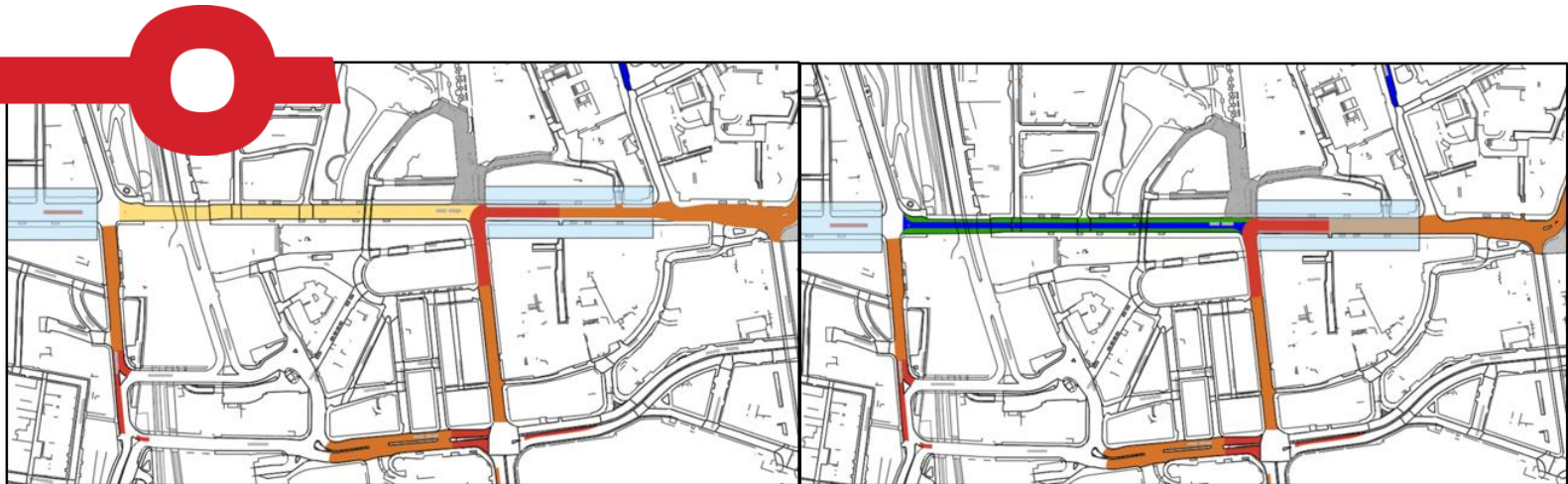




ABERDEEN CITY CENTRE MASTERPLAN TRAFFIC MANAGEMENT PLAN PHASE 1 – CENTRAL UNION STREET AREA



SYSTRA

ABERDEEN CITY CENTRE MASTERPLAN REVIEW

TRAFFIC MANAGEMENT PLAN. PHASE 1: CENTRAL UNION STREET AREA

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1. EXECUTIVE SUMMARY

1.1 Report Summary

- 1.1.1 SYSTRA Ltd (SYSTRA) was commissioned by Aberdeen City Council in September 2021 to develop a Traffic Management (TM) Plan to facilitate the next stage of delivery of the Aberdeen City Centre Masterplan (CCMP).
- 1.1.2 This report details the initial Phase 1 of the project, focusing on the central section of Union Street and associated network operation.
- 1.1.3 As part of the streetscape improvement proposals on central Union Street (section between Bridge Street junction and Market Street junction), there are two potential operational scenarios. These are:
- **Option 1** – Full pedestrianisation of Central Union Street (except for cycles and time limited servicing)
 - **Option 2** – Buses and cycles only, with bus stops removed (except for time limited servicing)
- 1.1.4 Initial traffic operational plans for the two Union Street options were discussed with key shareholders: bus operators, taxi operators, cycle groups, Accessible Users (ACTUP)
- 1.1.5 Through traffic model testing (Ref: *Aberdeen City Centre Masterplan – Sensitivity Testing Report*, Oct 2021) a package of measures was identified to support the pedestrianisation of central Union Street (Option 1) and minimise the impacts to bus journey times and reliability. The model report concluded that if buses are to be removed from Union Street, then additional bus priority measures on the following routes would have significant benefits for bus reliability and journey times:
- Bridge Street – Bus, taxi and Cycle only (both directions)
 - Guild Street (east of Carmelite Street) – Bus, taxi and Cycle only (both directions)
 - Market Street (north of Guild Street) – Bus, taxi and Cycle only (both directions)
- 1.1.6 For Option 2, the traffic modelling found that retaining the buses through Union Street but providing no additional network restrictions through the Bridge Street / Guild Street/ Market Street corridor resulted in the following issues:
- 40% increase in traffic flow through Guild Street (due to restrictions on Union Street and Schoolhill)
 - Difficulty for buses egressing the station on Guild Street due to traffic queuing along Guild Street
- 1.1.7 In addition, through consultation on the proposals with various stakeholders, including cycle groups and bus operators, they highlighted the congestion levels experienced through Guild Street and the lack of safe and easy connection between the bus/rail station and the city

centre for cyclists and pedestrians. The operation of Guild Street as a primary traffic route essentially cuts off the bus and rail station from the city centre.

- 1.1.8 For this reason, and to provide bus operators with alternative routing options to central Union Street, the proposed additional bus priority measures on Bridge Street, Guild Street and Market Street identified for Option 1, would also be required under the Option 2 for Central Union Street. This is of critical importance in retaining current passengers, many of whom rely on buses to get to work, education, services and leisure. It is also a fundamental part of the local, national and global effort to reduce travel related carbon emissions via mass and sustainable transport. A reliable, punctual and competitive bus network is key to attracting more passengers and enabling a significant increase in city centre footfall.
- 1.1.9 In order to determine which central Union Street option provides the greatest benefits, a detailed comparison of the advantages and disadvantages of each option was undertaken.
- 1.1.10 From the option comparison, it was clear that a number of considered impacts of the proposed restrictions on Central Union Street are the same for both options. For example, the need for additional supporting bus/ cycle/ taxi priority was deemed to be the same regardless of whether buses can route through central Union Street or are required to reroute via Guild Street.
- 1.1.11 It was found that there are clearly more benefits to the sustainable travel hierarchy of road users for full pedestrianisation compared to allowing buses to route through the central section. Whilst buses are required to divert from their existing route, the additional bus priority measures ensure that a reliable and accessible bus service is provided. The full pedestrianisation option maximises the central Union Street area for pedestrians and cyclists and facilitates streetscaping that best allows for the creation of a vibrant city centre 'place'.

The recommendation for Central Union St is to provide full pedestrianisation through this corridor with access for cycles and time restricted servicing.

Additional Network Detail

- 1.1.12 Based upon the recommendation for central Union Street to be fully pedestrianised, further detail of the traffic management plan around the core city centre area was developed, including specific measures, such as taxi ranks, accessible parking bays etc. This is summarised as follows:

Schoolhill/Upperkirkgate Operation

- Pedestrian zone between Harriet Street and Flourmill Lane
- Traffic modelling suggests traffic flows would increase (without a pedestrian zone) when restrictions were also in place on central Union Street and Guild Street
- Pedestrian and cycle safety measure

Union Terrace Operation

- No vehicle restrictions proposed along Union Terrace

- Right turn from Union Terrace to Rosemount Viaduct for buses, taxis and cycles only
- Extensive modelling of options along this corridor and in combination with Schoolhill measures
- Proposals allow access to parking on Union Terrace and also an exit strategy for general traffic on Union Street
- Modelling suggests traffic flows to be significantly lower than normal network operation (70% reduction in model testing)

Back Wynd / Belmont Street Area

- Removal of all vehicles with the exception of time limited loading access to support the cafe culture vision for the area
- Taxi ranks to be relocated

Hadden Street / Carmelite Street Area

- Complex area that will require further consideration of the various, potentially conflicting, requirements for pedestrians, residents, taxi operators, access requirements for the new Market, loading bays, accessible parking and restrictions to prevent rat running.
- Taxi rank on Hadden Street and Exchange Street to remain

City Centre Cycle Routing

- Cycles permitted through all routes within the city centre area, including the proposed pedestrian areas on central Union Street and Schoolhill/Upperkirkgate
- Improved safety due to the level of general traffic restrictions around core central area resulting in significant reductions in traffic levels (up to 90%)
- Phase 2 of the TM plan will consider cycle measures on east and west Union Street

City Centre Loading / Servicing Arrangements

- central Union Street loading access considered from west to east (eastbound) direction only. Limited to between 18:00-10:00.
- Need to rationalise loading times within the wider city centre for consistency and transparency.
- Phase 2 of the TM plan will review current on-street parking restrictions (single and double yellow lines) as well as refuse storage and collection

City Centre Bus Routing & Stopping Arrangements

- Buses will need to re-route from central Union Street to Bridge Street, Guild Street and Market Street
- The bus priority measures through these diverted routes have significant benefit for bus reliability and journey times as general traffic levels are reduced by up to 90%
- In addition, there are opportunities to provide enhanced stopping facilities on Bridge Street, Guild Street and Market Street

- Phase 2 of the TM plan will consider placement of bus stops on east and west Union Street with an opportunity to rationalise the existing bus stop operation through this corridor and potentially provide locations for focussed 'bus hubs'.

City Centre Accessible Parking Arrangements

- Due to the proposals for more pedestrian friendly streetscape, some of the existing accessible parking bays (blue badge parking) will require to be removed (Schoolhill-North side, Union Terrace-west side, Back Wynd, Little Belmont St)
- Replacement bays are proposed on Schoolhill-south side and Union Terrace-east side
- An objective for the TM Plan is that the measures proposed will result in no net detriment to the number of Accessible Parking bays within the city centre area.
- Phase 2 of the TM will continue to explore opportunities for additional accessible parking bays, including locations in the vicinity of the new Market

City Centre Taxi Rank Arrangements

- Review of taxi rank use undertaken , both long term ranks and *Spaces For People* temporary ranks
- Due to the proposals for more pedestrian friendly streetscape, some of the existing taxi ranks will require to be removed (Back Wynd)
- Replacement bays are currently being considered with opportunities for new bays potentially on Union Terrace (east side) or South Silver Street
- As part of Phase 2 of the plan, consideration of a centrally located night-time taxi rank (12am-5am) will be paramount for public safety. Ideally a night-time rank will be provided at the west end of Union Street
- An objective for the Traffic Management Plan is that the measures proposed will result in no net detriment to the number of taxi rank bays within the city centre area.

Enforcement of Traffic Restrictions

- Enforcement of the restrictions is essential to retain the necessary efficient operation and safety of the traffic network.
- Bus, taxi and cycle gates are proposed through the city centre at strategic points to restrict general traffic routing through the city centre.
- Access to vehiclular destinations will be maintained e.g. Queen Street, the Adelphi, Carmelite St area, Golden Square, but the access strategy will be designed to limit the opportunity for rat-running around the enforcement points.

1.2 Next Stage of the Traffic Management Plan Development

- Ongoing development of central area detail
- Ongoing engagement with key stakeholders
- Consideration of the operation of the wider Union Street corridor, out-with the central section
- Operation of servicing including bin storage and collection

- Review of current on street restrictions / regulations (single and double yellow lines)
- Continued dialogue with key stakeholders in the refinement of the Traffic Management Plan
- Development of a schedule of Traffic Regulation Orders (TRO's) required to deliver the optimum Traffic Management Plan for the whole of Union Street.

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2. INTRODUCTION

2.1 Background

- 2.1.1 SYSTRA Ltd (SYSTRA) was commissioned by Aberdeen City Council in September 2021 to develop a Traffic Management (TM) Plan to facilitate the next stage of delivery of the Aberdeen City Centre Masterplan (CCMP).
- 2.1.2 This commissions follows an extensive review of the CCMP proposals and subsequent reporting to committee on 25th August 2021.
- 2.1.3 The committee recommended that the indicative works be developed to detailed design stage. This will include the initial development of a Traffic Management Plan to support the City Centre Masterplan Review in consultation with the bus operators and in collaboration with the Chief Officers of Operations and Capital.

2.2 Project Scope

- 2.2.1 The scope of works has been split into 2 phases, with Phase 2 being defined as work to be undertaken after the November committee meeting. This report details the initial Phase 1 of the project, focusing on the central section of Union Street and associated network operation.
- 2.2.2 The first phase of the traffic management plan includes the following requirements:
- Proposed streetscape improvements for two Union Street network scenarios, namely:
 - Option 1 - Union Street fully pedestrianised between Bridge Street and Market Street with additional bus, taxi and cycle measures on Market Street, Guild Street and Bridge Street to facilitate the safe and efficient re-routing of public transport from Union Street.
 - Option 2 - Union Street bus and cycle only between Bridge Street and Market Street (removal of bus stops F1-F9)
 - Consideration of the benefits and disbenefits of both scenarios on the bus network
 - Consideration of the different traffic management implications for each scenario
 - Identification of the optimum solution for central Union Street
 - Review of historical work undertaken on various options associated with Union Street
 - Identification of the optimum package of measures on Union Street and surrounding streets (particularly Guild Street, Bridge Street, Market Street and the Belmont Zone) to support and mitigate the impacts of any traffic restrictions on Union Street and to maintain efficient active travel and public transport movements through the city centre.

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3. CENTRAL UNION STREET OPTIONS

3.1 Introduction

3.1.1 As part of the streetscape improvement proposals on central Union Street (section between Bridge Street junction and Market Street Junction), there are two potential operational scenarios, these are:

- **Option 1** – Full pedestrianisation of central Union Street (except for cycles and time limited servicing)
- **Option 2** – Buses and cycles only (except for time limited servicing)

3.1.2 The following sections detail the network operational implications for each scenario and the benefits and disbenefits of each option.

3.2 Option 1: Pedestrianisation of central Union Street

3.2.1 The option to pedestrianise Union Street between Bridge Street and Market Street is detailed in Figure 1. In this option, pedestrian movement will be the priority through the full corridor with streetscaping measures provided throughout the length and breadth of the corridor.

3.2.2 The key operational detail includes:

- Central passageway through pedestrian area to allow for servicing, cycles and emergency service vehicles
- Loading access from west to east (eastbound) only
- Servicing proposed between 18:00-10:00 to be consistent with other central area loading requirements (See Section 4.7)
- Buses re-routed via Bridge Street / Guild Street and Market Street
- Bus stops F1-F9 removed and bus stop dwelling reallocated to other stops (see Section 4.8)
- Bus 'Hubs' proposed on Union Street, to the east and west of the central section – detail to be considered under Phase 2 of the Traffic Management Plan.

