimated the value of various benefits based on evidence from UK cities.

**Figure 5.1 Estimated impacts of public realm improvements from previous UK research**

Performance Factor	Scale of Observed Impacts
Footfall	10-45% INCREASE
Retail sales (% business turnover)	15-25% INCREASE
Rents and capital values	15-20% INCREASE
Vacancy rates	15-20% DECREASE

Source: Kada Research (2018)

This is consistent with a meta-analysis by Whitehead et al (2006), which found walking and cycling projects increased retail and commercial rents by around 10-30%.

There is also research in the Edinburgh market that suggests similar benefits from public realm. Tolley (2011) found in a survey of shoppers and retailers in the city that shoppers’ main concern was a good range of shops in an attractive environment.

Stated Preference experiments in London produced Willingness to Pay (WTP) estimates of £45 per person per annum for high street improvements and £20-£45 per person per annum for streets outside London (Sheldon et al 2007). In another study, Londoners were also found, on average, to be willing to pay an additional £14.78 to £17.35 on their Council Tax for improvements in their walking environment (Accent and Colin Buchanan, 2006).

Living Streets (2018) provided a summary of the evidence on willingness to pay for improvements from the UK literature. This has a central estimate of £40-£45 per person per year for a range of different benefits.



**Figure 5.2 Estimates of willingness to pay for public realm street improvements in the UK**

Attribute	Willingness-to-pay, £ per annum		
	Central estimate	Judgemental 95% confidence interval on WTP	
		Lower Bound	Upper Bound
<b>Priority: Shared Space</b>	<b>20 to 25</b>	<b>2</b>	<b>50</b>
<b>Priority: Full Pedestrianisation</b>		<b>10</b>	<b>30</b>
<b>Priority: Limited Vehicle Access</b>		<b>15</b>	<b>35</b>
<b>Surface (material high quality)</b>	<b>10</b>	<b>2</b>	<b>17</b>
<b>Activity (high, where complementary to uses on street)</b>	<b>10</b>	<b>3</b>	<b>6</b>

Source: Living Streets (2018)

However, not all the research is positive on the impact of such changes. For example, there is evidence that value of public realm improvements may be neutral in some cases and even negative. It is also observed, in a number of studies, that assessing the financial value/impact of these changes can be a difficult exercise as identifying and attributing a causal link between investment in public realm and direct commercial returns has proven to be a challenge in a number of studies, particularly to understand the additional benefits once deadweight, displacement and leakage are accounted for. The impacts are also often long-term and can be secondary in wider urban regeneration projects, again making measurement difficult. Living Streets (2018) is clear that hard, quantitative assessments in this area are rare. This report also argues that the evidence suggests that good design matters and pays for itself over time, but there is less known about how investments in public realm can be harnessed to create local employment and other economic benefits.

Key findings from the literature review are summarised below.

**Figure 5.3 Key findings from literature review**

<b>Author(s)</b>	<b>Title</b>	<b>Key findings</b>
Accent and Colin Buchanan (2006)	<i>Valuing Urban Realm – Business Cases for Public Spaces. Transport for London</i>	<ul style="list-style-type: none"> <li>Londoners would be willing to pay an additional £14.78-£17.35 on their council tax for improvements in their walking environment.</li> </ul>
Arup (2019)	<i>The Economic Case for Public Realm Investment in the Heart of London Area</i>	<ul style="list-style-type: none"> <li>Evidence from a number of successful comparable global cities demonstrates the positive economic benefits of public realm improvements in cities.</li> <li>Estimates that proposed improvements in the heart of London area would increase net jobs by 18%, net GVA by 44%, business rates by 16% and commercial rents by 208%.</li> </ul>
Carmona (2016)	<i>Place Value: place quality and its impact on health, social, economic and environmental outcomes</i>	<ul style="list-style-type: none"> <li>Better place quality adds value economically and socially.</li> <li>Benefits occur over the short- to long-term and across all socioeconomic strata.</li> <li>There are certain qualities that are required to maximise place value through good urban design including lower levels of traffic; walkability and bikeability; connection to a public transport network; sense of place; pedestrian scale of streets; and lower traffic speeds and neighbourhood noise.</li> </ul>
Carmona (2018) in Journal of Urban Design	<i>Place Value: place quality and its impact on health, social, economic and environmental outcomes</i>	<ul style="list-style-type: none"> <li>Links place qualities with positive outcomes of all types and evidences place qualities that are fundamental in new development to maximise place value.</li> </ul>
CityLab (2016)	<i>The Complete Business Case for Converting Street Parking into Bike Lanes</i>	<ul style="list-style-type: none"> <li>Replacing on-street parking with bike lanes has little or no impact on local businesses.</li> <li>Cyclists spend less per trip than car drivers but tend to make more spending trips.</li> <li>Business owners tend to overestimate the levels of car customers and underestimate bicycle levels in their streets.</li> <li>Replacing street parking with cycle lanes had little impact on business property values and customer shopping patterns.</li> </ul>

Commission for Architecture & Built Environment and Dept for Environment, Transport & the Regions (2001)	<i>The Value of Urban Design</i>	<ul style="list-style-type: none"> <li>• Good urban design enhances the economic viability of development and delivers social and environmental benefits at low cost.</li> <li>• The relationship between design and value is complex. There are examples of good design increasing value but also examples of these increasing costs (at least in the short-term). It can also be difficult to measure economic, social and environmental values of design through financial means.</li> </ul>
Haus-Klau (1993)	<i>A Review of the Evidence from Germany and the UK. Transport Policy 1(1).</i>	<ul style="list-style-type: none"> <li>• Shoppers tend to have a more negative perception of high traffic areas than retailers.</li> </ul>
Kada Research (2018)	<i>Kidderminster Centre Public Realm Improvements – economic impact assessment</i>	<ul style="list-style-type: none"> <li>• Evidence that public realm improvements of around £2m produced a BCR of 7.6:1 over 10 years.</li> <li>• Provides case study benchmark evidence of the impacts of public realm improvements based on various literature.</li> </ul>
Kumar & Ross (2006)	<i>Effects of Pedestrianisation on the Commercial and Retail Areas – study in Khao San Road, Bangkok. Splintered Urbanism.</i>	<ul style="list-style-type: none"> <li>• Retailers tend to benefit from and support pedestrian improvements once implemented.</li> <li>• Shoppers tend to have a more negative view of traffic than retailers.</li> </ul>
Living Streets (2018)	<i>The Pedestrian Pound – the business case for better streets and places</i>	<ul style="list-style-type: none"> <li>• Summarises much of the key literature and evidence in the field, including case study evidence.</li> <li>• Better streets and places have a high social return, but it is challenging to establish whether public realm investment creates additional benefits.</li> <li>• Identifies some of the shortcomings in the evidence and the lack of quality quantifiable assessments.</li> <li>• Evidence that the public would be willing to pay for pedestrianisation and better townscapes as they prefer pedestrian environments over car-centred environments.</li> </ul>
Sheldon et al (2017)	<i>Valuing Public Realm – business cases for open spaces. European Transport Conference</i>	<ul style="list-style-type: none"> <li>• Stated Preference theory in London estimated Willingness to Pay for High Street improvements of £45 per person pa in London and £20-£45 per person pa outside London.</li> </ul>
Tolley (2011)	<i>Good for Busine\$\$ - the benefits of making streets more walking and cycling friendly</i>	<ul style="list-style-type: none"> <li>• Shoppers' main concern in Edinburgh was having a good range of shops in an attractive environment.</li> <li>• Shoppers tend to have negative perceptions of high traffic areas.</li> </ul>

