Appendix 8

KMC Transport Planning

RIBA Stage 2
Transport & Movement

September 2024

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1.0 Introduction

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Introduction

KMC has been commissioned to provide transport planning advice as part of a consortium working on the Cambridge Civic Quarter project, with the vision of **reconnecting the Guildhall, Market Square, Corn Exchange, and the wider public realm, to create an inclusive and attractive destination that will increase visitor numbers and shape a more vibrant and people focused civic heart.**

With regard to transport, the Civic Quarter has a number of constraints and competing needs – currently the 'movement' function, particularly for servicing and general traffic, arguably dominates to the detriment of the quality of the 'place'.

Report

This Transport and Movement report supports the RIBA Stage 2 Concept Design. It provides a baseline of transport issues and challenges, collated from a range of sources including site visits, baseline data collection, engagement with key stakeholders and local businesses. Following this, the report makes recommendations for transport and movement in the Civic Quarter to support the Stage 2 Concept Design. The Transport and Movement Strategy will need to be further developed as part of RIBA Stage 3 and the report sets out the key next steps as part of the pre-application phase.

Whilst this report is structured by mode of transport, it should be noted that there is intrinsic crossover between all modes.

Pedestrians | Cyclists | General Traffic | Deliveries and Servicing | Taxis

Study area

The defined study area for this project is shown on Figure 1, encompassing Market Square, Market Hill, Guildhall Street, Peas Hill, Wheeler Street and part of Corn Exchange Street.

However, it should be acknowledged that when discussing transport and movement, there is a requirement to be more flexible with a defined boundary, as any transport proposals will rely on/interact with the surrounding street network. As such, the proposals section of this document will reference potential improvements which sit within the wider context of Cambridge but relate to the Civic Quarter.

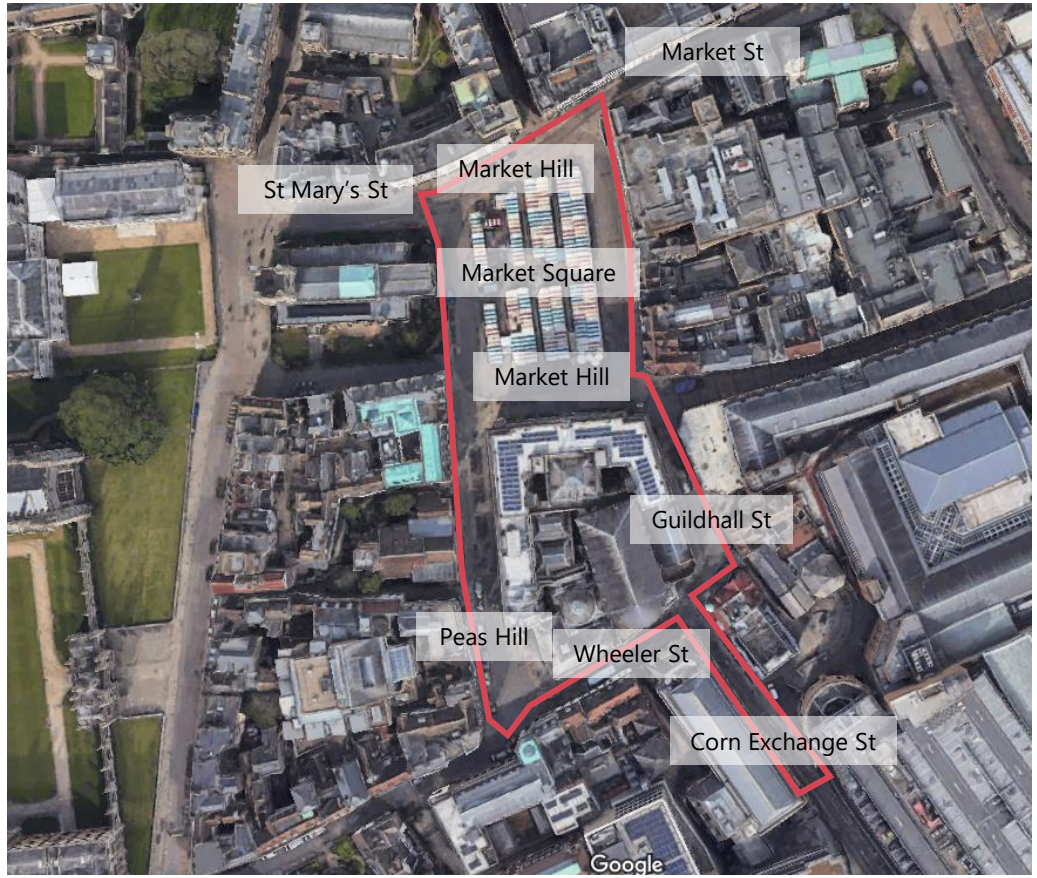

Fig. 1. Defined Study Area

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Engagement to date

Engagement has been a critical element of developing the transport and movement proposals to RIBA Stage 2 level. This has been in addition to the wider stakeholder and public engagement works undertaken by the project team for the Civic Quarter, which included elements beyond just transport and movement.