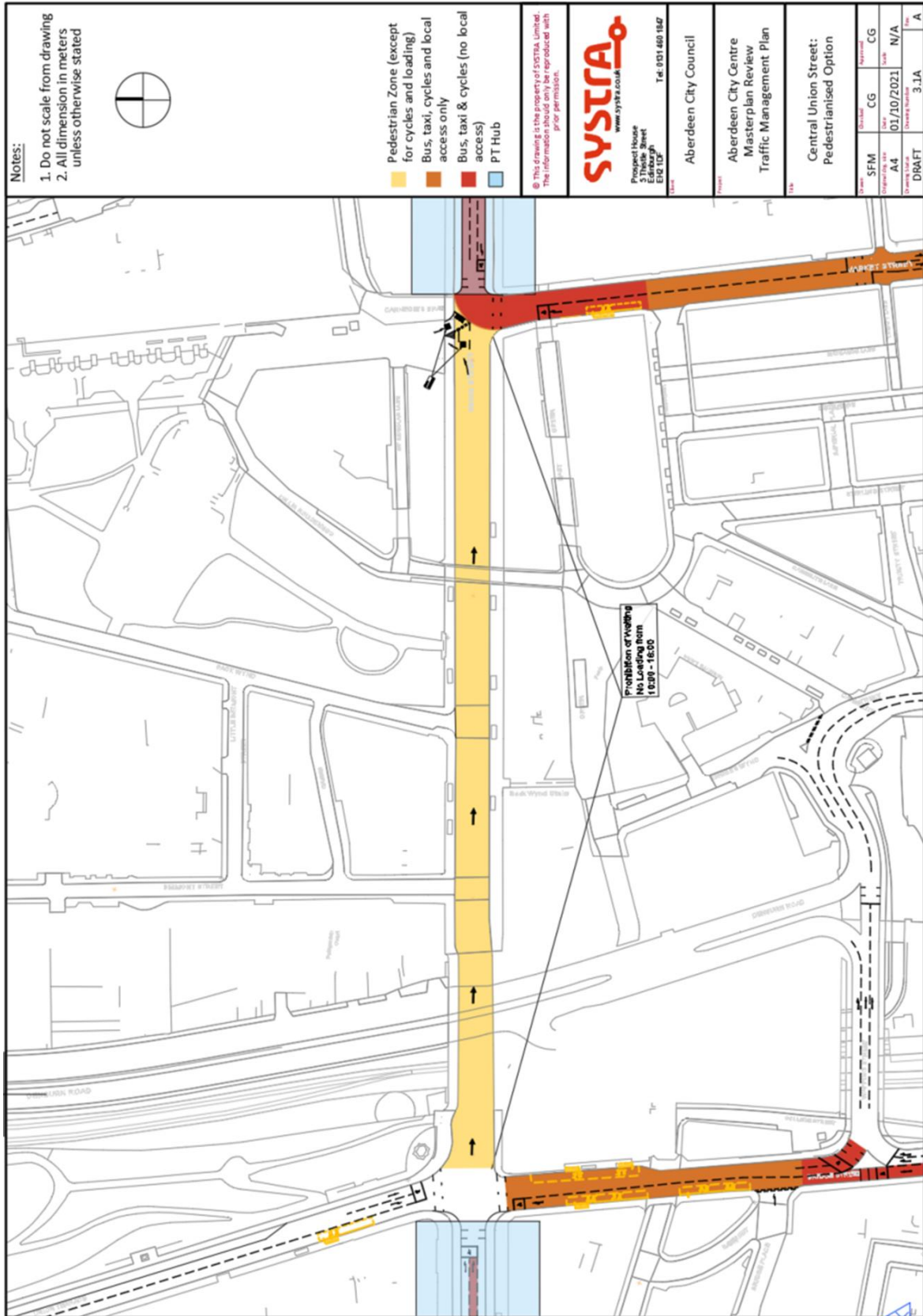


Figure 1. Option 1: Central Union Street Pedestrianised

Wider Network Requirements

- 3.2.3 Through traffic model testing (Ref: *Aberdeen City Centre Masterplan – Sensitivity Testing Report*, Sept 2021), a package of measures was identified to support the pedestrianisation of central Union Street and minimise the impacts to bus journey times and reliability. This is of critical importance in retaining current passengers, many of whom rely on buses to get to work, education, services and leisure. It is also a fundamental part of the local, national and global effort to reduce travel related carbon emissions via mass and sustainable transport. A reliable, punctual and competitive bus network is key to attracting more passengers and enabling a significant increase in city centre footfall. The model report concluded that if buses are to be removed from Union Street, then additional bus priority measures on Bridge Street, Guild Street and Market Street would have significant benefits for bus reliability and journey times.
- 3.2.4 To emphasise the potential impact to traffic levels through this area of the network, traffic model outputs show the difference in 2-way traffic flows on Guild Street (east end), Market Street(north of Guild Street) and Bridge Street when the restrictions are in place as part of the City Centre Masterplan (CCMP) compared to a baseline (pre covid) network.

Table 1. Modelled Traffic Flow Changes

Location	12 Hr 2-way Traffic Flow		
	Base	CCMP	Diff
Bridge St	4174	519	-88%
Guild St	6985	748	-89%
Market St	3745	787	-79%

- 3.2.5 The table shows that there is a significant reduction in general traffic of approximately 80-90% through these routes when the bus priority is in place. This clearly emphasises the potential sea change in operation of the bus network to better serve the sustainable hierarchy of road users.
- 3.2.6 Figure 2 shows the proposed wider measures that would form this option. The measures shown include:
- Bus, taxi, and cycle only restriction on Bridge Street in both directions
 - Bus, taxi, and cycle only restriction on Guild Street between Exchange Street and Market Street
 - Bus, Taxi, cycle and local access only on Market Street, between Union Street and Guild Street
 - Bus, Taxi, cycle and local access only on Union Street / King Street, between Market Street and East North Street.

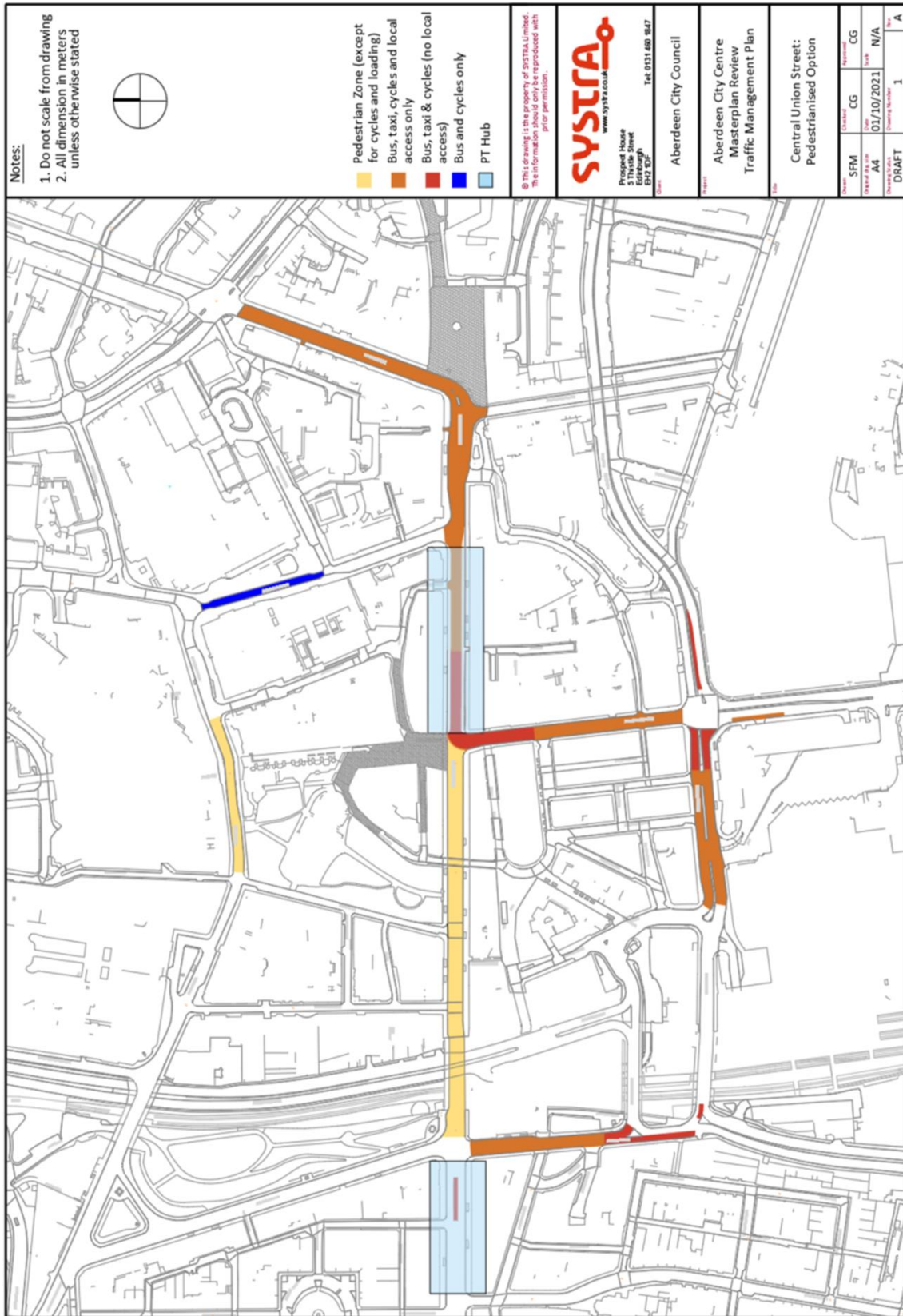


Figure 2. Central Union St – Option 2 Wider Network Requirement

3.2.7 Figure 2 also includes the proposed measures on Schoolhill and the east & west sections of Union Street. This is discussed in more detail in Section 4.2.

Union Street / Market Street Junction Operation (Figure 3)

3.2.8 Under the central Union Street pedestrianisation option, the Union Street/Market Street junction will become predominantly for the use of buses, taxis, cycles, pedestrian crossings and loading access.

3.2.9 The priority movements for buses will be between Union Street and Market Street and vice-versa. The junction will be traffic signal controlled to ensure safe vehicle manoeuvres and interaction with pedestrians/ cycles.

3.2.10 The proposal to allow one-way loading eastbound from west to east on central Union Street requires a loop detector linked to the Union Street / Market Street junction. The consideration of including loops to this three arm junction (as opposed to the four arm junction at Bridge St) is the key factor in the proposed loading direction. Pedestrian safety was the primary reason for rejecting two-way loading operation.

Union Street / Bridge Street Junction Operation (Figure 4)

3.2.11 Under the central Union Street pedestrianisation option, the Union Street / Bridge Street junction will also become predominantly for the use of buses, taxis, cycles, pedestrians crossing and loading entry to the pedestrianised area out-with restricted times.

3.2.12 Union Terrace will be open to all traffic, which will allow for general traffic to exit Union Street when routing eastbound from the west end. Due to proposed restrictions at the north end of Union Terrace (general traffic left turn only to Rosemount Viaduct) then the volume of general traffic on Union Street and Union Terrace is predicted to be significantly lower than pre-Covid levels (from traffic model testing). This is covered in more detail in Section 4.2

3.2.13 Cyclists can also route through the pedestrianised area and through all the other restricted routes. Traffic levels are predicted to be low right through the Union Street corridor, providing a safer and more cycle friendly environment.

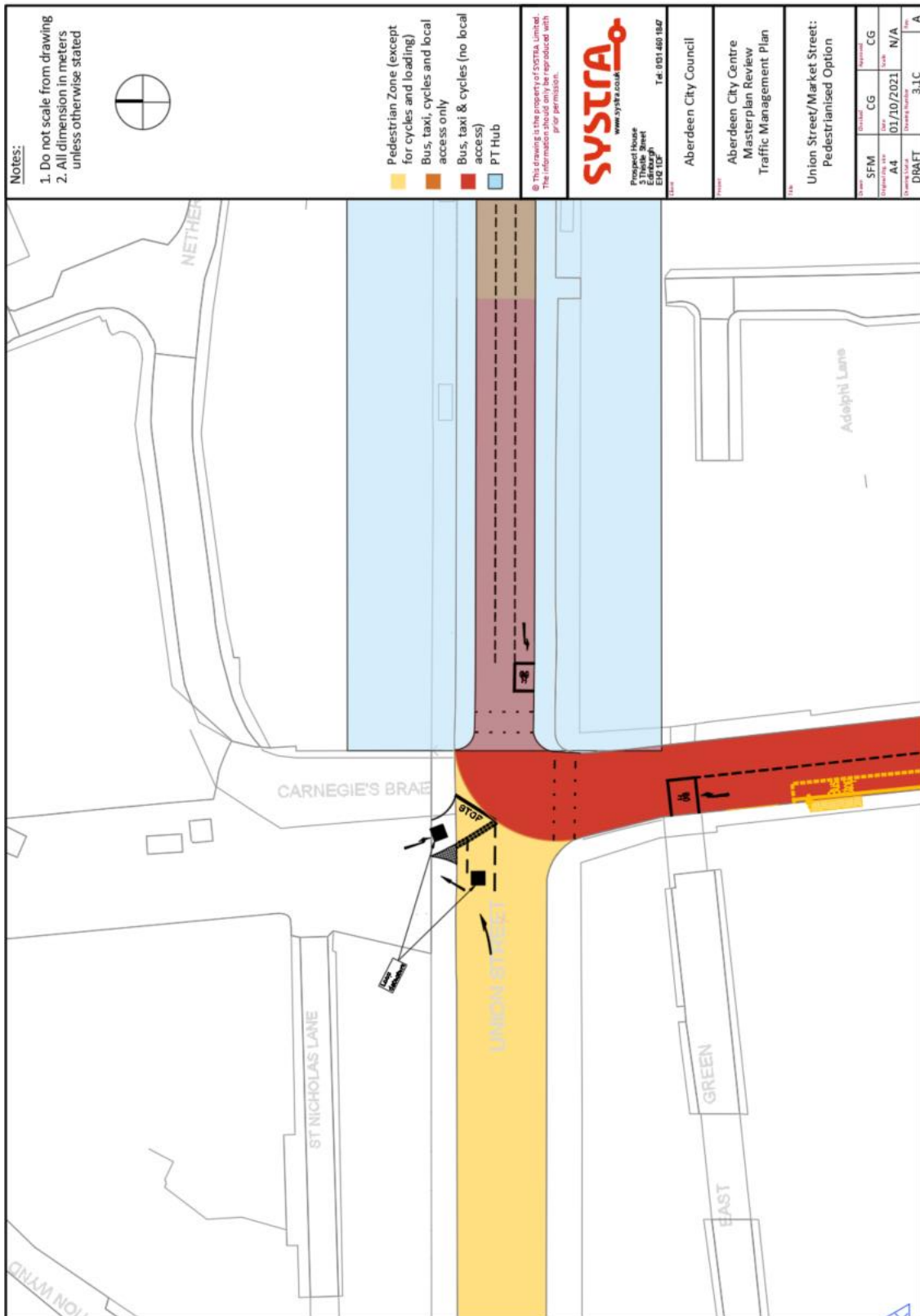


Figure 3. Option 1– Union St / Market St Junction Layout

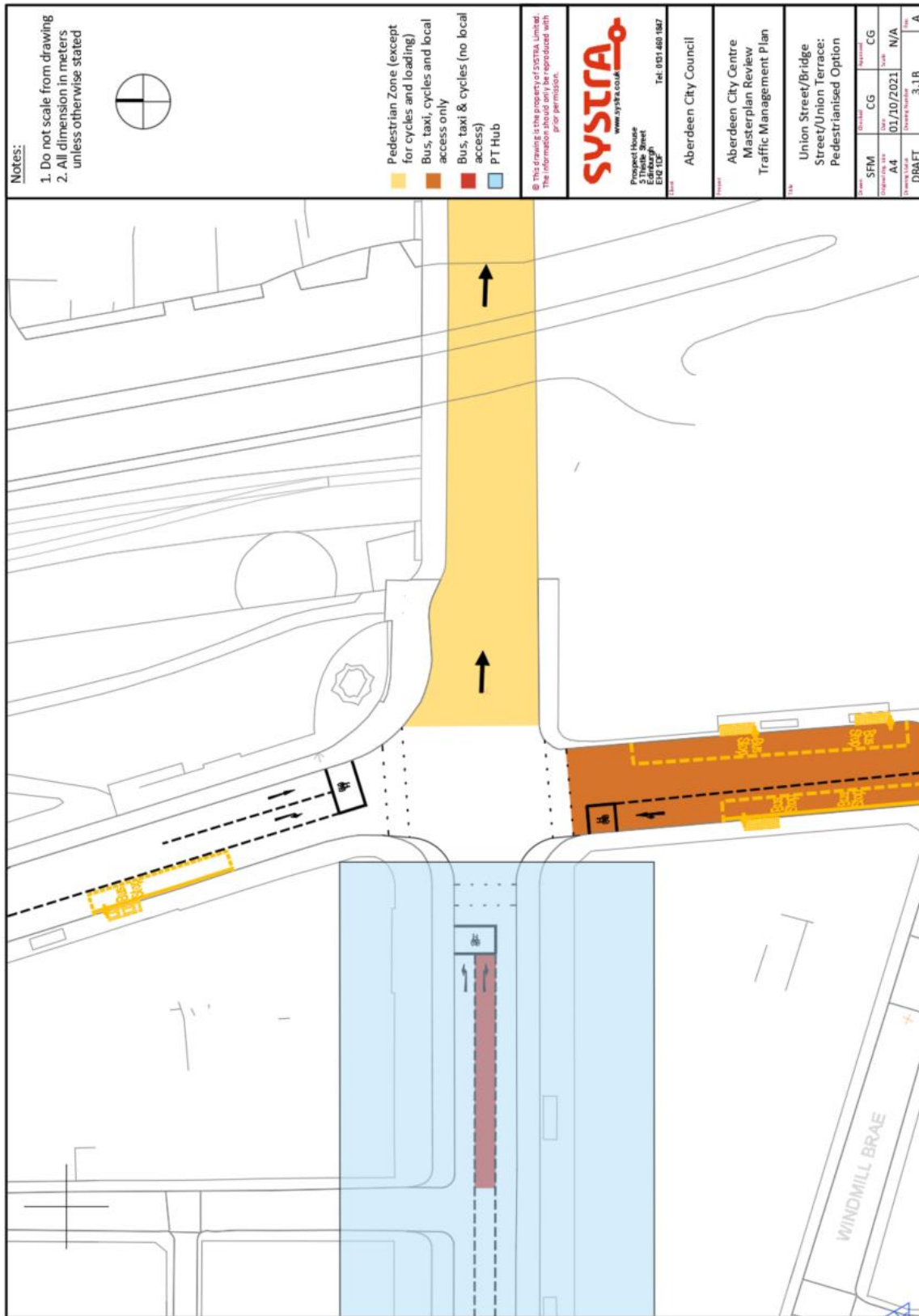


Figure 4. Option 1- Union St / Bridge St Junction layout

Public Transport (PT) Operation

- 3.2.14 Prior to the Spaces for People measures (public health measures introduced as a result of COVID-19), during the peak hours there are approximately 50 buses that route through central Union Street in either direction. The proposed central Union Street restrictions require the re-routing of these bus services via Bridge Street, Guild Street, and Market Street. Bus operators indicated this would be preferred to using Schoolhill. The proposed restrictions on these routes removes general traffic to allow buses, taxis and cycles to traverse this section of the network without getting held up in traffic queuing. This segregation of the bus network from general traffic therefore allows for improved journey times and individual service reliability, which is critical for the delivery of an efficient and accessible public transport network.
- 3.2.15 In addition, the removal of high volumes of general traffic from Bridge Street, Guild Street and Market Street allows for improved bus stopping facilities through these routes, which will have been lost from the central Union St section (Stops F1-F9).
- 3.2.16 The PT network and bus stopping considerations are further detailed in Section 4.8.