Trafford Council (2017)	<i>Altrincham Town Centre Neighbourhood Business Plan</i>	<ul style="list-style-type: none"> <li>• In Altrincham, a £15m increase in public realm has been credited with reducing vacancy rates and increasing footfall over 2010-17.</li> </ul>
Transport for London (2017)	<i>Cycling and the housing market</i>	<ul style="list-style-type: none"> <li>• Evidence is mixed on whether high quality cycling infrastructure has a positive effect on the local housing market.</li> <li>• Impacts tend to be greater at the neighbourhood level as improved connectivity and liveability can unlock new development.</li> </ul>
Transport for London (2018)	<i>Walking &amp; Cycling: the economic benefits</i>	<ul style="list-style-type: none"> <li>• Walking and cycling improvements to high streets and local centres can increase retail spending by up to 30%.</li> <li>• Active travel is accessible and inclusive, helping all in the community to share benefits.</li> </ul>
Transport for London and University College of London (2018)	<i>Street Appeal: the value of street improvements</i>	<ul style="list-style-type: none"> <li>• There are very strong perceptions among everyday street users and local property occupiers that street improvement schemes enhance street character, walkability, ease of crossing, opportunities for sitting, and general street vibrancy.</li> </ul>
Transport for London & University of Westminster (2018)	<i>Health Streets: a business view</i>	<ul style="list-style-type: none"> <li>• A good environment for walking, cycling and spending time are important for business performance in an area.</li> <li>• Areas can improve by trying to achieve Healthy Streets indicators.</li> <li>• The top 3 interventions to improve the street environment are improving public realm, reducing levels of motor traffic and improving pedestrian crossing.</li> </ul>
Victoria Transport Institute (Litman) (2018)	<i>Economic Value of Walkability</i>	<ul style="list-style-type: none"> <li>• Improving walking and cycling conditions improves the overall convenience, comfort and affordability of access to destinations.</li> <li>• People walking have a much greater exposure to the local environment due to their slower speeds and activities are experienced by the amount of time they take not just distance travelled.</li> <li>• Walkable neighbourhoods tend to have greater resilience, e.g. fewer vacancies and greater social equity.</li> </ul>
Whitehead et al (2006)	<i>The Effect of Urban Quality Improvements on Economic Activity. Journal of Environmental Management 80(1).</i>	<ul style="list-style-type: none"> <li>• A meta-analysis that shows walking and cycling projects increase retail and commercial rents by 10-30%.</li> </ul>

Source: Rettie & Co

## 5.1 SURVEY OF LOCAL RESIDENTS AND BUSINESSES

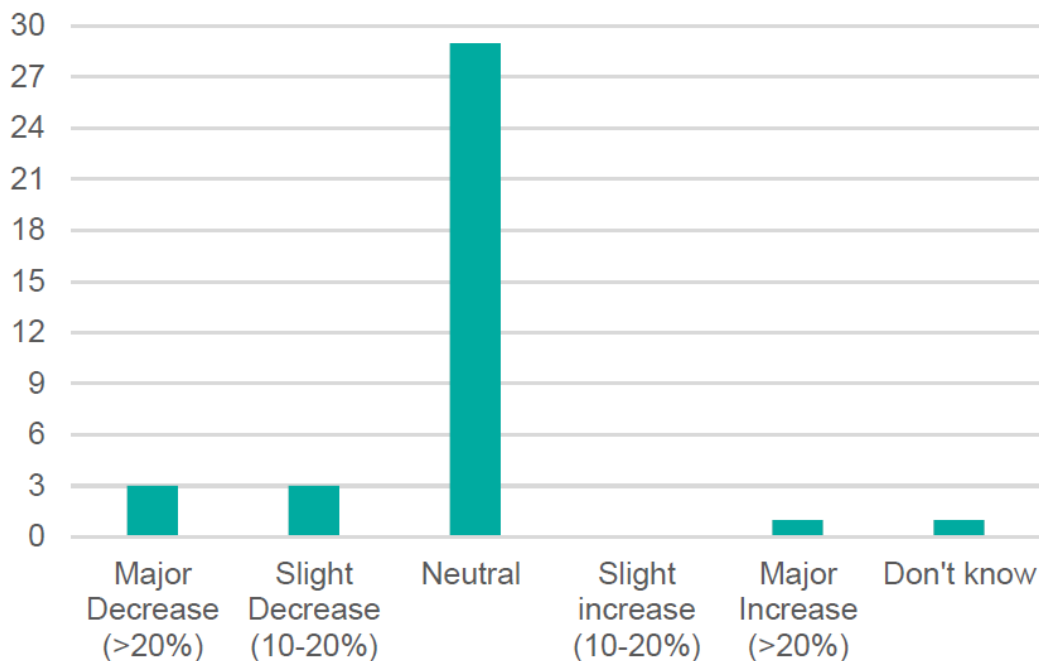
A business and resident online survey was run as part of the George Street & First New Town Design (RIBA Stage 3) Operations Plan engagement. To help to find evidence for some of the core assumptions in the economic impact assessment, a number of questions were added to this survey. The questionnaires were hosted by Atkins and promoted through local flyer drop and using CEC's own consultation hub (Citizen Space). The survey was open from 1<sup>st</sup> March-8<sup>th</sup> April 2022.