The first stage of the specific transport engagement was aimed at informing the direction of this document and thus consisted of speaking to key stakeholders to build a picture of the challenges and opportunities for the Civic Quarter.

Key transport and movement stakeholders included:

- officers at Cambridge City Council;
- highways, active travel and access officers at Cambridgeshire County Council;
- officers at the Greater Cambridge Partnership working on the City Access project;
- local interest and advocacy groups including Living Streets and CamCycle; and,
- local business managers on Peas Hill, including the Cambridge Arts Theatre and the Corn Exchange.

In addition, the project team has undertaken a public engagement exercise to understand wider opinions on the Civic Quarter. More detail is provided on this in the Consultation Report by ECF.

Previous studies

There have been a number of studies in recent years curating a baseline assessment and some proposals for the Market Square, which forms part of the Civic Quarter.

Part of the research undertaken in preparation for this RIBA Stage 2 phase has included the review of previous studies relating to the Civic Quarter.

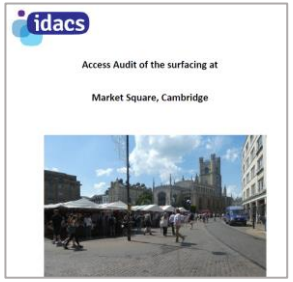
Four of these key documents are shown to the right, all of which are from the last five years and set a clear picture of the context of the Civic Quarter area.

A short summary of the contents and/or recommendations from each document is provided overleaf.

Making Space for People – Draft Supplementary Planning Document – Baseline (2019) – Cambridge City Council & BDP

Cambridge Market Square Public Realm Improvement Project (2019) – Cambridge City Council & BDP

Cambridge Market Square Concept Design (2021) – Cambridge City Council & LDA



Access Audit of surfacing at Market Square (2023) – Cambridge City Council & Idacs

Previous studies - outputs

Making Space for People Supplementary Planning Document – Baseline Report (2019) – Cambridge City Council & BDP

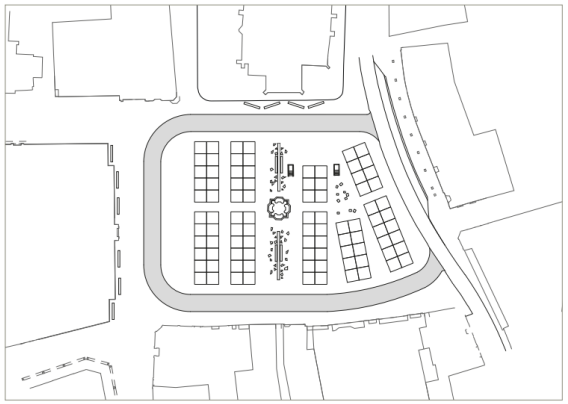
- The City Council is preparing the Making Space for People Supplementary Planning Document (SPD), which is intended to guide improvements to routes and spaces in the city, in tandem with GCP City Access workstreams. It aims to put people first. A draft SPD has yet to be published for consultation.
- The Baseline Report (2019) highlights access and movement issues in the City Centre, including the area of the Civic Quarter.

Cambridge Market Square Concept Design (2021) – Cambridge City Council & LDA

Provided concept design proposal for Market Square only up to RIBA Stage 02.

Recommendations included :

- Narrowing the carriageway around the market to 4.25m to increase the size of the footway/ public realm.
- Restoring the historic setts to meet modern accessibility requirements In line with Equality Act 2010.
- Reduce kerb heights to 2.5mm.
- Introduce inset parking bays
- Relocate existing cycle parking.



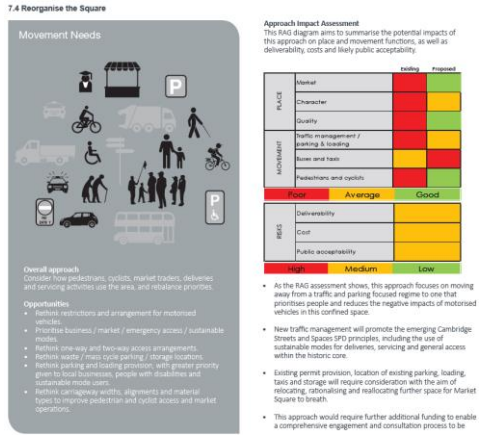
Proposed Changes to Road Layout

The proposed road layout will consistently be 4.25m all the way around the square and thereby aid efficiency and improve ease of accessibility for pedestrians, cyclist and motor vehicles within the Market Square.