Traffic Displacement

- 3.2.17 The traffic modelling shows that the traffic displaced from the city centre generally routes in accordance with the approved roads hierarchy. The combination of the CCMP measures and the LEZ boundary restrict traffic movements from routing through the city centre area.
- 3.2.18 There are some local areas of congestion in the traffic model, which will need to be monitored post-implementation. There will be an element of traffic evaporation that the modelling does not account for. In addition, the model is based upon pre-COVID 2019 traffic patterns, which has already changed through the implementation of the *Spaces for People* measures.
- 3.2.19 The extent of any secondary congestion as a result of the city centre restrictions is difficult to predict, as we are not yet out of the impact of the COVID-19 pandemic. THIS is why it is critical that network monitoring is carried out post-implementation, once the network settles down and there is greater familiarity with the restrictions. Option 2: Bus & Cycle through central Union Street
- 3.2.20 The option to allow buses to continue to route through central Union Street between Bridge Street and Market Street is detailed in Figure 5. In this option, pedestrian movement will be the priority through the full corridor with more limited streetscaping measures provided throughout the length and breadth of the corridor. Similar to Broad Street, there would be no bus stopping, with stops relocated, to maximise the effective and active space for pedestrians.
- 3.2.21 The key operational detail includes:
- 2 lane central corridor devoid of street furniture to allow for buses routing in either direction as well as for servicing, cycles and emergency service vehicles
 - Loading access from either end
 - Servicing proposed between 18:00-10:00 to be consistent with other central area loading requirements

- Bus stops F1-F9 removed and bus stop dwelling reallocated to other stops along Union Street corridor.

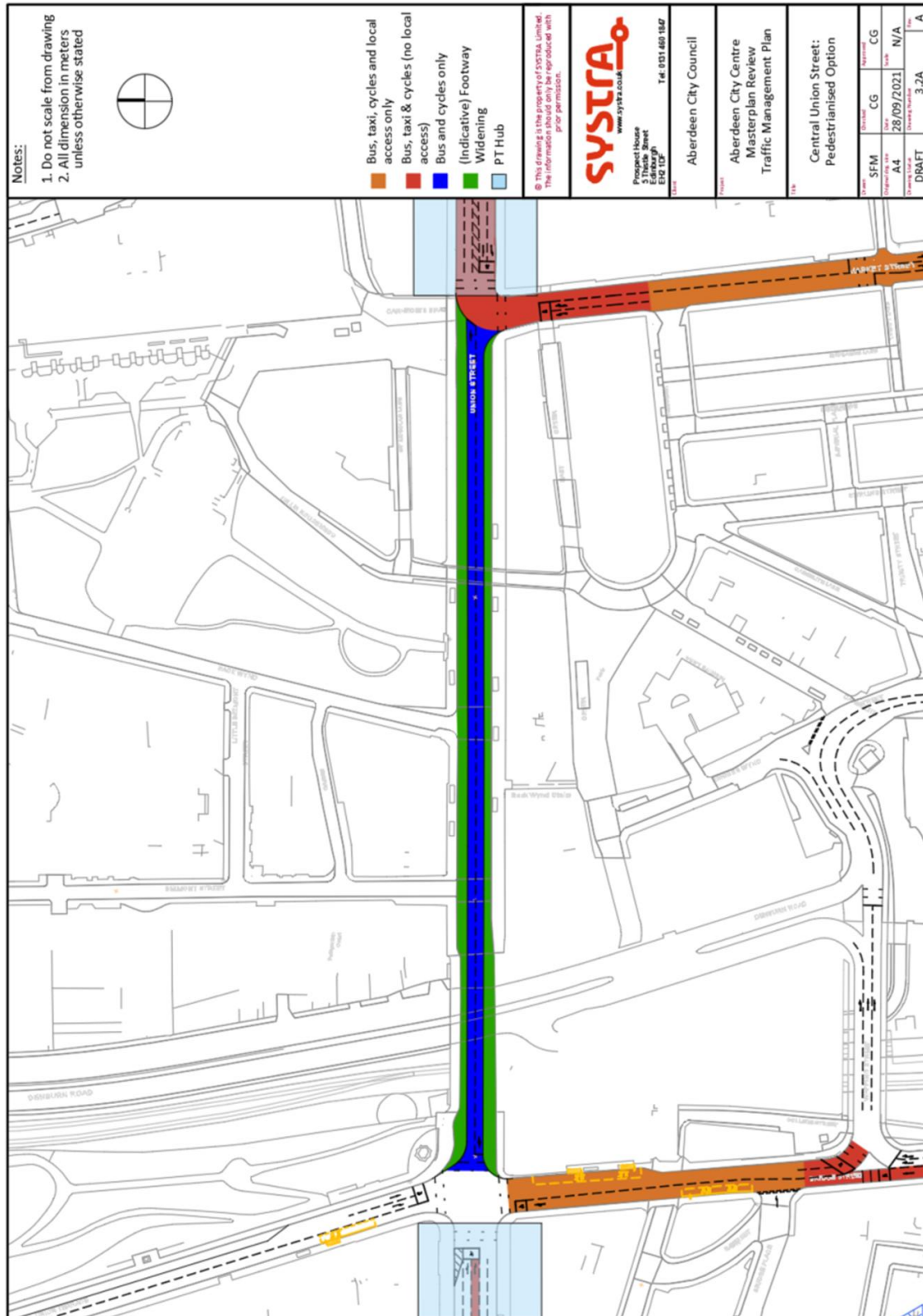


Figure 5. Option 2- Bus and Cycle Route through Central Union Street

Wider Network Requirements

3.2.22 Through traffic model testing (Ref: *Aberdeen City Centre Masterplan – Sensitivity Testing Report*, Sept 2021) it was found that retaining the buses through Union Street but providing no additional network restrictions through the Bridge Street / Guild Street/ Market Street corridor resulted in the following issues:

- 40% increase in traffic flow through Guild Street (due to restrictions on Union Street and Schoolhill)
- Difficulty for buses egressing the station on Guild Street due to traffic queuing along Guild Street

3.2.23 In addition, through consultation on the proposals with various stakeholders, including cycle groups and bus operators, they all highlighted the congestion levels experienced through Guild Street and the lack of safe and easy connection between the bus/rail station and the city centre for cyclists and pedestrians. The operation of Guild Street as a primary traffic route essentially cuts off the bus and rail station from the city centre.

3.2.24 For this reason, and to provide bus operators with alternative routing options to central Union Street, the proposed additional bus priority measures on Bridge Street, Guild Street and Market Street would also be applied under the Option 2 for central Union Street.

3.2.25 Figure 6 shows the proposed wider measures that would form this option. The measures shown include:

- Bus, taxi, and cycle only restriction on Bridge Street in both directions
- Bus, taxi, and cycle only restriction on Guild Street between Exchange Street and Market Street
- Bus, Taxi, cycle and local access only on Market Street, between Union Street and Guild Street
- Bus, Taxi, cycle and local access only on Union Street / King Street, between Market Street and East North Street
- Bus and cycle restriction on central Union Street, no bus stopping

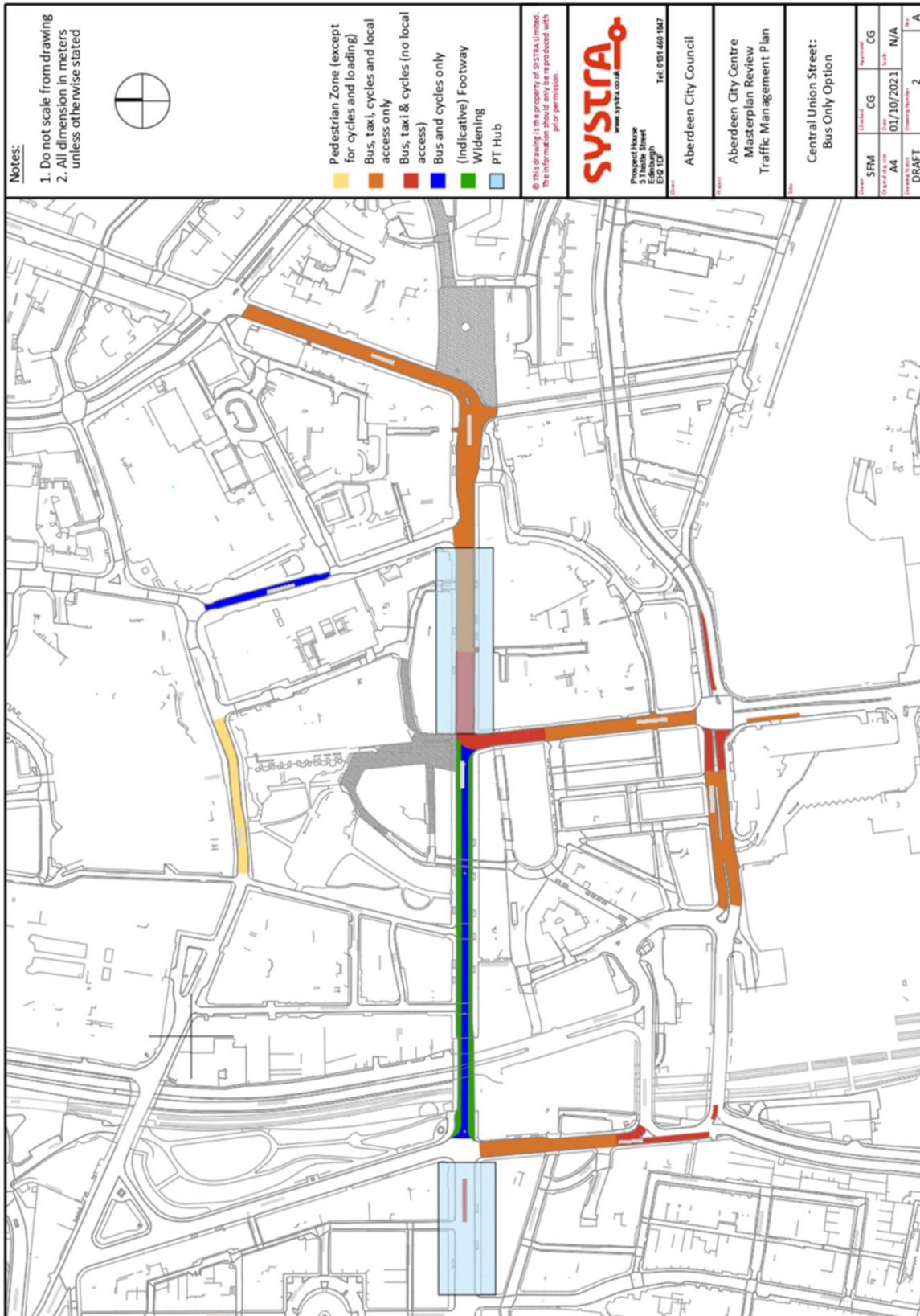


Figure 6. Option 2 - Central Union St - Wider Network Requirement

Union Street / Market Street Junction Operation (Figure 7)

- 3.2.26 Under the central Union Street Option 2, the Union Street/Market Street junction will become predominantly for the use of buses, taxis, cycles, pedestrian crossings and loading access.
- 3.2.27 The priority movements for public transport will be on all three arms of the junction: Union Street east and west arms and Market Street. The junction will be traffic signal controlled to ensure safe vehicles manoeuvres and interaction with pedestrians and cycles.
- 3.2.28 This option will require additional signal phasing compared to Option 1 to allow for the additional movement of buses to/from central Union Street
- 3.2.29 No loop detectors are required for one-way loading under this central Union Street scenario as two way operation is in place for buses and for loading.

Union Street / Bridge Street Junction Operation (Figure 8)

- 3.2.30 Under the central Union Street Option 2, the Union Street / Bridge Street junction will also become predominantly for the use of buses, taxis, cycles, pedestrians crossing and loading access. The difference to Option 1 is that buses will also require to enter and exit central Union Street. It is not anticipated that this will require additional signal phasing, but it will be a less efficient junction for right turning buses on Union Street.
- 3.2.31 Union Terrace will be open to all traffic, which will allow for general traffic to exit Union Street when routing eastbound from the west end – as per Option 1. There are turning restriction proposed for the north end of Union Terrace, which is detailed in Section 4.2.
- 3.2.32 Cyclists can also route through the pedestrianised area and through all the other restricted routes. Traffic levels are predicted to be low right through the Union Street corridor, providing a safer and more cycle friendly environment.