80 responses were received, 39 of which were local residents, 21 owned/managed a local business, 16 worked in the area and 4 were residents of other parts of the city. Residents received a residents' questionnaire and those owning, managing or working for a business in the area received a business questionnaire. Many sectors were represented among the business respondents, including banks, retail, food & beverage, legal & property, hotels and religious venues. Among resident respondents, many streets with the First and Second New Towns were represented.

This level of response is not representative of residents or businesses in the area and is relatively small. Nevertheless, it does provide some insight into how the local community views the proposals and their likely impacts.

Only one of the business questionnaire respondents said they had plans to relocate in the coming years. Respondents to this questionnaire were asked about the impact the project would have on staffing levels after completion. A majority felt no meaningful impact, although a small proportion of responses believed that staff numbers would fall. Only one respondent stated that staff numbers would rise.

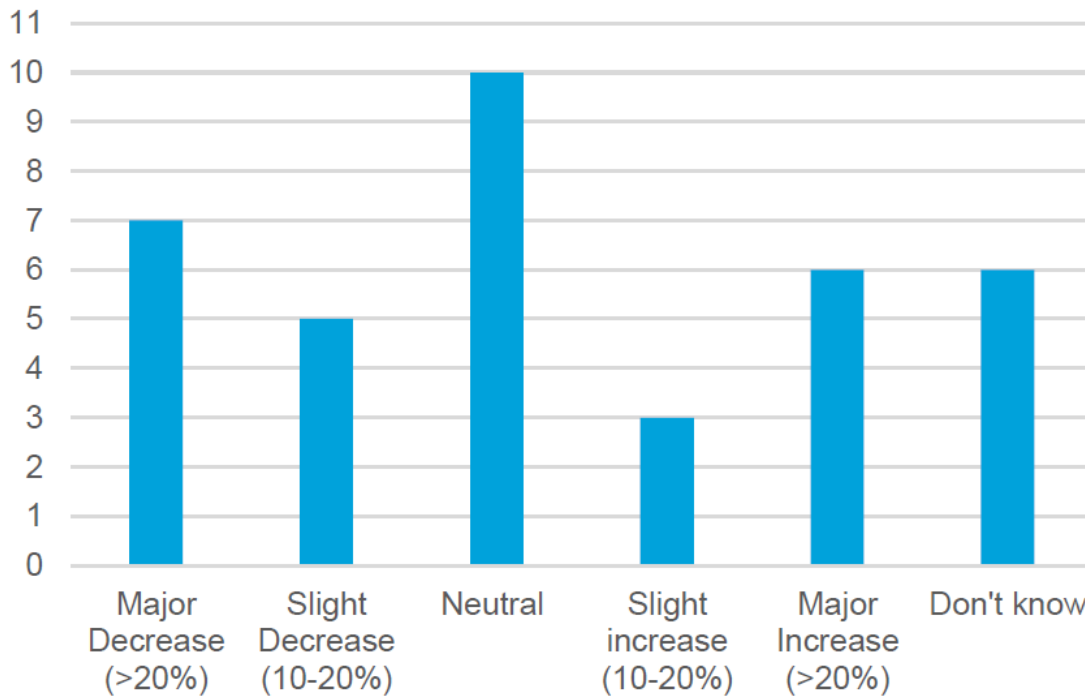
**Figure 5.4 Anticipated impact by local businesses of the GNT project on local staffing numbers on project completion**



Source: Business & Resident Online Survey in GNT area

Business questionnaire respondents were also asked about the impact they thought the project would have on local footfall and spending. There was no clear consensus among the responses, although the weight of the evidence leaned towards a negative impact.

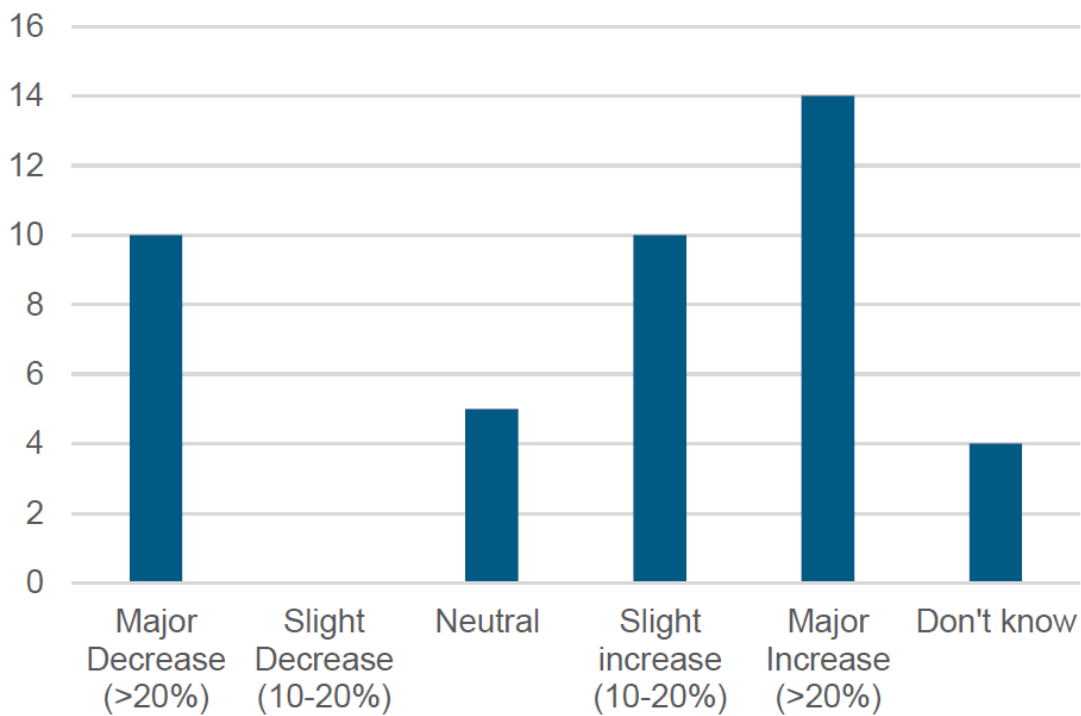
**Figure 5.5 Anticipated impact by local businesses of the GNT project on local footfall and spending**



Source: Business & Resident Online Survey in GNT area

A similar question was asked of residents. Resident opinion was also diverse, but leaned more towards a positive response, with 60% seeing positive change and 25% believing that footfall and spending would fall.

**Figure 5.6 Anticipated impact by local businesses of the GNT project on local footfall and spending**



Source: Business & Resident Online Survey in GNT area

Taken together, over 40% of the business and resident correspondents combined thought that there would be a positive impact on local footfall and spending compared to just over 20% who assumed a negative impact. This does provide some evidence of expected positive returns from the project but is far from a 'ringing endorsement' and, overall, the survey results do suggest some local nervousness about the changes and 'mixed feelings.'

This pessimism about public realm improvements before implementation is also noted in the literature. However, there is also evidence that retailers tend to support and benefit from pedestrian improvements once implemented (Kumar & Ross, 2006) and a number of studies have shown that shoppers are much more likely to have negative views about traffic and transport than retailers (Haus-Klau, 1993; Kumar & Ross, 2006; Tolley, 2011).

## 6 ECONOMIC IMPACT ASSESSMENT

Rettie & Co was instructed to undertake an economic impact assessment for the GNT proposals.

The proposals are based on the Council's current plans.

As previously highlighted in this report, the nature of George Street is changing anyway as a result of market forces and the likely direction of this is difficult to foresee just now. Estimating the quantitative impacts of public realm improvements has also been highlighted in the literature as a difficult exercise to undertake accurately. For these reasons, this assessment needs to be treated with caution, but every effort has been made to make as accurate and fair an assessment as possible given the available data and evidence.

### 6.1 REMIT FOR EIA

This impact assessment contributes to the economic case for the development by estimating the costs, benefits and value for money of the project.

Based on current proposals, this will constitute a 3-year build programme.

This assessment will estimate the gross and then the net economic impact of the proposals by considering the likely direct, indirect and induced impacts of the proposals, taking into account local and national multipliers, leakage and displacement levels. This provides impact figures in terms of quantifiable economic indicators (output, employment and GVA<sup>13</sup>).

The area covered for the economic impact assessment will be at the Edinburgh City level. This development is considered to be of city-wide significance in terms of spending and objectives. This means that we will be assessing the ability of the development to bring jobs and output to the city. The proposals are not considered to be as significant or widespread enough to consider regional or national impact assessments.

The economic impact of the proposals will be assessed together with the impact of a 'do nothing/do minimum' scenario to act as the counterfactual. This will provide an assessment of the net additionality of the proposals, i.e. by removing deadweight.

### 6.2 SUMMARY OF THE OPTIONS

There are two options on which to undertake the detailed economic impact exercise, which are summarised below.

#### 6.2.1 Option 1 – Do Minimum Option

This option consists of the current maintenance of the GNT streets. CEC estimates a rough cost of £150,000 per annum. This was run over a 20-year appraisal period (for reasons set out below).

#### 6.2.2 Option 2 - Full Phased Investment Case (Intervention Case)

This option assumes delivery of the GNT programme as currently planned.

<sup>13</sup> GVA stands for Gross Value Added. It is the additional value generated by each part of production activity and, here, is equated as output minus intermediate consumption.



## 6.3 COSTS

The GNT project will be funded by the public sector. Sustrans (managing grant funds on behalf of Transport Scotland) have allocated up to £22million grant funding via their Places for Everyone programme. The balance of funds will be secured via CEC's capital works programme – currently up to £10 million. This provides a total estimated budget of £32 million and covers construction, fees and surveys.

The capital costs for the project were taken from CEC's budgeted plan from April 2019 (c.£27.5 million). These costs were uprated by inflation to 2024 prices using the GDP deflators and the latest Office for Budget Responsibility's (OBR's) *Economic & Fiscal Outlook*. This produced a figure of £32.7 million.

To this, an Optimism Bias of 20% was added, a typical on such projects and verified by Faithful & Gould.

A maintenance cost per annum of 1% of cumulative build costs (a year in arrears) was included over the appraisal period. An appraisal period of 20 years was judged as suitable based on Green Book guidance. 10 years would be a typical period but large-scale infrastructure projects can have an appraisal period of up to 60 years. Given the scale of this particular project, 20 years was believed to be a suitable appraisal period. Arup (2019) had a similar approach in their work on the heart of London area.

This provided a total cost figure over the appraisal period of £45.2 million. On a Net Present Value (NPV) basis over 20 years, using a discount rate of 3.5%, as recommended in the Green Book, this produced a figure of £42.1 million.

**Figure 6.1 GNT predicted build-out and capex**

Construction Impact	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
	Y1	Y2	Y3	Y4	Y5	Y6
Cap costs	£10,911,155	£10,911,155	£10,911,155			
Optimism Bias	£2,182,231	£2,182,231	£2,182,231			
Total cap cost & OB	£13,093,386	£13,093,386	£13,093,386	£0	£0	£0
Cumulative build cost	£10,911,155	£21,822,310	£32,733,466	£32,733,466	£32,733,466	£32,733,466
Maintenance (1% in arrears)	£0	£109,112	£218,223	£327,335	£327,335	£327,335
Total costs	£13,093,386	£13,202,498	£13,311,609	£327,335	£327,335	£327,335
Discount period		0	1	2	3	4
Discount rate (1-30 yrs)	3.50%					
NPVs	£0	£13,093,386	£12,756,037	£12,426,530	£295,237	£285,253
NPV at 20 yrs	<b>£42,141,822</b>					

Source: Rettie & Co

The above cost estimates have been used to calculate the construction benefits enabled by the GNT project.

## 6.4 ECONOMIC IMPACT ASSUMPTIONS

The economic impact assessment considers the quantitative benefits for each of the options, principally on employment, output, GVA and provision of new housing. These are assessed on a gross basis (direct results of the activity) as well as a net basis (to take account of the economic effects that will not occur – displaced - as a result of the activity as well as the extra activity that will occur because the activity happens).

The economic impact for the project arises from a number of main sources.

- Construction
- Visitor spend
- Additional household spend
- Land value uplift
- Willingness to Pay

Additional Council Tax and Business Rates revenues were excluded from the analysis. Although an increase in such revenues would be expected from the development, they would likely create public sector employment, which would have revenue costs attached. To simplify the impact assessment, these have therefore been omitted.

The proposals will take a number of years before the full benefits will be realised. The appraisal period for the benefits is the same as those for the costs (20 years), which is also a reasonable period for infrastructure lifetime before further significant costs.