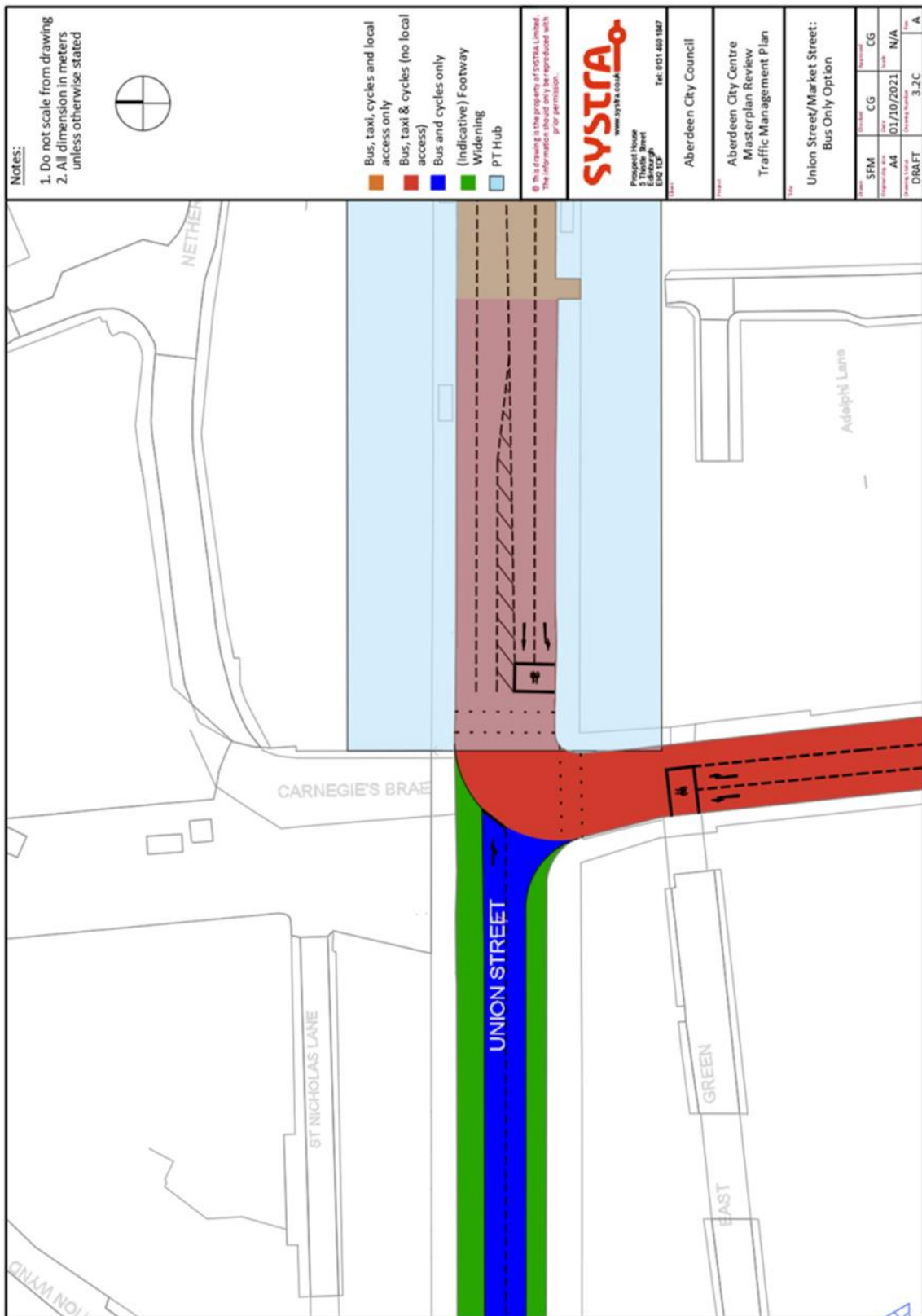


Figure 7. Option 2 - Union Street Market St Junction Layout

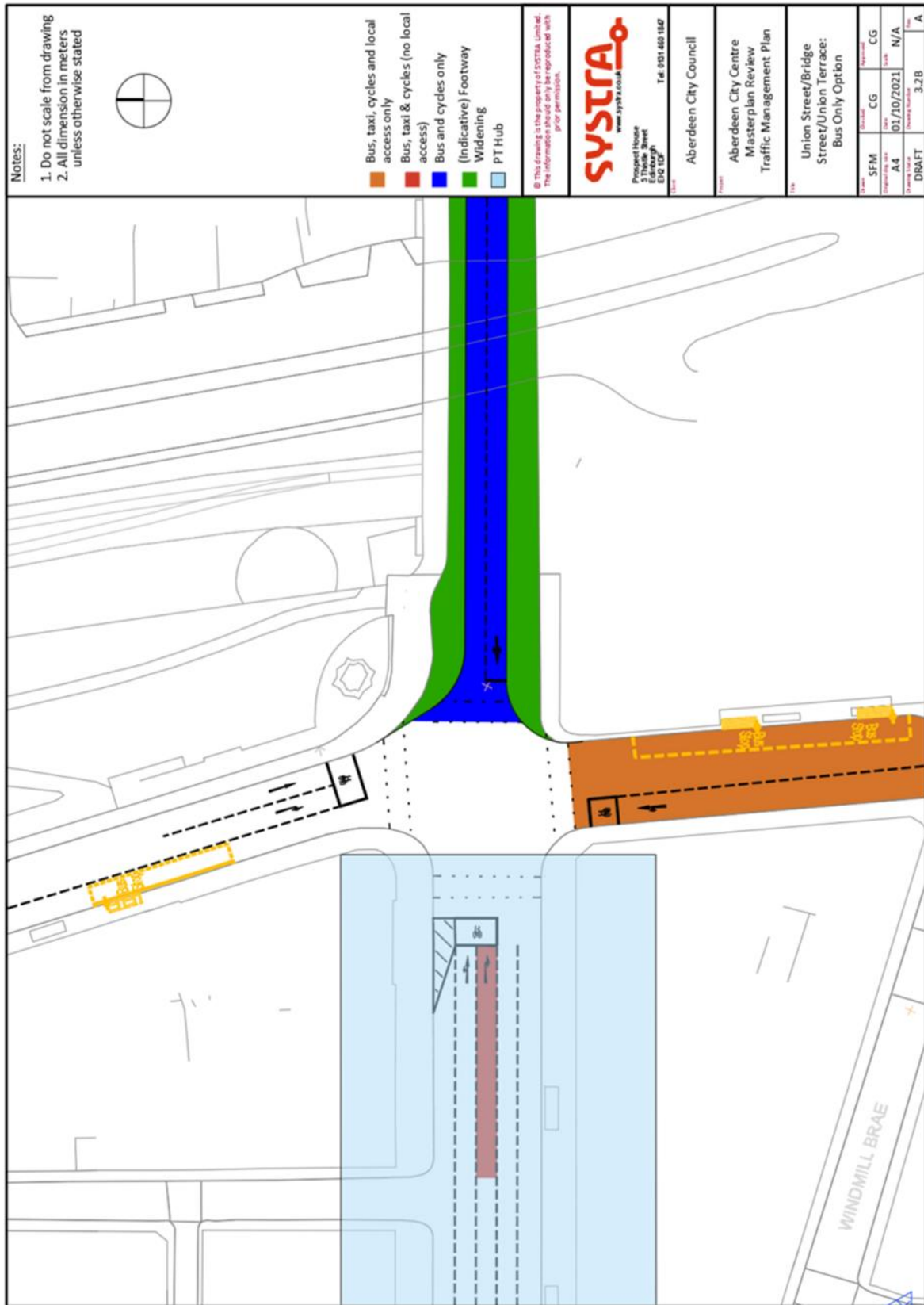


Figure 8. Option 2 – Union St / Bridge St Junction Design

Public Transport Operation

- 3.2.33 During the peak hours, there are approximately 50 buses that route through central Union Street in either direction. It is anticipated that the vast majority of services would continue to route through central Union Street if it were open for bus routing. (There would still be an option to route via Bridge Street, Guild Street and Market Street as an alternative for the bus operators).
- 3.2.34 Whilst buses would still be able to route through central Union Street the bus stops (F1-F9) through this section would be removed to maximise the road space for pedestrians as part of the placemaking vision for the city centre, similar to Broad Street.
- 3.2.35 With the bus stops removed on central Union Street (F1 to F9), the difference between this scenario and re-routing all the buses via Guild Street (Option 1) would be that more additional bus stops would be required on Union Street east and west of the restriction. In Option 1, the additional kerbside on Bridge Street, Market Street and Guild Street can be utilised to relieve demand for stopping locations lost from central Union Street.
- 3.2.36 In Option 2, there is a net loss of kerbside space for bus stops for the services that route along the full Union Street corridor (e.g. services 1,2,11,13,14,15,16,17,18,19) and chose to remain on the central section. These services will lose stops F1 to F9, but will not have the additional kerbside space that the re-routes buses will have on Bridge Street, Guild Street and Market Street. This may impact on the efficient operation of the bus network.
- 3.2.37 There are still many services that route along Bridge Street, Guild Street and Market Street as part of their normal route, so the additional stopping provisions on these corridors would be advantageous. In addition, the bus operators may choose to divert some services from central Union Street anyway, so that they pass more stop locations and are also able to service the Union Square area.

The option to retain buses through central Union Street but to remove the bus stops through this corridor may put additional pressure on the remaining sections of Union Street to facilitate all the bus stop and bus dwell time requirements.

3.3 Comparison of central Union St Options

- 3.3.1 In order to determine which central Union Street option provides the greatest benefits, a detailed comparison of the advantages and disadvantages of each option is detailed in the following 2 tables:

Table 2. Comparison of Central Union Street Options – Table 1 of 2

Advantages			
Disadvantages			
Impact Element	Central Union Street Options		
	Pedestrianised	Buses Only	
Pedestrians / Placemaking	Enhanced pedestrian space	Enhanced pedestrian space	
	Full Central Union Street area for pedestrian priority	Central section required for 2 PT routing lanes, plus additional locations for service vehicles to stop	
Cycle Routing	Facilitated through Central Union Street	Facilitated through Central Union Street	
Pedestrian / Cycle Safety	Central Union Street area free of public transport and general traffic	Pedestrians / cyclist interaction with routing buses (Potentially an additional incident risk)	
Placemaking - wider Union Street area	Opportunity for Footway widening along Union Street East and West end	Potentially some footway widening opportunities lost as a there will be a greater requirement for enhanced PT hubs along Union Street to facilitate loss of kerbside space on the Central section	
Bus Routing	Longer routing distance via Guild Street	Direct route through Union Street	
	Buses are segregated from general traffic through diversion route	Buses are segregated from general traffic through Central Union Street	
	More bus services route close to Union Square Shopping Centre	PT services mainly remain on Union Street (but option available to divert to Union Square)	
Bus Stops	Loss of kerbside space through Central Union Street is partly replaced through Bridge St / Guild St / Market St	Loss of kerbside space on Union Street is not replaced. Critical issue for locating alternative bus stopping facilities that enable the PT network to operate efficiently	
	Bus stop requirements to be rationalised along Union Street East and West and enhanced provisions on Bridge St, Guild St and Market Street (North)	Additional bus dwell time required along Union Street corridor (East and West of Central Area) compared to the pedestrianised option - potentially creating issues for dwelling / routing buses and buses queuing to get to stop	
Emergency vehicles	Clear access eastbound through pedestrian area	Access east and westbound through pedestrian area	
Taxi Routing & Rank Provisions	Taxis able to route through all city centre network except for Central Union Street and part of Schoolhill. Taxi rank facilitates ongoing consideration	As per Pedestrianised Option	
Network Infrastructure requirements	General traffic restrictions required on Bridge Street, Guild Street, and Market Street to facilitate displaced buses	As per Pedestrianised Option	
Accessible Parking	Existing and new accessible parking bays proposed. Some existing bays require removal. No net detriment to provisions sought	As per Pedestrianised Option	
Loading Requirements	Single lane corridor through Central Union Street for one-way loading / Refuse collection operation	Potential conflict between routing buses and loading & refuse vehicles	

Table 3. Comparison of Central Union Street Options – Table 2of 2

Advantages		
Disadvantages		
Impact Element	Central Union Street Options	
	Pedestrianised	Buses Only
Signal Junction Operation	Fewer conflicting movements required compared to the buses only option, resulting in more efficient junction operation	Additional signal phasing required to facilitate the movement of buses through central Union Street at either end of the restriction, incurring additional delay to PT and potentially reduced pedestrian phase green time
Events	Opportunity to host events through Central Union Street with little disruption to wider traffic network operation. Potential requirement to still allow access through the restricted area for servicing	Opportunity for events through central Union Street limited if buses are to be retained through Union Street. Larger events would require temporary measures for rerouting buses and stopping locations
General Traffic	Through routing general traffic will be displaced from City Centre area of Central Union St, East Union Street, Bridge St, Market St, (section of) Guild Street, Schoolhill, with significant traffic reductions on Union Terrace and West end of Union Street. Existing and proposed wider infrastructure and network operational measures to cater for the revised network operation including: <ul style="list-style-type: none"> - AWPR - Network hierarchy & associated road signing - Low Emission Zone - South College Street junction Improvements - Haudagain Junction Improvements - Berryden Corridor improvements 	As per the full pedestrianisation option, the same considered traffic restrictions around the city centre area are deemed a requirement for the bus only option through Union Street. There is little difference to the impact to general traffic between the two Union Street scenarios
Traffic Model Outputs:	Bus Journey Times marginally longer than baseline (90 seconds longer approx. on average, to traverse through the model network - approx. 25 mins total)	Buses remain on existing route through Union Street. Bus journey times on average 30 seconds shorter than baseline (due to reduced traffic on Union St)
	Bus reliability significantly improved when additional general traffic restrictions are applied on Bridge St, Market St and Guild St, to protect and segregate the PT network from general traffic.	Bus reliability is slightly better in the model output statistics when buses are retained through Central Union Street, however, a significant number of additional bus stops were applied in the model along Union Street east end west of the restriction. Many of these additional stops may not be able to be accommodated when detailed traffic management proposals are developed.
	General traffic re-routing is identical for both options, therefore, network wide operational statistics, including average time taken, mean speed etc. are very similar between the two options.	General traffic re-routing is identical for both options, therefore, network wide operational statistics, including average time taken, mean speed etc. are very similar between the two options.

3.4 Recommended central Union St Option

- 3.4.1 From the above comparison, it is clear that a number of considered impacts of the proposed restrictions on central Union Street are the same for both options. For example, the level of additional supporting network restrictions are deemed to be the same regardless of whether buses can route through central Union Street or are required to reroute via Guild Street.
- 3.4.2 There are clearly more benefits to the sustainable travel hierarchy of road users for full pedestrianisation compared to allowing buses to route through the central section. Whilst buses are required to divert from their existing route, the additional infrastructure measures ensure that a reliable and accessible bus service is provided. The full pedestrianisation option maximises the central Union Street area for pedestrians and cyclists and facilitates streetscaping that best allows for the creation of vibrant city centre 'place'.

The recommendation for Central Union Street is to provide full pedestrianisation through this corridor with access for cycles and time restricted servicing.

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4. TRAFFIC MANAGEMENT PLAN - ADDITIONAL NETWORK DETAIL

4.1 Introduction

4.1.1 Based upon the recommendation for central Union Street to be fully pedestrianised, the following section provide more detail on the traffic management plan for the core area around central Union Street and also the current consideration of specific measures, including potential locations of taxi ranks, accessible parking bays etc.

4.2 Union Terrace & Schoolhill Operation

4.2.1 As detailed in the traffic modelling report *Aberdeen City Centre Masterplan – Sensitivity Testing Report, (Oct 2021)*, a series of traffic model tests were undertaken with various traffic restrictions applied through Union Terrace and Schoolhill.

Schoolhill

4.2.2 The traffic modelling showed that, regardless of the operation of Union Terrace, traffic flows through Schoolhill increased by at least 20-30% when general traffic restrictions were in place on Union Street and Guild Street.

4.2.3 Given the high pedestrian movement between the St. Nicholas and Bon Accord shopping centres, and the shared space streetscaping in place at the Upperkirkgate / Broad Street junction, it was considered that the traffic restrictions included on Schoolhill as part of the *Spaces For People* measures should be made permanent, primarily from a pedestrian safety and placemaking perspective.

4.2.4 Whilst several bus services have historically routed through Schoolhill and Upperkirkgate, only Service 14 was operating through this corridor in 2019 (pre-COVID). The bus operators have not noted any issues with the option to permanently close Schoolhill to through traffic.

4.2.5 The consideration of closing Schoolhill to routing traffic was included in the original City Centre Masterplan proposals in 2016.

4.2.6 The details of the considered restriction are as follows:

- Pedestrian zone between Harriet Street and Flourmill Lane (except for cycles and loading)
- Access to Harriet Street and Harriet Street Car Park from Rosemount Viaduct
- Access to Flourmill Lane from Gallowgate

4.2.7 The location of the proposed restriction is detailed in Figure 9

4.2.8 To provide some network resilience for situations where the bus network is impeded (events or incidents), it is proposed that the infrastructure required for the traffic restriction on Schoolhill be implemented in a way so that buses could re-route through Schoolhill if required to keep the network moving.

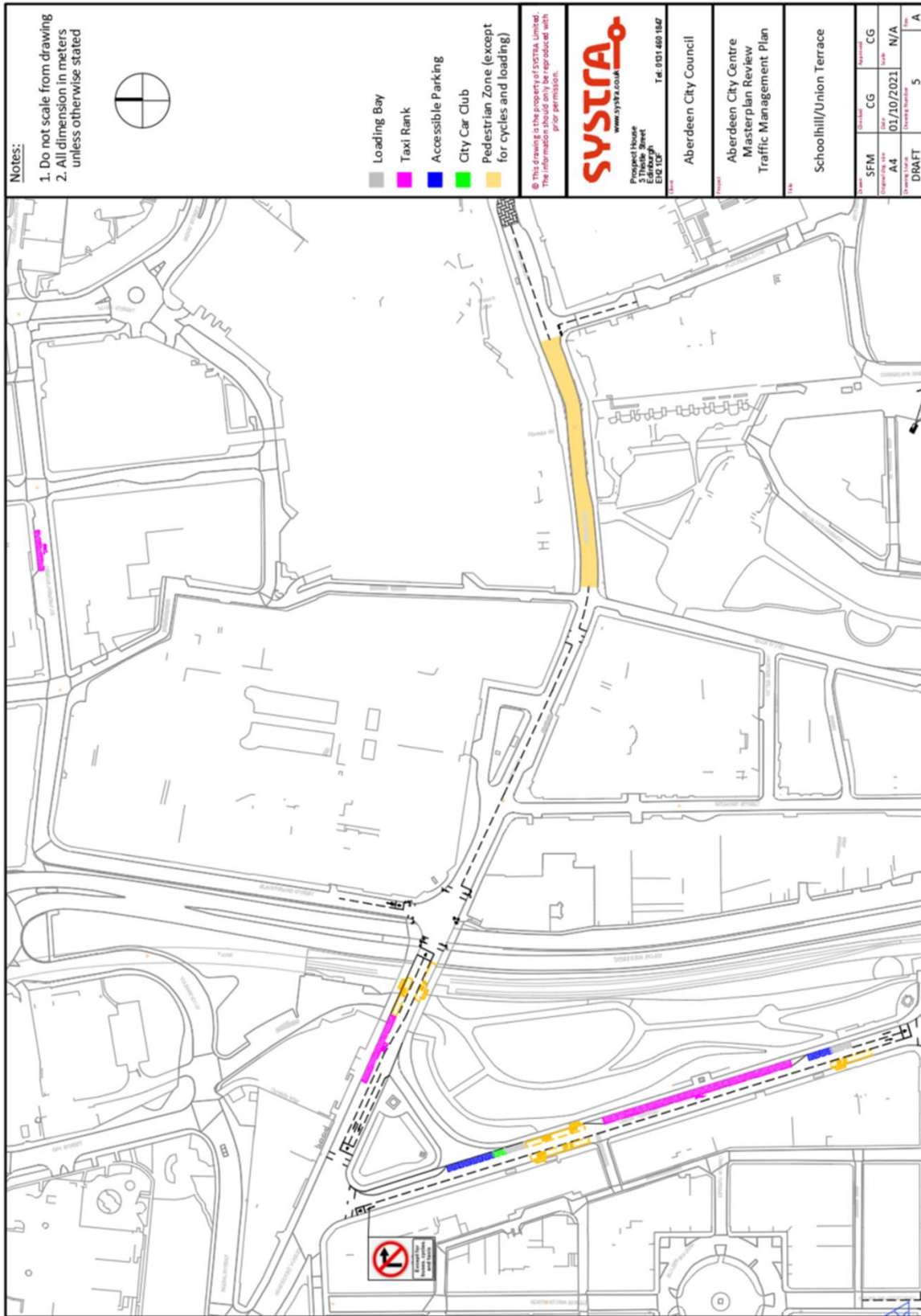


Figure 9. Union Terrace / Schoolhill Operation

Union Terrace

- 4.2.9 The original proposal to restrict general traffic on Union Terrace was developed for a CCMP implementation scenario where traffic restrictions were included on central Union Street only. The purpose of the Union Terrace restriction was to protect Schoolhill from being used as an alternative east-west general traffic corridor. This is the key reason why the Low Emission Zone package of measures included general restrictions on central Union Street and Union Terrace.
- 4.2.10 The Union Terrace Gardens Project (UTG Project) includes proposals for accessible parking and loading bays along the eastern carriageway (southbound). This presented a conflict with the consideration for general traffic restriction on Union Terrace as vehicles would not be able to access the proposed parking measures.
- 4.2.11 A series of traffic model tests were developed to consider a range of options on Union Terrace (including one-way restrictions, and banned movements), this was undertaken in combination with restrictions on Schoolhill and the wider CCMP measures on Union Street, Bridge Street, Guild Street and Market Street.
- 4.2.12 The key outcomes from the model testing were:
- Buses and taxis only on Union Terrace:- traffic flows reduced by 90% (compared to a baseline pre covid network). This applies for restrictions in either direction
 - Union Terrace open to all traffic: - two-way traffic flow reduced by 50-60% (compared to pre covid baseline). This is partially due to restrictions on Central Union Street and Bridge Street
 - Union Terrace open to all traffic but no right turn from Union Terrace to Rosemount Viaduct (except buses, cycles and taxis):- Northbound movement reduced by 60% compared to pre covid baseline (as opposed to 40% when fully open). This resulted in a net 2-way flow that was 70% lower than the pre covid baseline.
- 4.2.13 The model testing therefore showed that leaving Union Terrace open to all traffic did not create a rat run for through routing traffic as the restrictions on central Union Street and Bridge Street limited the appeal of this route.
- 4.2.14 To further reduce the traffic demand on Union Terrace, restricting the right turn movement into Rosemount Viaduct to buses, cycles and taxis only results in the removal of the majority of strategic routing traffic, leaving local traffic, buses, taxi and cycles to utilise this corridor, whilst various accessible parking opportunities are retained on the southbound carriageway.
- 4.2.15 A further benefit of this option is that it provides an exit for general traffic routing along Union Street from the west, without requiring to U-turn.
- 4.2.16 The key measures proposed for Union Terrace are therefore:
- Union Terrace open to all traffic in both directions
 - No right turn from Union Terrace to Rosemount Viaduct except for buses, cycles and taxis.

4.2.17 Figure 10 shows the correlation between the UTG engineering drawing and the traffic management plan proposal for this corridor. The proposed provision of accessible parking, loading bays and (potential) taxi rank is detailed in subsequent sections.

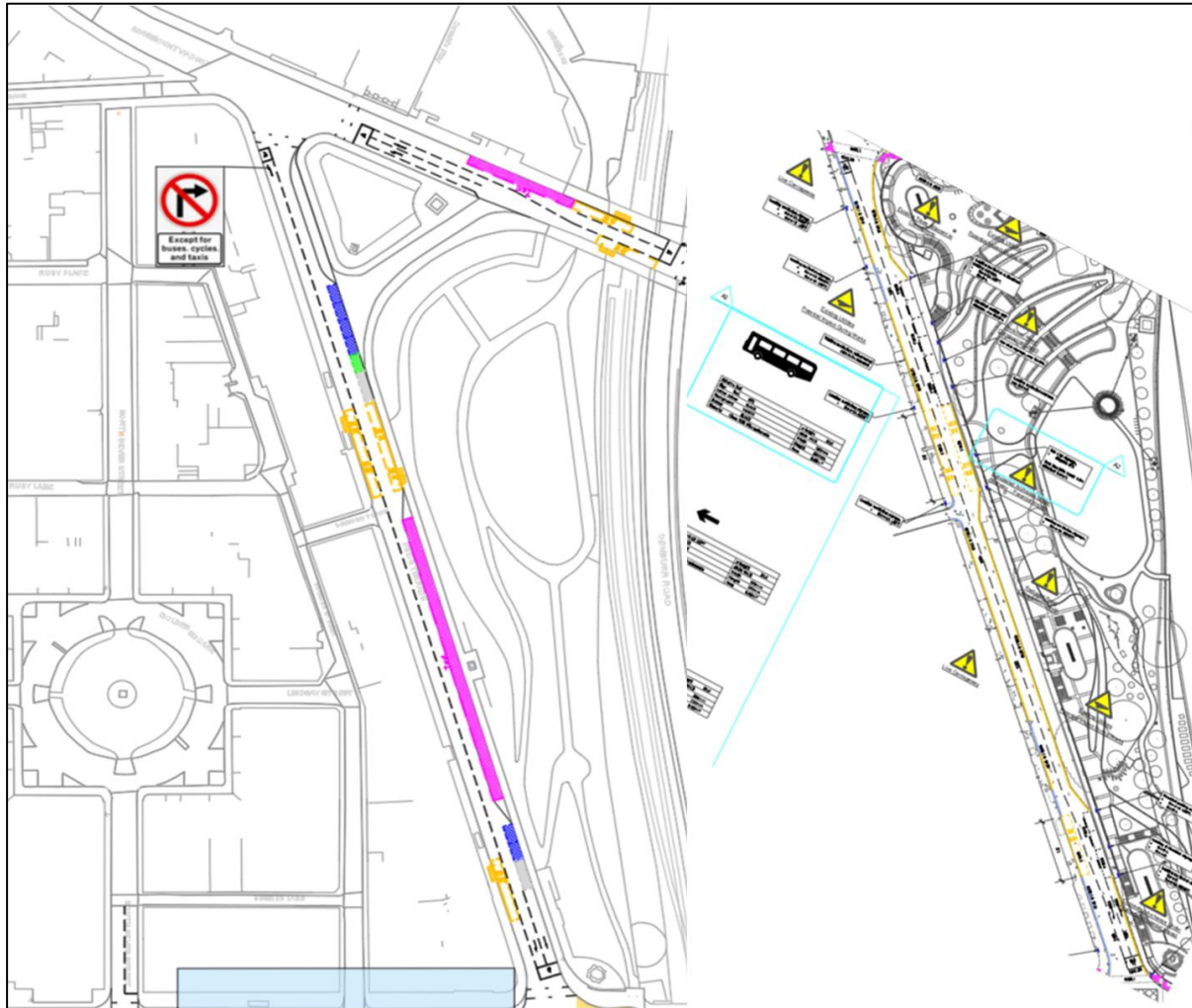


Figure 10. Correlation with Union Terrace Garden's Proposals for Union Terrace

4.3 Bridge Street / Guild Street / Market Street Operation

- 4.3.1 As noted in Chapter 3, traffic restrictions on Bridge Street, Guild Street, and Market Street (north of Guild Street) are proposed to protect and segregate the public transport network from general traffic to enable reliability and punctuality in the bus network timetable.
- 4.3.2 In addition, the proposed restrictions reduce general traffic volumes through these corridors considerably, which facilitates a more pedestrian and cycle friendly environment, allowing strong connectivity between the Bus and Rail station through to the new Market and on to central Union St.

4.3.3 The following three figures show the potential operation of this area of the network. Figure 11 provides detail around Guild Street and Wapping Street Gyratory, Figure 12 focuses on the Guild Street Market Street junction operation, and Figure 13 the Bridge Street junctions.

4.3.4 The key measures proposed include:

Guild Street / Wapping Street - Figure 11

- Bus, taxi and cycles only on Guild Street between Market Street and Exchange Street in both directions
- Bus, taxi, cycles and access only on Guild Street between Exchange Street and Carmelite Street in both directions – to facilitate local access / egress from Stirling Street and Exchange Street
- Enhanced bus stop facilities on Guild Street; additional bus stops and/or extended stopping bays through traffic restricted section in both directions to provide enhanced public transport connection to the bus and rail station and to Union Square Shopping centre
- Wapping Street Gyratory operation for two purposes – 1. To facilitate general traffic movement between College Street and Denburn Road. 2. To facilitate bus movement between Guild Street and Bridge Street
- No requirement to segregate buses from general traffic through Wapping Street gyratory as different lanes are required for each user type. Short restriction applied on Guild Street westbound at Bridge Street due to Bridge Street restrictions.

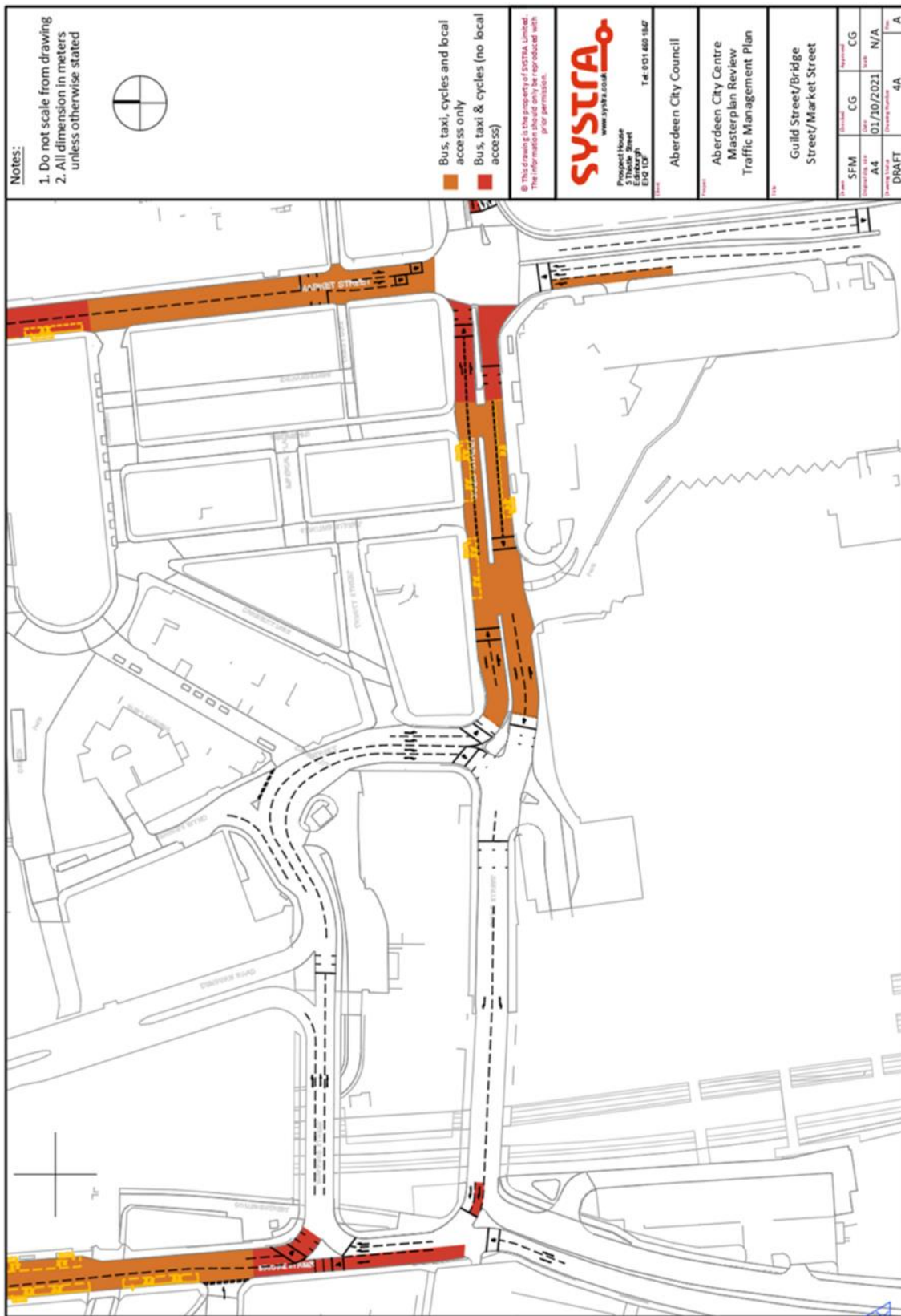


Figure 11. Bridge St / Guild St / Market St Operation

Guild Street / Market Street Junction - Figure 12

- A more efficient junction operation is enabled by allowing general traffic primarily routing between Market Street (south) and Trinity Quay, whilst buses and taxis primarily routing between Guild Street and Market Street (north)
- Market Street NB approach to the junction includes a bus, taxi and cycle restriction in lane 1
- Trinity Quay WB approach to the junction includes lane 3 ahead movement for buses, taxi and cycles only. Whilst bus routes generally do not utilise the Trinity Quay corridor, the proposed measures provide additional resilience into the network for when buses may be required to re-route around the Virginia Street/ Commerce Street corridor (during events or incidents).

Market Street Corridor (north of Guild Street) – Figure 11 and 12

- Bus, taxi and cycle only restriction through the full corridor with local access allowed between Guild Street and Hadden Street.
- Additional bus stop, just north of Hadden Street (as included during *Spaces for People*).
- Important to acknowledge that the proposed bus stop is on a gradient and not suitable for all passengers - additional stopping opportunities on Union Street required

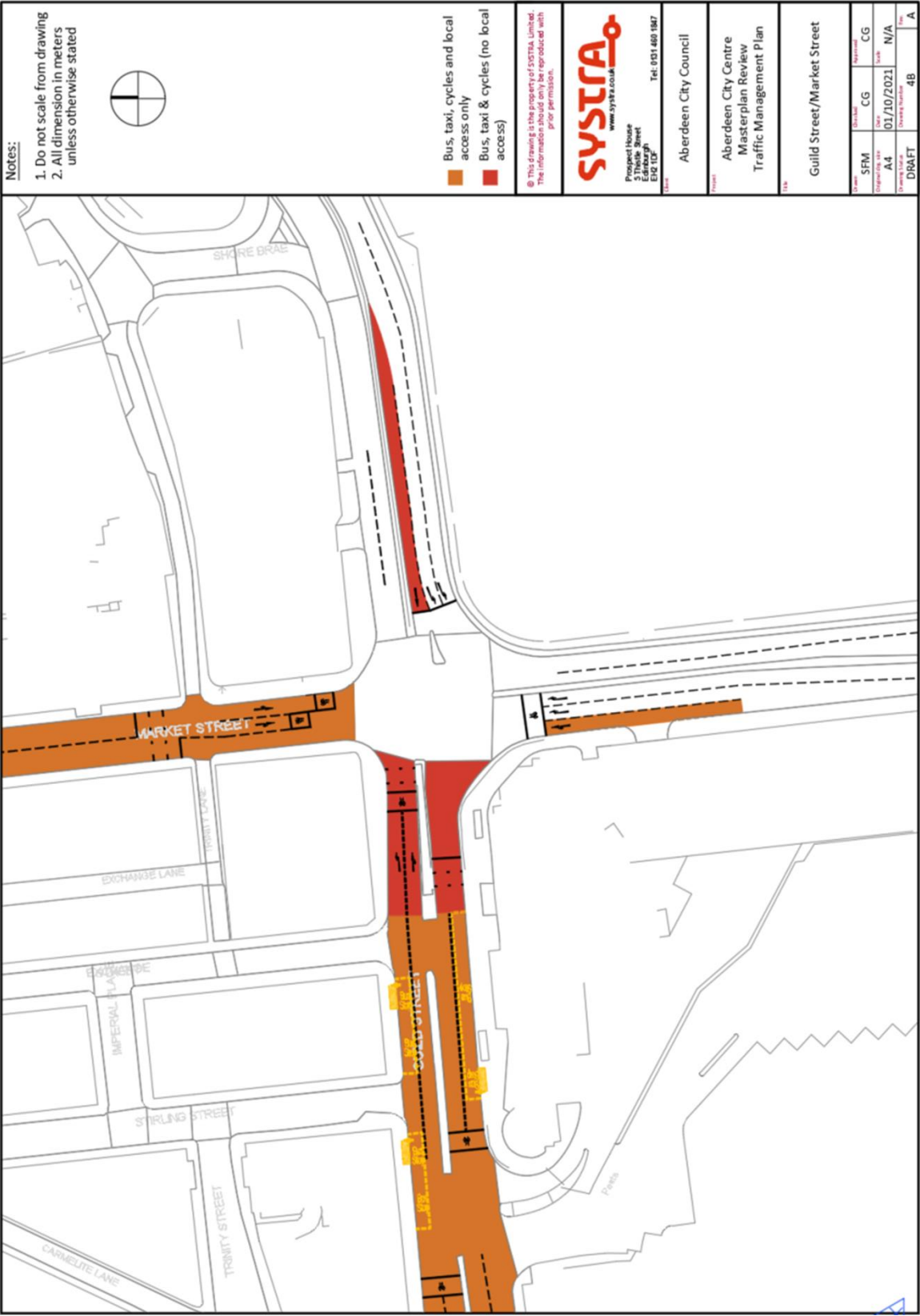


Figure 12. Guild St / Market St Junction

Bridge Street Corridor - Figure 13

- Bus, taxi and cycle only restriction through the full corridor with local access allowed between Bath Street and Union Street.
- Additional bus stop facilities on both sides of Bridge Street
- Important to acknowledge that the proposed bus stops are on a gradient and not suitable for all passengers - additional stopping opportunities on Union Street or Union Terrace required