#### 6.4.1 Construction impact assumptions

The construction impacts of the project itself are relatively straightforward to define – it is the impacts of the infrastructure spend and public realm improvements.

Under the Intervention Case, it is assumed that infrastructure works start in 2024/25 and are completed by 2026/27. In addition, an assumed ongoing revenue cost for maintenance has been included, which starts after the first 12-month period.

The capital spend is estimated to be around c.£45 million for the Intervention Case in 2024 prices, including Optimism Bias and the maintenance spend across the build-out period.

The Do Minimal option involves an estimate of the maintenance spend, which the Council estimated as roughly £150,000 per annum, giving a capital spend of £3 million over the 20-year appraisal period, or £2.2 million in NPV terms.

The following additionality assumptions were used in the economic impact model for calculating construction impact for the various options. These are consistent with HM Treasury and other additionality guidance.

- **Leakage:** Typically, developers' key commodities are centrally procured for their regional divisions and, on a regional basis, local suppliers are sourced for installation. This can be reduced by, for example, using local workers and the local supply chain. Nevertheless, we would expect a level of leakage given that some of the sourcing and manufacturing will take place outside the city. Leakage at the Edinburgh level will be relatively high as it is likely that suppliers and workers would be used outside this relatively small geographical area. Using this information, in conjunction with Additionality Guidance, we decided to use a 35% leakage figure at the city level.
- **Displacement:** This considers the likelihood that construction activity would simply be displaced from other parts of an area. It is inevitable that there will be some displacement as some other construction activity would be likely to be happening elsewhere if this particular development did not go-ahead and construction displacement is usually assumed to be high in assessments of this kind. Based on these arguments and Additionality Guidance, we assumed a 35% displacement figure at the city level.
- **Multipliers:** The latest (2018) Scottish multipliers (for GVA, output and employment) were adjusted using guidance from the 2014 Additionality Guide. We assumed a 35% scale as the base for the Edinburgh level. This is reasonably conservative assumption.

We assumed the substitution effect to be 0%, i.e. that the Council or any other public sector body will not offer public sector inducements for firms to take up staff, offices, etc. at the expense of those in the same location. This is a very specific form of displacement and BIS guidance demonstrates that the size of such effects is minimal anyway for these types of interventions.

Deadweight is accounted for in the counterfactual (Do Minimal option) and the preferred option will be assessed against it in terms of impact.

CEC has stated that, as with all major Council construction contracts, community benefit clauses will be included in any contracts aiming to secure benefits such as local apprenticeships and training opportunities.

## 6.4.2 Operating impact assumptions

The operating impact is based on two main sources.

- Increased visitor spend
- Increased household spend.

Spending benefits from these two sources are expected to be the most identifiable and measurable ways in which the development will boost business operations, creating new jobs and economic output.

To undertake this exercise, the business and resident baseline analysis outlined in Section 4 was used.

As explained in this section, 27 million visitors per annum are estimated to visit the GNT area and the level of spend is around £468 million per year, i.e. around £17 per visit.

Given the likely upheaval during construction over the three-year period, it was estimated that turnover/spending would be 10% down for each of these three years. This is a somewhat arbitrary figure but would represent a significant decline in spending. The Kada (2018) research (referenced in Section 5) estimated that these type of public realm improvements would raise retail spending by 15-25%. We assumed that this would be a gradual increase up to the lowest point of this range to ensure our assumptions were conservative, i.e. 5% increase over Years 4-5, 10% over Years 6-9 and 15% from Year 10.

The following assumptions were applied on the visitor spending.

- **Visitor displacement.** Visitor displacement is likely to be high as many people visiting the area will be local or be visiting the city anyway and take in the GNT area as part of a wider trip. The ECCM (2007) survey, referred to in Section 4, estimated that around 31% of visitors to the City Centre BIDS area were from over 10 miles away, i.e. visitors likely to be arriving from outside the city boundaries. The displacement figure will therefore likely be in excess of 70%. A visitor displacement figure of 80% for the local authority area was therefore applied.
- **Multipliers.** Adapted Food & Beverage, Sports & Recreation and Retail multipliers and effects, based on Home & Communities Agency Additionality Guidance (2014) and the Scottish Input-Output tables, were applied to the output figure to calculate the additional output and GVA associated with the additional spending. The scales applied are in line with the construction and operation multipliers above.

As with construction, substitution effects were assumed at 0% and deadweight will be taken account of when measuring against the counterfactual (Option 1).

The other quantitative category of operating impact that the development will trigger is the impact of additional population and households, particularly the income spending of new households moving into the area. To calculate this, the following assumptions were made.

- **New households.** We assumed that the area would take a proportionate share of the 43,400 new homes targeted for the city over a 12-year period in the Council's latest Main Issues Report (*Choices for Cityplan*). This implies a figure of 32 new households, or 2.7 per annum over the 2018-30 period. *Note: GNT will only start in 2024/25 and therefore the per annum housing uplift will only apply for seven years.*

- **Household displacement.** We assumed that the new houses will be constructed and occupied over Years 1-7, i.e. an average of 2.7 units built, sold and occupied each year. The latest SESPlan Housing Need & Demand Assessment<sup>14</sup> calculates that there is a high level of self-containment in the region, which would be the basis for assuming a high level of displacement. We therefore assumed a displacement of 90% at the Edinburgh level.
- **Household size.** The average household size in Edinburgh is currently 2.12 persons per household<sup>15</sup> and this was used to calculate the population growth resulting from the housing part of the development.
- **Household income and income retention.** In calculating the household income in the area arising for the development, we assumed that these houses would be targeted (on average) at those on average earnings. For Edinburgh, we took the average household income (£48,142) from the latest Council figures for the city based on Mosaic data (2020) and updated for inflation to 2024 prices. A proportion of spending will occur outside of the area, e.g. mortgage payments, transport payments, and utilities. The spending likely to be retained is in retail. We assumed that nearly all this retail spend will be captured at the city level (90%). Scottish Input-Output tables indicate that about 24% of all spending is in Retail; therefore we assumed that 22% of spending is retained in Edinburgh. As befits a Green Book compliant appraisal, these are conservative assumptions.
- **Multipliers.** Retail sector multipliers were applied in the same way as with the construction and visitor spending impacts.