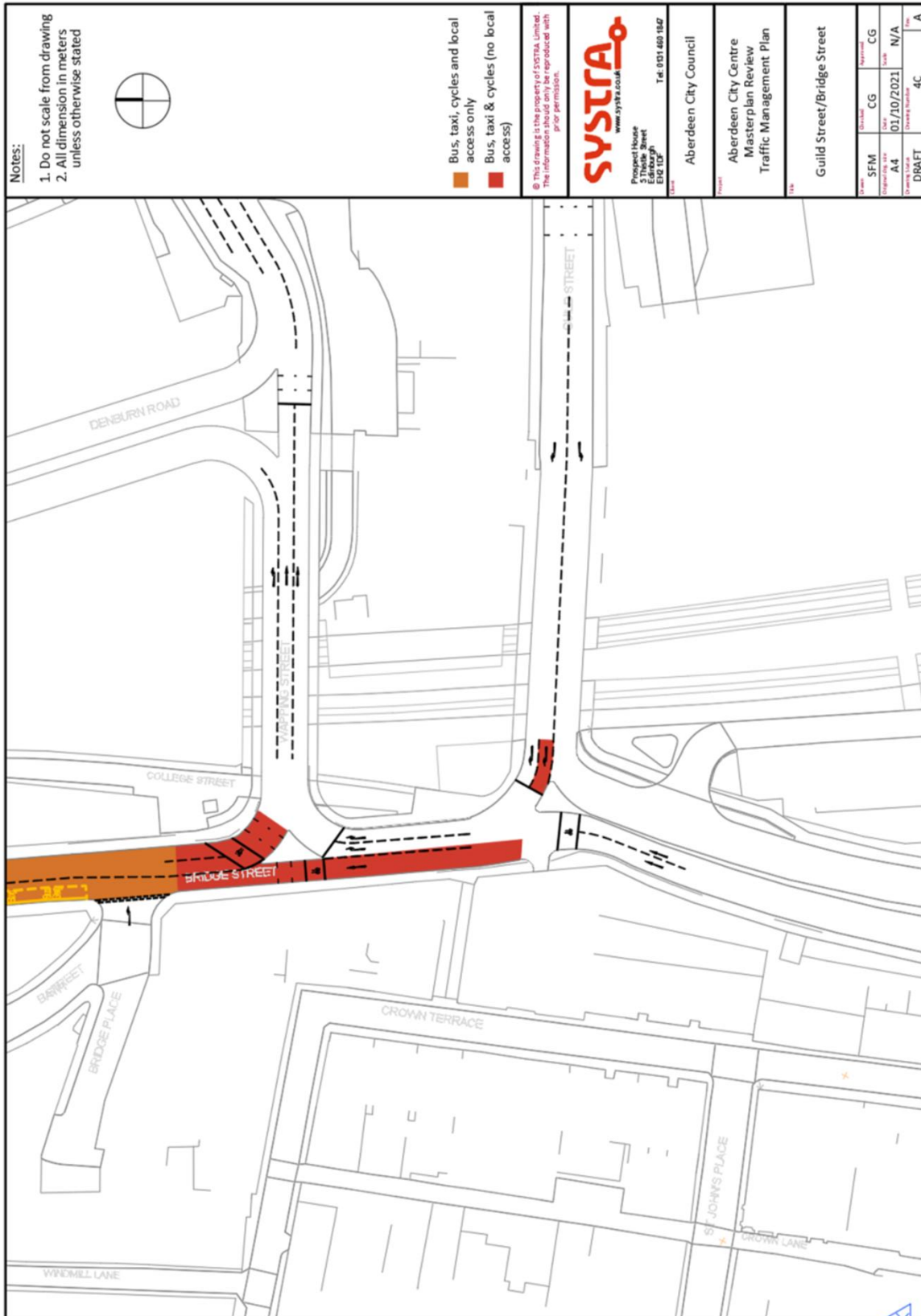


Figure 13. Bridge Street Operation

4.4 Back Wynd / Belmont Street Area Operation

- 4.4.1 The streetscape proposals for Back Wynd and Belmont Street area are derived to encourage a predominantly pedestrian environment with outdoor seating for food and drink premises. As noted in later sections, the taxi ranks and parking bays are proposed to be removed from this area and replaced elsewhere within the city centre, resulting in an environment that is free from traffic through the core hours of the day.
- 4.4.2 The current restrictions through this area of the network as part of the *Spaces For People* measures are proposed to be carried forward into a permanent operation.
- 4.4.3 Figure 14 shows the proposed traffic management operation through this area of the network with prohibition of waiting and no loading between 10am and 6pm (for consistency with the central Union Street loading times).
- 4.4.4 A one way clockwise loading operation is proposed through this section (Back Wynd SB, Gaelic Lane WB, Belmont Street NB) with the exception of the northern most section of Belmont St which is two-way operation for local access. Little Belmont Street is proposed to function as a predominantly pedestrian area with food and drink outlets utilising the road space.
- 4.4.5 Specific locations for vehicle loading will be developed through the detailed design process.
- 4.4.6 There has been some feedback to the operation through the *Spaces For People* measures which includes some issues for larger delivery vehicles traversing the circular route.
- 4.4.7 Illegal use of these route into Union Street has also occurred and the police have raised concerns about revellers mixing with delivery drivers routing through this area out with the designated times.
- 4.4.8 There is a need to further consider whether the southern ends of Belmont Street and Back Wynd can be accessed to or from Union Street during the loading times. (this is another reason for consistent loading time restrictions). This may assist with the larger delivery vehicle issues.
- 4.4.9 There is also a potential consideration for rising bollards (or similar) to be considered through this area. The traffic management detailed considerations are therefore ongoing.

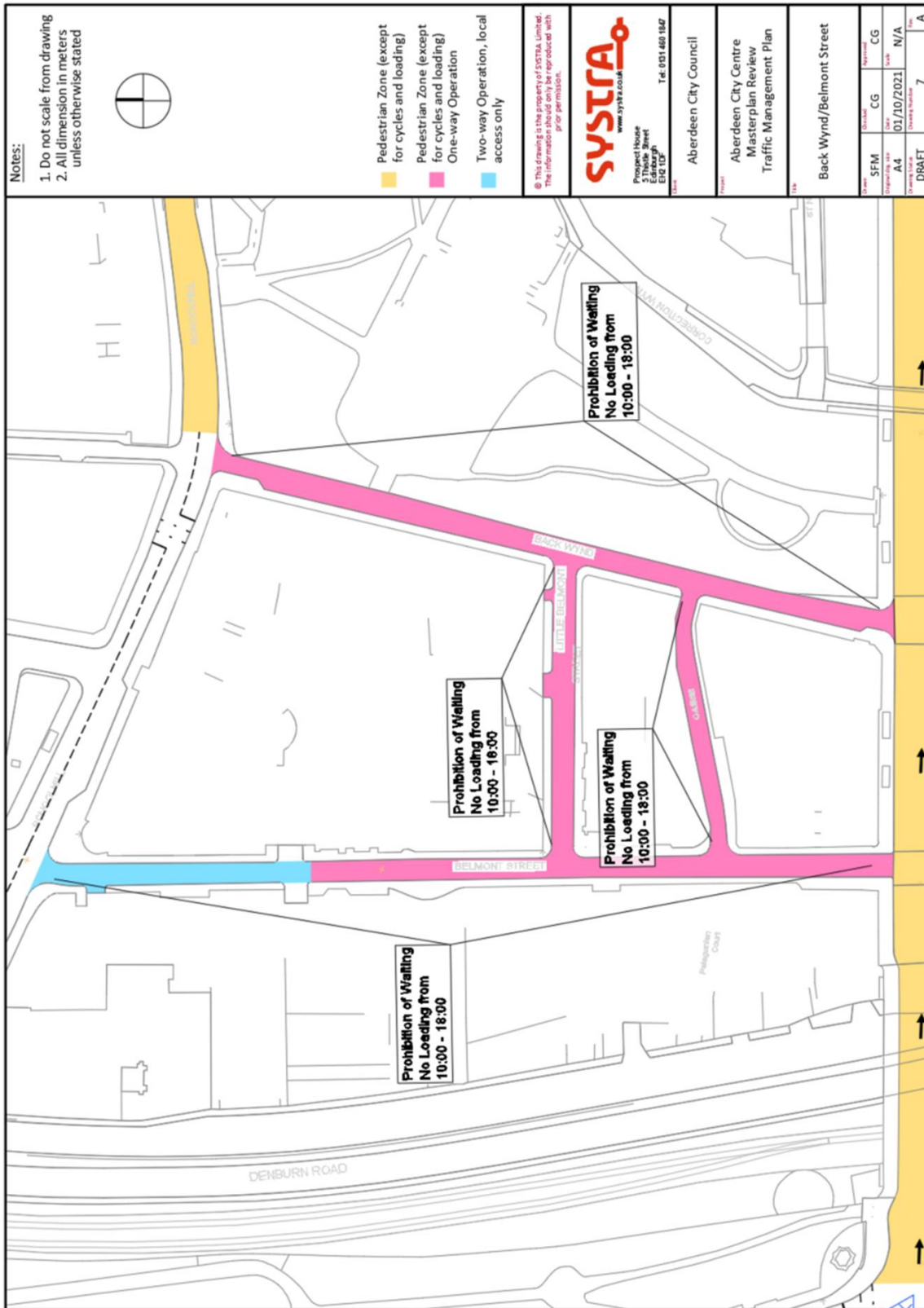


Figure 14. Back Wynd / Belmont St Operation

4.5 Hadden Street / Carmelite Street Area Operation

- 4.5.1 The road network around the proposed Market (between central Union Street and Guild Street – See Figure 15) requires careful consideration of the various, potentially conflicting, requirements for pedestrians, residents, taxi operators, accessible parking, access requirements for the Market, loading bays and restrictions to rat running.
- 4.5.2 This is therefore a complex area that will require more time to consider various traffic management solutions to provide the optimum solution.
- 4.5.3 For the purposes of this initial traffic management plan, this area of the network has been cordoned out for a more detailed assessment in the next phase.
- 4.5.4 The following details some of the key requirements that need to be included within the traffic management plan of this area:
- Good pedestrian linkage between Bus/ Rail Station and the Market (through to Union Street) - Utilising Carmelite Street and Carmelite Lane primarily, also linking with The Green
 - Taxi Rank on Hadden Street and Exchange Street (to remain)
 - Retain loading bay on Hadden Street(recently moved from Market Street)
 - Opportunities for additional Accessible Parking bays
 - Loading Access for the Market via East Green
 - Retain some parking for local residents
 - Potential for rat running via Hadden Street to avoid proposed restrictions on Guild Street (this may require reversal of one-ways, raised tables and/or routing restrictions).
- 4.5.5 Further work is therefore required to fully develop the traffic management plan through this area.

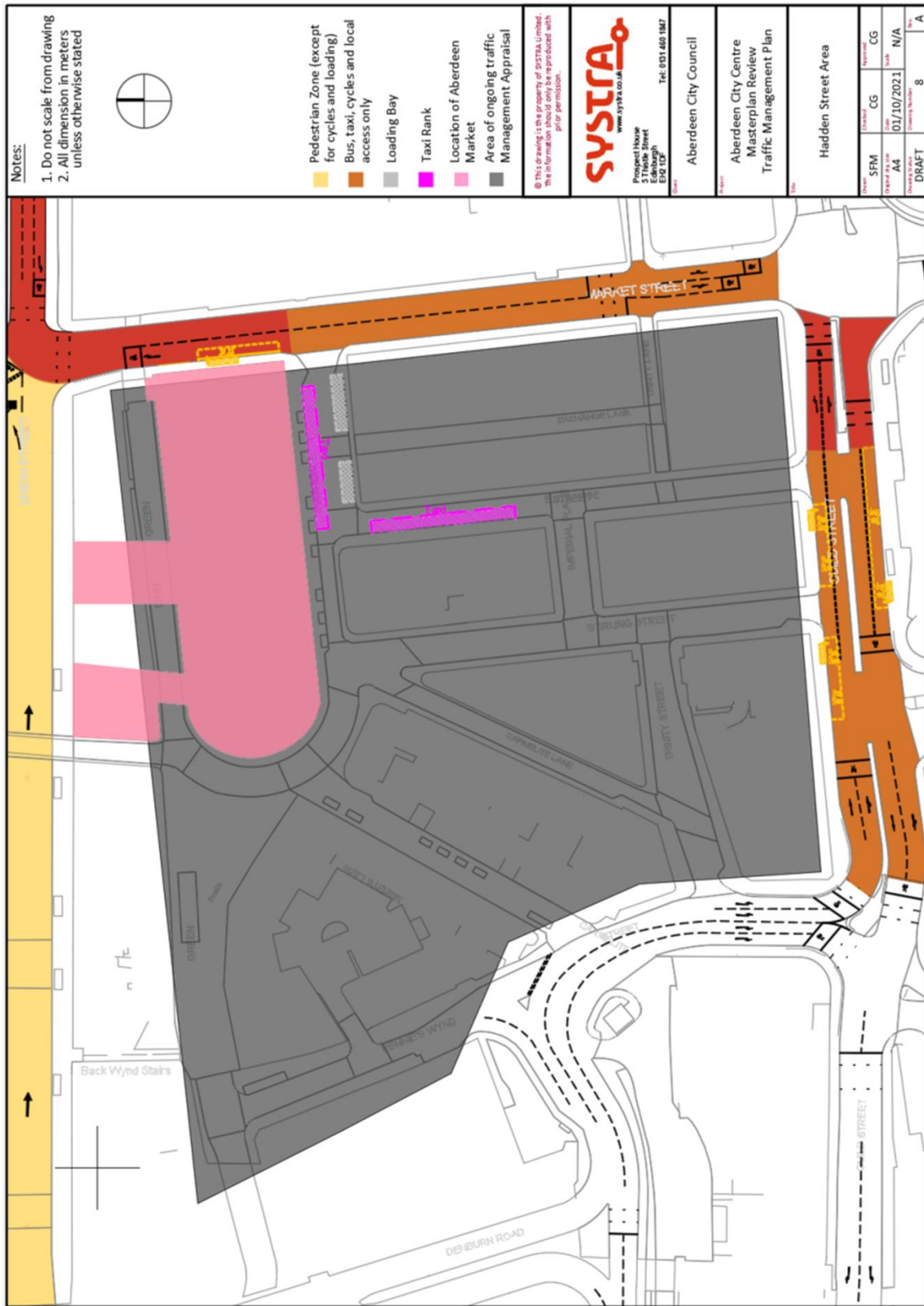


Figure 15. Hadden St Area – Further Review

4.6 City Centre Cycle Routing

4.6.1 As shown in Figure 2, the central Union Street pedestrian area will also facilitate cycle routing. This will be supported by the bus ,taxi and cycle only restrictions in the surrounding network.