The operating benefits are therefore for retail and F&B only. There will likely be benefits for other sectors, such as offices, in terms of additional employment. However, with the current upheaval in the office market in the city and the relatively low vacancy rates for offices, we have assumed no additional benefits of additional office employment. Instead, the benefits for offices are based on property value uplift.

### 6.4.3 Property value uplift

We took the current baseline values for residential property values and commercial rents provided in Section 4 and updated these to 2024 prices.

Kada (2018) estimated that the property value uplift for public realm street improvements in the UK was 15-20%. We took the low-end estimate and applied these values over a 20-year discount period.

### 6.4.4 Willingness to Pay

An average Willingness to Pay for quality public realm in the local community was derived from the lower bound estimate from Living Streets study (2018), illustrated above in Figure 5.2 and applied to the City Centre population and local workforce only. The report suggested that those living and working in the area would be willing to pay around £32 per year for a range of public realm improvements, with this updated to just over £39 per year at 2024 prices.

### 6.4.5 Loss of parking revenue

A negative impact of the scheme will be the loss of parking revenue as a result of pedestrianisation. CEC provided a breakdown of parking revenues by City Centre street for year 2019/0. CEC stated that only George Street would be affected by the loss of parking revenue as other streets could maintain

<sup>14</sup> SESPlan Housing Need & Demand Assessment 2. Final Report. March 2015.

<sup>15</sup> National Records for Scotland, *Estimates of Households and Dwellings in Scotland*. 2021.

parking. The parking revenue figure for George Street in 2019/20 was c.£1.7 million, which was updated to c.£1.9 million to 2024 prices.

It would only be a proportion of such revenue that would be lost as those who wish to bring their cars into the City Centre can find other locations to park in. A displacement figure of 43% was used based on the ETRO study for CEC of people that said that parking was important or fairly important.

Multipliers were also applied to this loss in revenue as it would also entail the loss of indirect and induced spending. This was assumed to affect Council revenues and therefore Council employment, therefore office-based multipliers and output and GVA per head figures were used.

## 6.5 ECONOMIC IMPACT RESULTS

The economic impact assessment was carried out for two phases: the construction phase and the operating phase.

The construction phase impact of the total programme is the impact of the infrastructure spend. The costs provided are all at 2024 prices. A maintenance cost of 1% of cumulative build cost (in arrears) was also applied on an annual basis. Optimism bias at 20% was applied to all construction costs to account for uncertainty and risks.

The construction costs for each of the options are outlined below.

**Table 3.2 Construction Costs**

Cost element	Do minimum	Intervention case
Infrastructure and build costs	£0m	£33m
Optimism Bias	£0m	£7m
Maintenance costs	£3m	£6m
<b>Total costs</b>	<b>£3m</b>	<b>£45m</b>
<b>Net present value over 20 years</b>	<b>£2m</b>	<b>£42m</b>

The operating phase impact is based on five sources.

1. Additional visitor spending generated by the scheme.
2. Additional spending in the local economy from new households moving into the area.
3. Property value uplift due to the scheme.
4. Willingness to Pay for improved public realm among local residents and workers.
5. The loss of parking revenues to the Council.

The number of projected jobs created across the construction and operating phases have been calculated and presented below for both options at the Edinburgh City level. Our baseline estimates of the number of jobs in the GNT area is around 11,000 to 14,000 jobs (see Table 4.2). The net additional jobs, calculated below, therefore represents around one-fifth to one-quarter more jobs as a result of the project.

**Table 3.3 Number of Projected Additional Jobs Over 20 Years**

Jobs	Do minimum	Intervention case
Construction jobs (PYEs)	1	70
Operating jobs	0	2,892
<b>Total impact</b>	<b>1</b>	<b>2,962</b>

The net present value (NPV) of the gross value added (GVA) of all the benefits over a 20-year period were calculated and presented below.

**Table 3.5 NPVs of Benefits at 20 Years**

Benefits	Do minimum	Intervention case
Construction impacts	£0.5 million	£9 million
Operating impacts	£0 million	£86 million
<b>Total impact</b>	<b>£0.5 million</b>	<b>£95 million</b>

The intervention case delivers significant economic impacts in terms of the sizes of the construction and operating benefits. The 'do minimum' option has little economic benefit.

### 6.5.1 Cost-benefit analysis

The results of a cost-benefit analysis carried out at the Edinburgh level are set out below. The benefit cost ratio (BCR) for each option and geographical area was calculated by taking the NPV of the total net benefits over 20 years and dividing this by the NPV of the total costs over the same period.

**Table 3.6 Summary of Cost Benefit Analysis**

Benefits	Do minimum	Intervention case
Costs (discounted)	£2 million	£42 million
Net GVA (discounted)	£0.5 million	£95 million
<b>BCR</b>	<b>0.2</b>	<b>2.2</b>

The intervention case delivers the strongest benefit-cost ratio: 2.2 at an Edinburgh level, as opposed to 0.2 for the 'do minimum option. This means for every £1 spent, benefits of the value of £2.20 are generated.

### 6.5.2 Accounting for deadweight

To estimate actual net additional over the appraisal period, the costs and benefits of the preferred option need to be assessed against the counterfactual, i.e. the assessment of what would likely happen without the intervention (the Do Minimum option). This means assessing the intervention on a net costs and net benefits basis. On this basis, the net costs would be £40 million (£42 million for the intervention case subtracted by £2 million for the do minimum case). The net benefits are as follows would be just under £95 million, with the BCR then rising to 2.4.

**Table 3.7 Reference Case Minus the Counterfactual**

Benefits	Intervention case
Net Costs (discounted)	£40 million
Net Benefits (discounted)	£94.5 million
<b>BCR</b>	<b>2.4</b>

### 6.5.3 Sensitivity testing

Sensitivity analysis is conducted to identify the effects of changing key variables in the economic model.

We have assumed a 20% variation in impacts on the high end and low end cases on the net additional impacts, which reflects different economic conditions, with the high end representing more buoyant than expected economic activity over the next 20 years and the low end more depressed economic activity. The retail and F&B industries are sensitive to changes in the economic climate and the property market will rise and fall under different economic conditions.

While the upper scenario can be looked on as the best likely outcome, the lower scenario can be considered as the worst likely outcome.

The net impact is again net of the counterfactual and the figures are rounded.