4.6.2 Cycles will therefore be protected from high levels of general traffic through the following routes:

- central Union Street
- Broad Street
- Schoolhill / Upperkirkgate
- Bridge Street
- East Guild Street
- Market Street (north of Guild Street)
- Union Terrace (significantly reduced traffic levels)

4.6.3 These measures proposed through the city centre area tie in well with the current cycle routes as detailed in the ACC/Cycle Forum produced Cycle Map detailed in Figure 16

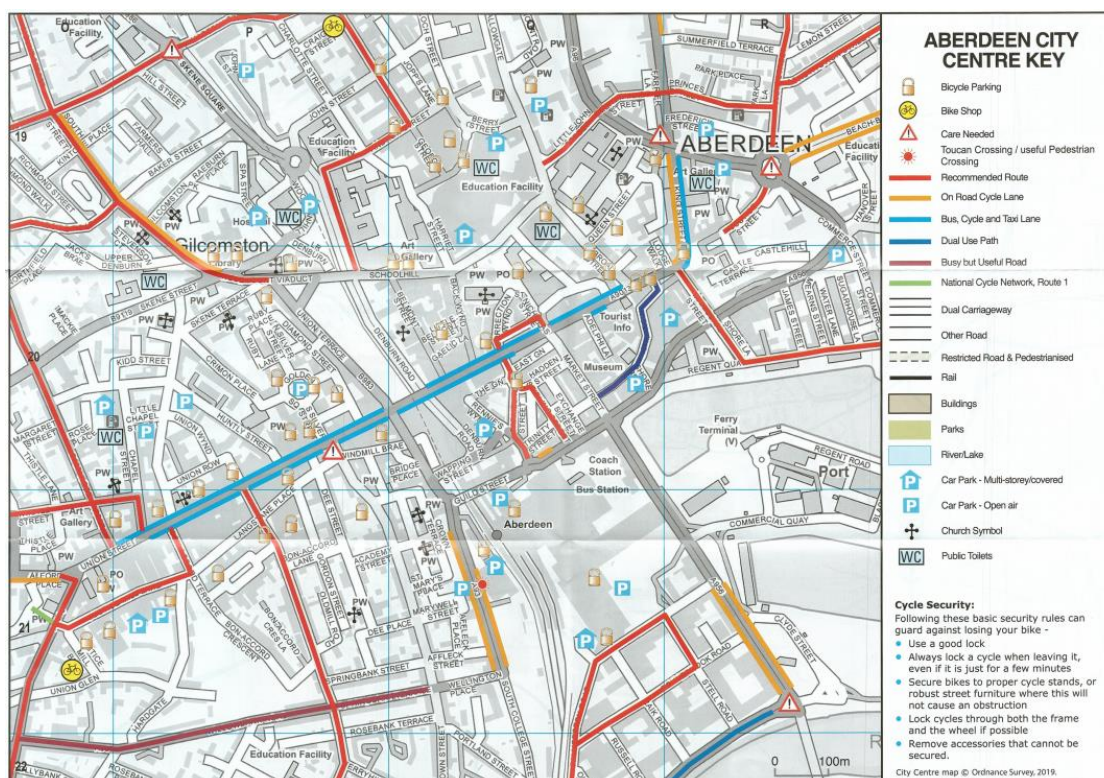


Figure 16. Aberdeen City Centre Cycle Map (Source: ACC)

4.6.4 There are ongoing opportunities to infill some of the cycle gaps around the city centre area as part of the CCMP proposals. For example, traffic restrictions on Guild Street may allow for cycle facilities on the Wapping Street gyratory (which would connect the bus, taxi and cycle restrictions on east Guild Street and Bridge Street)

- 4.6.5 Under Phase 2 of the TM plan, the east and west Union Street corridors will need to consider how to provide cycle facilities within the available road space. This work is ongoing.
- 4.6.6 A meeting was held with cycle groups on Tuesday 14th September 2021 to hear their views on the options and understand any issues or concerns.
- 4.6.7 Points raised by cycle groups:
- Group would seek a holistic approach to cycle considerations – a connected cycle network, not just a cycle provision through central Union Street
 - Clear preference for segregated cycle facilities through full Union Street corridor
 - Cycle safety is of paramount importance
 - Need cycle facilities that safely meet the needs of an unaccompanied 12 year old child
 - Union Street is a Core Path which grants certain access rights to users which would have to be maintained.
 - A central cycle lane within the pedestrianised core may be an appropriate solution.
 - Broad Street, a roughly comparable layout in terms of mixing pedestrians, cyclists and buses, does not work well for all cyclists.
 - Accessibility and permeability for cyclists need considered in both scenarios so some form of hybrid of the options presented is likely required e.g. even if Union Street bus and cycle only, there would still be a requirement for cycling facilities between Union Street and the station for example to be improved.
 - Consider tourism implications – city centre needs to be accessible, permeable and safe to people cycling to and between the Union Terrace Gardens, the Art Gallery and the proposed new Market. Need to ensure bike hire scheme integrated into plans.
- 4.6.8 The provision of cycle facilities through the city centre is a critical element of the development of a traffic management plan, particularly considering the sustainable travel hierarchy of road users. The considerations for cyclists and their safe passage through the city centre is a primary element in the ongoing development of the plan.

4.7 City Centre Loading / Servicing Arrangements

- 4.7.1 The loading consideration associated with Phase 1 of the traffic management plan have primarily focused upon the loading access considerations through central Union Street. As detailed in Section 3.2 and Figure 1. The loading proposals for central Union Street are:
- Loading access from west end to east end (eastbound) only
 - Servicing proposed between 18:00-10:00 to be consistent with other central area loading requirements
- 4.7.2 The 18:00-10:00 loading time was considered appropriate, following a review of pedestrian footfall within the city centre (both pre-covid and more recently), which shows a marked reduction after 6pm. In addition, the traffic signal operation at either end of central Union Street would be optimised during the peak periods if loading movements were restricted to periods outside of the peak.

- 4.7.3 Currently, there is no consistent time for loading restrictions within the city centre area. This can be confusing and difficult to enforce.
- 4.7.4 In order to ensure that the Union Street restrictions and associated traffic restrictions do not impinge upon the trading capabilities of the shops and businesses in the central area, it is proposed that the existing loading restrictions throughout the city centre be revised and harmonised.
- 4.7.5 The traffic management plan has so far considered that loading restrictions on central Union Street, Belmont Street/Back Wynd area, St. Nicholas Street area and the Castlegate area could and should include consistent loading times between 18:00-10:00. These considerations are ongoing and may require to be revised pending feedback from businesses on their specific needs.
- 4.7.6 Phase 2 of the traffic management plan will include a wider review of current on-street restrictions / regulations (single and double yellow lines etc.)
- 4.7.7 In terms of specific loading bays, the plans to date include new loading bays on Union Terrace (east side) and the retention of a loading bay on Schoolhill (outside the Academy). The specific locations for service vehicles to stop through the pedestrian areas will need to carefully considered as part of the streetscape detailed design.
- 4.7.8 Phase 2 of the traffic management plan will also include a review of the operation of servicing including bin storage and collection.

4.8 City Centre Bus Routing & Stopping Arrangements

- 4.8.1 The bus routing and potential stopping locations within the core area of the city centre have been detailed throughout this report.
- 4.8.2 As noted in Section 3.2.14, prior to the Spaces for People measures (pre-COVID-19), during the peak hours there are approximately 50 buses that route through central Union Street in either direction. The proposed central Union Street restrictions require the re-routing of these bus services via Bridge Street, Guild Street, and Market Street. The proposed restrictions on these routes removes routing traffic to allow buses to traverse this section of the network without getting held up in traffic queuing. This segregation of the bus network from general traffic therefore allows for improved journey times and individual service reliability, which is critical for the delivery of an efficient and accessible public transport network.
- 4.8.3 In addition, the removal of high volumes of general traffic from Bridge Street, Guild Street and Market Street allows for improved bus stopping facilities through these routes, which will be removed from the central Union Street section (Stops F1-F9).
- 4.8.4 A meeting with bus operators was held on Wednesday 15th September to review the options for central Union Street and gain feedback on the proposals as well as feedback on the operation of the bus network during *Spaces For People*.
- 4.8.5 The key comments include:
 - Strong preference for bus routing allowed through central section

- Concern at the reduction in stopping facilities for both scenarios
- Option 2: Central Union Street open to buses. The removal of the bus stops along the central section didn't make sense as the bus stops should be where people want to go to
- Requirement for bus layover facilities

4.8.6 Regarding the bus layover facilities (for driver rest and comfort breaks) , Stagecoach currently have a bus layover on Guild Street and utilise facilities in the bus station. The proposed general traffic restrictions on Guild Street would allow more kerbside space for layover points to prevent them interfering with other routing buses.

4.8.7 The First-Bus layover is currently on Union Street as they have offices for comfort breaks on Castlegate. As part of the development of the east Union Street proposals, consideration will be given to potential locations for a layover point near the Castlegate.

Bus Hubs

4.8.8 As part of the development of the traffic management plan for east and west Union Street, there are ongoing considerations for bus hubs adjacent to the central section. This is a considerable change to the current operation of bus stops along Union Street and will require a rationalisation of stopping locations to provide the most efficient and workable bus operation that will ensure bus reliability is maintained. In addition, the bus stops require to be conveniently located and accessible, whilst optimising the road space through Union Street for the sustainable travel hierarchy of users.

Access to Bus Station

4.8.9 A known issue for buses accessing the station on Market Street, particularly during the weekend or peak shopping periods, is traffic queueing southbound on Market Street can block back from the right turn filter lane through to Market Street. This therefore impacts upon buses routing to the station.

4.8.10 Traffic modelling was utilised to run a simple test to see the impact of banning the right turn into Union Square from Market St (at the junction with Commercial Quay). The traffic model covers a weekday 12 hour period so does not capture the peak weekend issues noted.

4.8.11 The model testing did show that the closure of the right turn access into Union Square results in a displacement of traffic through Denburn Road, College Street and finally through Palmerston Road at the new South College Street junction (opening 2022).

4.8.12 This is certainly an option to consider but the weekend impact on the operation of the South College Street junction proposals is unknown. An alternative consideration would be to allow 3 full lanes southbound on Market Street and 2 northbound between Guild Street and Commercial Quay. This would require the dedicated left and ahead NB flair (See Figure 12) to be removed and the movements incorporated into lane 2 with general traffic routing to Trinity Quay. (Noting that there are few bus services on this northbound section of Market Street)

4.8.13 These considerations for improved access to the bus station are ongoing.

It should also be noted that there are no proposals to utilise Castlegate as a bus hub.

4.9 City Centre Accessible Parking (Blue badge holders)

- 4.9.1 Whilst there are many accessible parking spaces (for blue badge holders) within the off-street car parks throughout the city centre, there are many on-street spaces located throughout the city centre area, some of which are more well-used than others. It will be important to retain on-street accessible parking spaces as close to key destinations as possible to ensure the full accessibility of the city centre to everyone.
- 4.9.2 Due to the proposals for more pedestrian friendly streetscape, some of the existing accessible parking bays will require to be removed.
- 4.9.3 Aberdeen City Council have taken the approach that the proposals for improving the city centre Streetscape should result in no net detriment to the provision of accessible parking.
- 4.9.4 Table 4 and Figure 17 provide detail on the current proposed locations of accessible parking bays.
- 4.9.5 New accessible bays introduced as part of the *Spaces For People* programme are proposed to be retained (on Flourmill Lane, Upperkirkgate and Loch Street).
- 4.9.6 6 new accessible bays are proposed on the east side of Union Terrace (SB) as part of the Union Terrace Gardens proposals (See Figure 9). These will replace the 4 existing bays on the west side (NB), which will be removed.
- 4.9.7 3 new bays will be provided on Schoolhill outside the Academy, these will replace the bays across the road outside Robert Gordon’s College.
- 4.9.8 Due to the proposals for pedestrian priority through Back Wynd and Little Belmont Street, the current provisions for accessible parking will be removed from these locations.
- 4.9.9 As detailed in the table below, the number of accessible parking bays to be removed equals 19, with 16 new bays proposed. There is a requirement therefore to consider additional locations where accessible parking can be provided, and where required, to meet the objective of no net detriment. These considerations are ongoing.
- 4.9.10 A meeting was held with the Accessible City Transport Users Partnership (ACTUP) on Thursday 30th September. Some of the key points raised at the meeting include:
- Current issues regarding temporary Spaces for People street furniture that is deterring people with visual impairment/guide dogs from coming into the city centre.
 - Requirement for public transport to access the city centre area
 - Requirement for Blue badge spaces to be retained
 - Requirement for taxi ranks to be placed centrally

4.9.11 The current issues with the temporary street furniture have reinforced the requirement for permanent streetscape measures to carefully consider those with mobility issues and visual impairment through provision of tactile paving etc.

Table 4. Location of Accessible Parking Bays

Location	Dir.	No. Spaces	New / Removed / Retained
Queen Street	WB - 2 locations	4	Retained
St. Catherines Wynd	SB	2	Retained
Rennies Wynd	NB	3	Retained
Correction Wynd	SB	1	Retained
Langstane Place	WB	1	Retained
Justice St	WB	2	Retained
Justice Mill Lane	WB	2	Retained
Rose St	NB 2 -locations	2	Retained
Thistle St	EB	1	Retained
Union Row	SB	4	Retained
South Silver St	NB	4	Retained
Golden Square	Circ.	2	Retained
S. Andrews St	WB	4	Retained
John St	EB	1	Retained
Loch St	SB	1	Retained
Craigie St	WB	3	Retained
Spring Garden	WB	1	Retained
George St	SB	1	Retained
Leaside Road	WB	1	Retained
Spa Street	SB	3	Retained
Flourmill Lane	SB	3	SFP - Retained
Upperkirkgate	WB	2	SFP - Retained
Loch St	NB	2	SFP - Retained
Union Terrace North	SB	4	NEW
Union Terrace South	SB	2	NEW
Schoolhill	WB	3	NEW
Schoolhill -at RGU	EB	5	Removed
Union Terrace	NB -	4	Removed
Back Wynd	SB	5	Removed
Little Belmont St	WB	5	Removed

4.9.12 The accessible parking and mobility / visual impairment considerations will continue to be at the forefront of the emerging streetscape detailed design and traffic management plan.

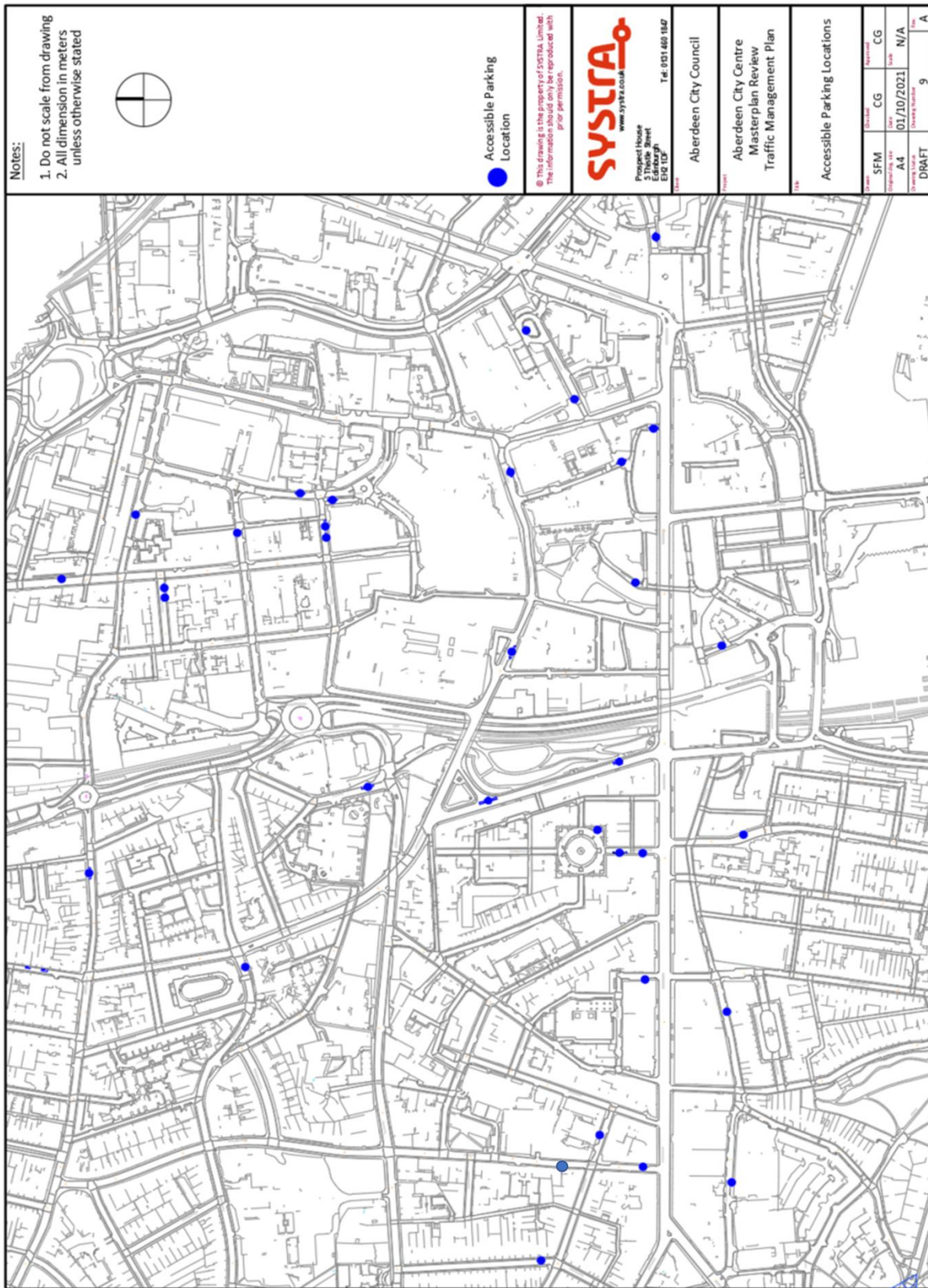


Figure 17. Accessible Parking Locations

4.10 City Centre Taxi Ranks

- 4.10.1 Consideration for the permanent placement of taxi ranks has included a review of long term taxi ranks and their usage, consideration of the ‘*Spaces For People*’ temporary taxi ranks, and consideration for new rank locations to replace some that are to be removed as part of the city centre placemaking proposals.
- 4.10.2 In addition, consultation with representatives from the taxi trade was undertaken on Wednesday 6th October 2022 to consider their views on the proposals.
- 4.10.3 The city centre placemaking proposals will require the removal of the various lengths of taxi rank on Back Wynd. Aberdeen City Council have again noted that the city centre streetscape improvements should result in no net detriment to the provision of taxi ranks in the city centre. To combat the loss of the rank on Back Wynd, opportunities have been identified to consider a new prime location on the east side of Union Terrace or South Silver Street.
- 4.10.4 The Union Terrace opportunity depends upon the ongoing works around Union Terrace Gardens. Within UTG, a footway widening section is proposed through the mid-section of the east side of Union Terrace (See Figure 10). Discussions are ongoing to assess whether there is a viable opportunity to include a southbound taxi rank within this section of Union Terrace (approx. 115m). This would be a preferred location due to its proximity to central Union Street and the removed prime taxi rank at Back Wynd.
- 4.10.5 At present, there are a number of temporary taxi ranks throughout the city centre area that are in place as part of the *Space For People* measures. Some of these have proven to be more popular than others in terms of usage. The temporary rank on Rosemount Viaduct is proposed to remain as a permanent location (pending confirmation of Union Terrace Rank).
- 4.10.6 Table 5 provides a breakdown of the locations where taxi ranks are proposed to remain, where the *Spaces for People* ranks are proposed to remain, and where there is an opportunity to provide additional ranks to replace the ones that are proposed to be removed. These are also provided in Figure 18.
- 4.10.7 For the Pre-COVID network, there was approximately 300m of (daytime) taxi rank available within the city centre area (approx. 51 bays). During the *Spaces For People* measures, there was approximately 390m of taxi rank available (approx. 66 bays). The proposals for permanent taxi ranks is estimated to be approximately 425m which is roughly 73 bays. Therefore, the traffic management plan, in its current form, would result in an enhancement of daytime taxi rank provisions within the city centre area.
- 4.10.8 It should be noted that the temporary taxi rank on Exchequer Row was only proposed to be retained until the Market Street building is demolished and the Hadden St rank is operational again. However, there is now consideration that a permanent rank here could service the east end of the city centre including the Castlegate.
- 4.10.9 From a public safety perspective, It is critical to provide a night time taxi rank (12am-5am) that is well lit, centrally located, and not segregated from the main routes in the city centre. A night time taxi rank was provided (before SFP) on the north side of Union Street between Bridge Street and Market Street. Whilst this would not be possible under the proposals for

central Union Street, consideration of the location of a night time taxi rank is ongoing as part of the development of the network operation of Union Street east and west.

4.10.10 The consideration of the city centre taxi rank locations is ongoing.

Table 5. Location of Taxi Ranks

Location	Provision	Estimated No. of Spaces	New / Removed / Retained	Time Period	Comment
Rail Station	Internal access via Guild Street. Rank is approx. 30m	5	Retained	Station Operating Hours	Special Licencing Agreement for specific operators
Hadden Street	North side of Hadden Street and West side of Exchange St. Total distance approx. 70m	12	Existing Rank Retained	24 Hr	Well used
Dee Street	East Side, 2 sections north and south of Langstane Place. Total distance approx. 37m	6	Existing Rank Retained	24 Hr	Occasionally used
Chapel Street	East side, south of Thistle St. Total distance approx. 36m	6	Existing Rank Retained	24 Hr	Well used
St. Andrews St	North side for a total distance approx. 20m	4	Existing Rank Retained	24 Hr	Occasionally used
Rosemount Viaduct	North Side	8	Spaces For People rank to be retained	25 Hr	Long term opportunity for connection to theatre and UTG. May depend on whether Union Terrace is a viable rank option
Exchequer Row	At north end of Ship Row. 2 sections for a total distance of approx. 70m	12	Spaces for People rank. Retained for Limited Period	24 Hr	Potential to retain this spaces For people measure to service east end of Union Street / Castlegate
Union Terrace	East Side, for a distance of approx. 115m	20	Opportunity for New Rank	24 Hr	Opportunity to replace the Back Wynd Taxi Rank at this location
South Silver Street	Location to be determined	-	Opportunity for New Rank	24 Hr	Opportunity to replace the Back Wynd Taxi Rank at this location
Back Wynd	West side in 2 sections. Total distance approx. 105m	18	To be Removed	-	Removed due to proposal for traffic free operation in Back Wynd, Little Belmont St and Belmont St areas.
Justice Mill Lane	North side, near Holburn St for approx. 60m	10	To be Removed	-	To be removed at the end of the spaces for people measures
Union Row	East Side, before junction with Union St. Total distance approx. 18m	3	To be Removed	-	To be removed at the end of the spaces for people measures
To be determined	Night Time Taxi Rank	-	-	12pm-5am	Consideration as part of the development of Union Street West plans

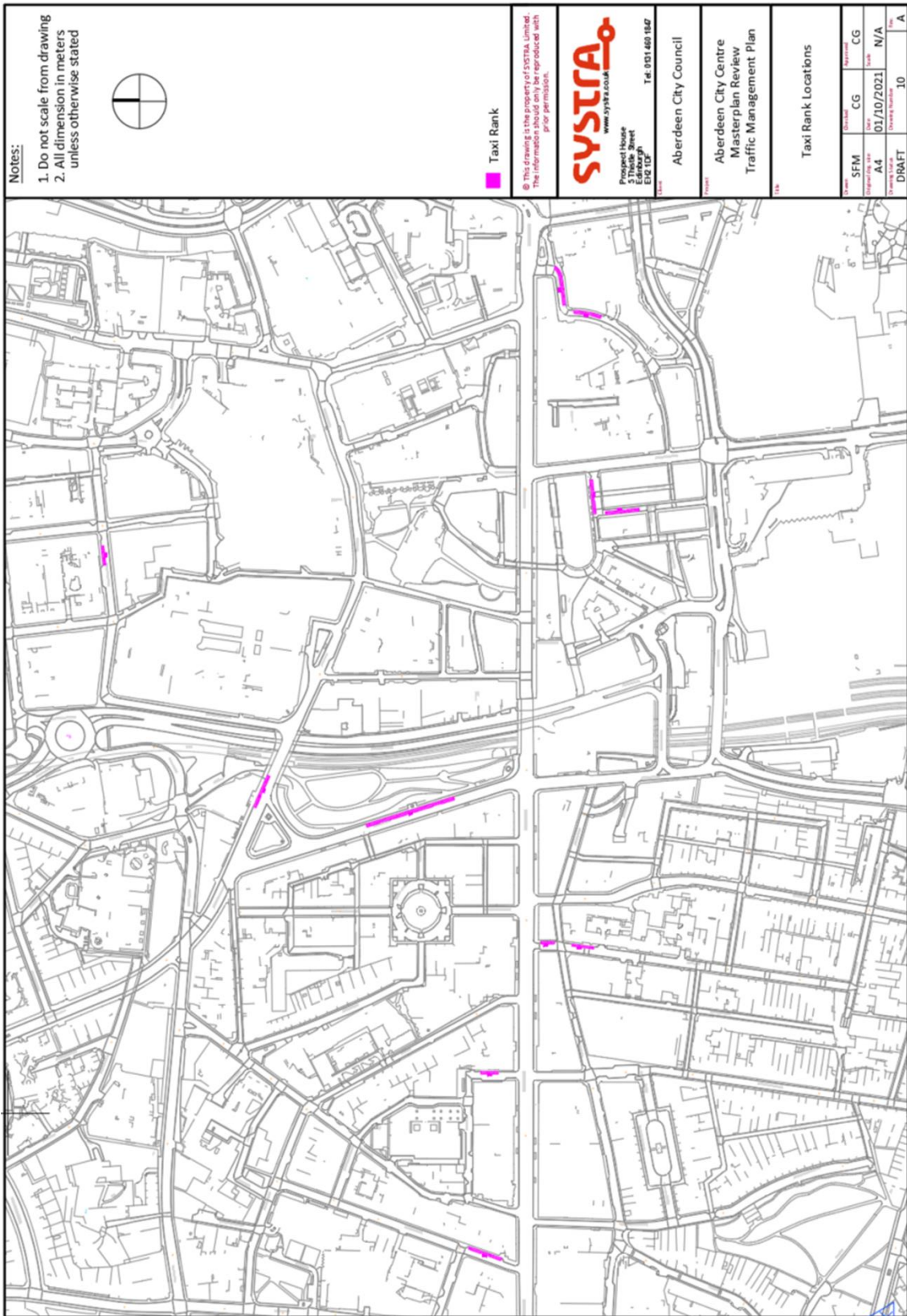


Figure 18. Taxi Rank Locations

4.10.11 Initial feedback from the taxi operators is detailed as follows, with responses in italics:

- Strong preference to retain the central taxi rank on Back Wynd. Union Terrace would be a potential alternative
- Union Terrace taxi rank should be located much closer to Union Street to service the general public (*This can be considered*)
- If a rank is located on Union Terrace, would special events be considered elsewhere so as not to require the temporary relocation of the rank? (*Opportunity for events to be held in the pedestrian areas such as central Union Street or Castlegate*)
- Can Broad Street be opened up to taxi routing as well as buses to compensate for the central Union Street restrictions? (*ACC to consider this*). There is also a desire for a rank on Queen Street that would be complemented by access through Broad Street to Gallowgate
- Can an additional taxi rank be considered on Bridge Street northbound? (*kerbside space may be required for bus stops, consideration of Union Street ‘bus hubs’ will identify if there is kerbside capacity for this*).
- Request for night time ranks on west Union Street larger (*to be considered as part of the development of these areas*)

4.11 Enforcement of Traffic Restrictions

4.11.1 It is essential that the proposed traffic restrictions through the city centre area are enforced to retain the necessary operation and safety of the traffic network. Figure 19 details the proposed locations of the bus, cycle and taxi gates and also the pedestrian zone gates. The locations of the enforcement camera is also detailed in Table 6.

4.11.2 As part of the enforcement strategy, careful consideration will need to be given to the issue of private hire cars that will seek to utilise the bus, cycle and taxi gates.

4.11.3 Work is therefore ongoing on these considerations.

Table 6. Camera Enforcement Locations

Location	Detail	Restriction	Comments
Broad Street	Camera at junction with Upper Kirkgate and junction with Queen St.	Bus & Cycle Only	Existing Camera Enforcement
Schoolhill	Camera at junction with Harriet St and junction with Flourmill Lane	Pedestrian zone (except for loading and cycle)	Required to restrict general traffic from routing through this section of Schoolhill.
Central Union Street	Camera at junction with Bridget St / Union Terrace and junction with Market Street	Pedestrian zone (except for loading and cycle)	Required to restrict general traffic from routing through this section of Union Street
Bridge Street	Bus Gate at junction with Wapping Street	Bus, Taxi & Cycle Only	<ul style="list-style-type: none"> - Required to restrict general traffic from routing through Bridge Street. - Northbound Egress permitted for vehicles exiting Bath Street
Guild Street	Bus Gate at junction with Market Street	Bus, Taxi & Cycle Only	<ul style="list-style-type: none"> - Required to restrict general traffic from routing through the east end of Guild Street. - Access retained at Stirling St and Exchange Street (to be confirmed)
Market Street	Bus Gate at junction with Union Street	Bus, Taxi & Cycle Only	<ul style="list-style-type: none"> - Required to restrict general traffic from routing through the Market Street, north of Guild Street. - Access to Broad St & Queen Street via King St / Union Street East. - Access for loading and servicing to Market Street from Guild St junction

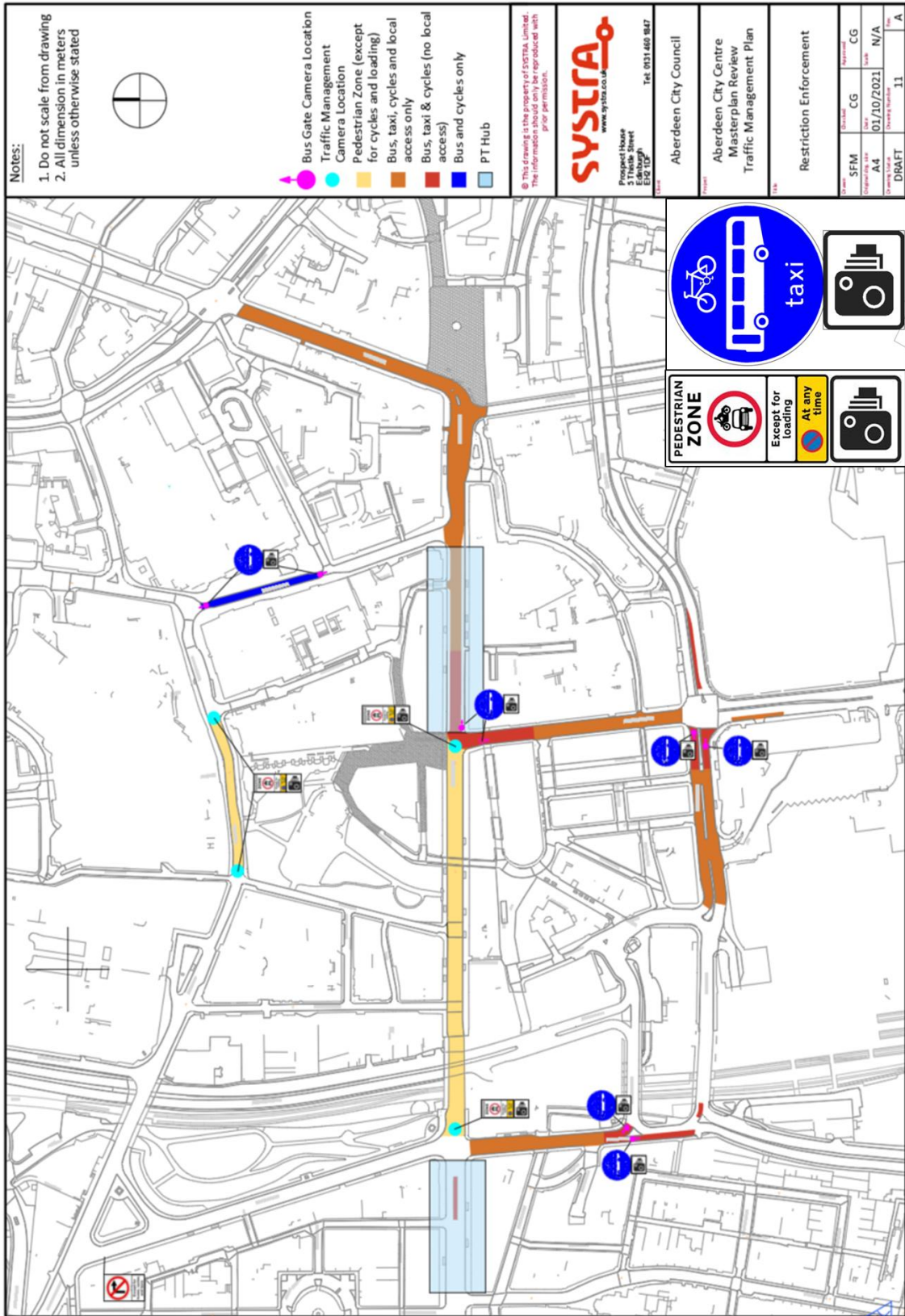


Figure 19. Enforcement Camera Locations

4.12 Traffic Management Plan – Phase 2

4.12.1 In addition to the ongoing development of the traffic management plan for the Phase 1 – the central area and the individual considerations detailed in this report, the second phase of the traffic management plan will also focus on:

- Operation of the Union Street corridor out with the central section:
 - Road lane allocation
 - Operation of junctions along Union Street
 - Bus stop facilities / Bus hubs
 - Cycle facilities
 - Any access restrictions to Union Street
 - Footway widening opportunities
- Ongoing engagement with key stakeholders
- Operation of servicing including bin storage and collection
- Review of current on-street restrictions / regulations (single and double yellow lines etc.) and identification of the changes required to deliver the traffic management package of measures
- Development of a schedule of Traffic Regulation Orders (TRO's) required to deliver the optimum combined Traffic Management Plan

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