**Table 3.8 Sensitivity Analysis – Impacts over 20 years (varying benefits)**

Area & Measure	Gross	Net Add	+20%	-20%
<b>Edinburgh City</b>				
Construction Jobs PYEs	148	69	83	55
Operating Jobs PYEs	13,880	2,892	3,470	2,314
GVA (discounted)	£338m	£95m	£114m	£76m
BCR		2.4	2.9	1.9

We have also assumed a 20% variation in net costs, assuming other things equal, which is outlined in the table below.

**Table 3.9 Sensitivity Analysis – Impacts over 20 years (varying costs)**

Area & Measure	Gross	Net Add	+20%	-20%
<b>Edinburgh City</b>				
Costs (discounted)	£45m	£40m	£48m	£32m
BCR		2.4	2.0	3.0

Varying benefits (with costs equal) and varying costs (with benefits equal) still maintains a public sector BCR of around 2 or above under a range of scenarios.



## 7 QUALITATIVE ASSESSMENT

A broader qualitative assessment of the scheme can be undertaken using the indicators in two different toolkits.

### 7.1 HEALTHY STREET APPROACH

Transport for London and University of Westminster (2018) used ten criteria to help to assess the experience of being in streets that measure the extent to which streets are appealing places to walk, cycle and spend time.

These are listed below together with an assessment of where the GNT proposals meet such criteria. It appears clear that the GNT proposals are consistent with the Healthy Streets approach.

**Figure 6.1 Assessment of GNT proposals against Healthy Streets approach**

Criteria	Relevance of GNT proposals	Criteria met?
Pedestrians from all walks of life	Wider pavements and pedestrianised areas will create more welcoming spaces for all pedestrians to walk and spend time in.	✓
People chose to walk, cycle & use public transport	Wider pavements and new cycling street will increase the appeal of walking and cycling in the area.	✓
Clean air	Promotion of active travel and pedestrianisation will reduce the number of vehicles on the road and improve air quality.	✓
People feel safe	Wide pavements will give people more space and an added sense of safety. Pedestrianisation will make people feel safer to be on near roads or cross roads.	✓
Not too noisy	Pedestrianisation will reduce the number of vehicles on the road and lower noise pollution.	✓
Easy to cross	Narrower road space will shorten crossing distances and make streets easier to cross.	✓
Places to stop and rest	There will be designated areas for people to relax and rest.	✓
Shade and shelter	A substantial scale of greenery will help to create shaded and sheltered areas.	✓
People feel relaxed	Pedestrians and cyclists will feel more relaxed in a largely car free environment.	✓
Things to see and do	'Clutter free' spaces will be incorporated outside iconic George Street buildings to provide clear views. These spaces can also support events.	✓

Sources: Rettie & Co interpretation of Transport for London and University of Westminster criteria (2018)

### 7.2 LADDER OF QUALITIES APPROACH

Carmona (2018) developed the Ladder of Place Qualities, which covers place qualities that are strongly associated with positive outcomes (highlighted in orange in the table below) as well as a number of aspects considered fundamental when trying to maximise place value through good design (highlighted in green).

The GNT proposals also appear consistent with the vast majority of these place quality criteria and neutral on the remainder. On the required criteria, they are consistent on seven and neutral just on one.

**Figure 6.2 Assessment of GNT proposals against Ladder of Place Qualities approach**

Place quality	Relevance of GNT proposals	Quality met?
Greenness	Substantial levels of new greenery planned, including hedges and shrub planting as part of new landscaping features.	✓
Mix of uses	Land use is mainly retail and business but there are also private residences in the area, educational facilities, events places, hotels and a church.	✓
Low levels of traffic	Intention is to create a very low traffic area and removal of parking bays to create space for non-motorised uses.	✓
Walkability	Walkability to be improved by wider pavements, shorter crossing distances and pedestrianised streets.	✓
Bikeability	There will be a new cycling street within the central carriageway of the new street and this will be part of a network of strategic cycling routes across the city.	✓
Compact & coherent	The materials and level of intervention to be consistent throughout the area, creating a sense of continuity and coherence.	✓
Pattern of development	The level of intervention is consistent throughout the project area. However, development of surrounding buildings and land is outwith the scope of the project.	-
Public transport & connectivity	Bus services will continue to operate in the GNT area but will not travel along George Street. An expanded tram network can also be accessed within the GNT area.	✓
Visual permeability	The project should maximise existing views and spaces, especially through decluttering spaces outside project buildings. However, it is not likely to have a major impact on the visual permeability of the area.	-
Sense of place	The placemaking interventions will create a greater sense of place within the area.	✓
Pedestrian scale	Pedestrian infrastructure will be enhanced in the area with wider pavements and shorter crossing distances.	✓
Façade continuity	The surrounding buildings are not in the scope of the project, although there will be clutter free spaces outside key George Street buildings.	-
Natural surveillance	High levels of natural surveillance due to the activity on the street for much of the day.	✓
Street level activity	Street level activity should be increased with wider pavements. Outdoor seating for food and drink establishments also possible and ability to create a café culture.	✓
Good street lighting	Street lighting will be reviewed and upgraded as required.	✓
Denser street network	The street network is unlikely to be affected by the scheme.	-
Low traffic speeds	The creation of a very low traffic area will limit traffic speeds, as will wider pavements and shorter crossings.	✓
Attractive & comfortable places	Wider pavements and pedestrianised streets with outdoor seating will help to create more attractive spaces for people to walk and spend time in.	✓
Social public/private threshold features	Placemaking interventions will create areas where people can linger and interact. Much of the area is privately owned.	-
Integration of built heritage	Clearer views will be possible of prominent buildings, but the built heritage is unlikely to be impacted by the scheme.	-
Integration of natural features & ecosystem	A SUDS will allow surface water to drain naturally, replenishing ground water and having no impact on existing drains and sewers. The landscape planting will slow the rate of surface water and reduce flood risk.	✓
Perceived architectural quality	Clearer views will be possible of prominent buildings, but the architectural quality is unlikely to be impacted by the scheme.	-

Sources: Rettie & Co interpretation of Transport for London and University of Westminster criteria (2018)

## 8 CONCLUSIONS

In this economic impact assessment, the ‘full investment’ option is judged to make a major contribution towards delivering the benefits associated with the strategic objectives, to deliver significant net economic impacts and to achieve a relatively strong benefit-cost ratio.

The project has a clear economic rationale in terms of addressing market failure and it is clear on intended beneficiary grounds and priorities. It also fits with core plans and strategies that CEC is taking forward with partners.

According to the Department for Communities and Local Government (DCLG) Appraisal Guidance, BCRs of less than 1 represent poor value for money, while those between 1 and 2 represent good value for money and those over 2 represent high value for money. In this context, the ‘do minimum option’ represents poor value for money, while the ‘full investment’ option represents good value for money.

The full investment case will also generate significant non-monetised benefits such as a healthier, safer and more relaxed environment. Therefore, in practice, the BCR should be comfortably above stated monetised levels.

This represents the best attempt at this type of assessment given the data limitations. We have also attempted to be as conservative as possible, in line with HM Treasury Green Book guidance, when applying our assumptions, e.g. we have taken the low end impact estimates from other studies

However, all economic impact assessments have their limitations. There are two main qualifications to our results.

1. The business baseline work in this report provides estimates of business space, jobs and residents in the GNT area, as well as of visitor numbers and expenditure. This is based on available information and data extrapolation. A proper baseline study could produce more robust estimates of such variables and would be a useful exercise to undertake prior to implementation. The performance of the scheme could then be assessed with further monitoring and evaluation work to assess actual impacts, as has been undertaken in other places that have introduced similar measures.
2. The assessment of likely impacts is largely based on the literature and previous studies. There is corroboration across the literature of the benefits of schemes such as that planned for the GNT area, but no two schemes are the same. There are also questions raised in the literature about the precise causal link between public realm improvements and commercial and economic returns.

Nevertheless, as shown in the Appendix, there are strong examples of the outcomes and benefits of public realm improvements over time in the UK and other parts of the world. This is a short selection of such case studies.

## APPENDIX A – CASE STUDIES

# SHEFFIELD TOWN CENTRE



## ISSUE

In the 1990s Sheffield was facing economic challenges from declining industry and new out of town retail was drawing people away from the city centre.



**+35%**

Increase in footfall

## INTERVENTION

Heart of City Project

3 key public realm improvements in the first phase

- Reconstruction of Peace Gardens
- Re-alignment and narrowing of Pinstone Street to give event and gathering space outside the townhall
- Narrowing of Surrey Street to give pedestrians more space



**+£4.2m**

Increase in spending

## OUTCOMES

An evaluation of the public realm improvements to the Peace Gardens reported a 35% increase in footfall in the City Centre (Genecon, 2010). The authors estimated an attribution rate of 20% – 44%, or a net increase of visitors of 350,000 – 770,000, and a net increase in spending of £4.2 million (based on 7% attribution of additional spend of £12.20 per visitor). Reported regeneration outcomes included an increase of £1.60 – £2.40 / sq. ft. rental value and the creation of 341–527 additional net jobs (ibid.).



**+£1.6-£2.4**

Rent per sqft

# MELBOURNE LANEWAYS



## ISSUE

The revitalization of Melbourne's laneways began in the early 1990s when the City of Melbourne and state government worked to protect and upgrade the remaining laneways.

This was part of a larger regeneration program intended to bring people back to the city after work hours, and make the city an exciting, safe, and hospitable environment.



**92%**

**Walkable and accessible**

## INTERVENTION

The city of Melbourne renovated its pavements and street furniture and turned narrow back alleys into a walkable network

- Pedestrian-priority spaces with no vehicular traffic.
- Quality paving materials and custom designed lighting.
- Removal of obstacles, bollards, curbs, and redundant street elements.
- Improved cleaning, supervision of laneways, and wayfinding.
- Activation including cultural and arts events.



**600+**

**Cafes by 2018**

## OUTCOMES

The renovation of the back alleys increased pedestrian traffic by 40% (Arup, 2015). In 1994 just 8% of the laneways were accessible and active but by 2004 92% were walkable and had become destinations with new cafes and restaurants (The Urbanist, 2015). As a result, outdoor cafes have increased from just two in the 1980s to over 600 in 2018 (ibid.).

# ALTRINCHAM GREATER MANCHESTER



## ISSUE

Highest number of shop vacancies in the UK in 2010 at over 30%

## INTERVENTION

£15 million of investment in the public realm, a new market and increasing food and drink premises

## OUTCOMES

Investment credited with reducing shop vacancy rates from over 30% in 2010 – when the town centre was labelled a ‘ghost town’ in the national media – to 7.9% as of December 2017

Better streets, pavements and crossing points are also credited with increasing footfall by 25% between 2010 and 2017, with further year-on-year increases in footfall predicted

Additional investment of £3 million is planned in 2018 and the local council is exploring ways the model can be used to revitalise high streets in neighbouring towns (Trafford Council, 2017).



**+30%**  
Vacancy Rate



**+25%**  
Increased footfall



**+£3m**  
Planned investment

# STROGET COPENHAGEN



## ISSUE

Until 1962, all the streets and squares of central Copenhagen were used intensively for vehicle traffic and parking and were under pressure from the rapidly growing fleet of private vehicles.



**+35%**

Increased footfall

## INTERVENTION

The conversion of the 1.15 km-long main street into a pedestrian street was seen as a pioneering effort, which gave rise to much public debate before the street was converted. "Pedestrian streets will never work in Scandinavia" was one theory. "No cars means no customers and no customers means no business," said local business owners.



**+81%**

Increased in outdoor café seating

## OUTCOMES

There was a 35% increase in pedestrian volumes in the first year after the conversion.

There was a 600% increase in pedestrian space from 15,800sqm in 1962 to 99,700sqm in 2005.

There was an 81% increase in outdoor café seating. Rising from 2,970 seats in 1986 to 7,020 in 2006.

There was a 400% increase in stopping and staying activities from 1968 to 1996.

There was a 20% increase in citywide pedestrian volumes to 15 min / day on average.

# PICCADILLY STOKE ON TRENT



## ISSUE

Ambition to drive activity and footfall and vibrancy in the town centre.

## INTERVENTION

Measures such as widening footpaths, replacing existing footpath surfaces, installing trees and seating.

the area is undergoing pedestrianisation and is the heart of the City's 'Cultural Quarter' following the refurbishment of the Regent Theatre in 1999.

In Spring 2021 bollards have been installed to further pedestrianize areas. The bollards will allow access for deliveries to businesses between 5am and 10am and 5pm and 9pm.

## OUTCOMES

A £10 million investment to make the area more pedestrian-friendly has increased footfall by 30%.

New businesses, cafes and restaurants have opened. The project's success has led to further strategic investment in public realm improvements to boost business performance



**+30%**

Increased footfall



**£10m**

Investment