The proposal reduces the amount of road surface, thereby increasing the pedestrian area and it simplifies the road by removing some of the existing lay-by's and widening the footways around the square.

Cambridge Market Square Public Realm Improvement Project (2019) – Cambridge City Council & BDP

- Outlines key challenges for Market Square based on RIBA Stage 01 detail.
- Uses desktop studies, survey data and anecdotal data from workshops with technical stakeholders.
- Presents series of five possible public realm illustrative concepts to space and movement design to help inform the brief for RIBA Stage 02.



Access Audit of surfacing at Market Square (2023) – Cambridge City Council & Idacs

- Report considers surfacing in the market square in relation to current accessibility guidance and obligations under the Equality Act 2010.

  "If the surfacing presents a sufficient barrier to give rise to substantial disadvantage, then duties under the Equality Act are triggered and the Council must consider reasonable adjustments, including removing and altering it."

- Recommends other measures including seating, surfacing, hazards etc.

Photo 8: Zone 12 showing falls of 1 in 15 which is considered to be a ramp.

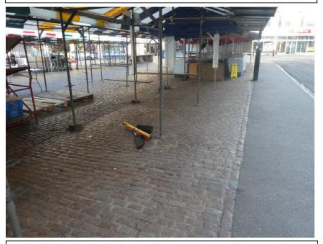


Photo 9: Zone 10 example showing falls to open channel between stalls.

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Baseline

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Gateway points

The adjacent diagram demonstrates the key current 'gateway' points to the Civic Quarter for different modes of transport.

Pedestrians enter the Civic Quarter via every street that joins the study area.

Cyclists are legally permitted to enter the Civic Quarter via St Mary's Street (one-way eastbound), Bene't Street (via contraflow on Bene't Street) and on Corn Exchange Street.

There are two 'gateway' points to the Civic Quarter for vehicles; Corn Exchange Street and St Mary's Street. As evident, both of these 'gateway' areas are shared with pedestrians and cyclists.

- General traffic enters the Civic Quarter from Corn Exchange Street and routes one-way westbound along Wheeler Street and Bene't Street.
- Vehicle access to the Market Square is restricted with permitted vehicles routing one-way eastbound along St Mary's Street and Market Street, with traffic able to also route one-way clockwise around Market Hill.

In addition to the identified 'gateway' points, it should be noted that there are instances where cyclists/drivers enter the Civic Quarter in prohibited areas. For example, servicing vehicles on some pedestrian links and cyclists on links where cyclists are requested to dismount.

Fig. 2. Gateway Entry Points

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Movement

The adjacent diagram demonstrates the key lines of movement in and around the Civic Quarter by mode.

It is recognised that this is not an exhaustive list and there are several potential movements not listed, however, it is considered that these are the core movements.

The diagrams demonstrate that there are conflicts between key movements between different street users.

More detailed desire lines and movement corridors are explored in each mode section of this report.

Fig. 3. Key Lines of Movement by Mode of Transport

Pedestrian key lines of movement

Cyclist key lines of movement

Permitted traffic key lines of movement

General traffic key lines of movement

Taxi key lines of movement (evening)

Deliveries/servicing key lines of movement

Restricted access deliveries/servicing key lines of movement

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Highway extents

The adjacent diagram demonstrates the highway boundary extents for the Civic Quarter area (highlighted in brown).

This demonstrates that key areas of the Civic Quarter are within the highway boundary and under control of Cambridgeshire County Council.

The highway boundary includes:

- Market Hill,
- Peas Hill including the pedestrianised section;
- Guildhall Street including the area to the entrance to St George House (entrance to forthcoming Lion Yard Premier Inn);
- Guildhall Street;
- Corn Exchange Street including the layby/loading bay; and
- Parsons Court adjacent to the Corn Exchange.

It is worth noting for this study that the highway boundary is overlaid on top of land ownership data.

The subsoil landowner retains the ownership of the subsoil, and the Local Highway Authority (LHA) 'adopt' the land above and have control over it. Some sections of the highway extent in the Civic Quarter have unknown subsoil land ownership.

Fig. 4. Indicative Highway Boundary Data

Fig. 5. Indicative Land Ownership

Existing pedestrian accessibility

There are varying levels of pedestrian priority within the Civic Quarter – as demonstrated by the adjacent figure. It is also worth noting that where pedestrians have greater levels of priority in the Market area and on pedestrianised streets, there is still the potential for conflict with drivers and cyclists due to a current lack of robust enforcement.

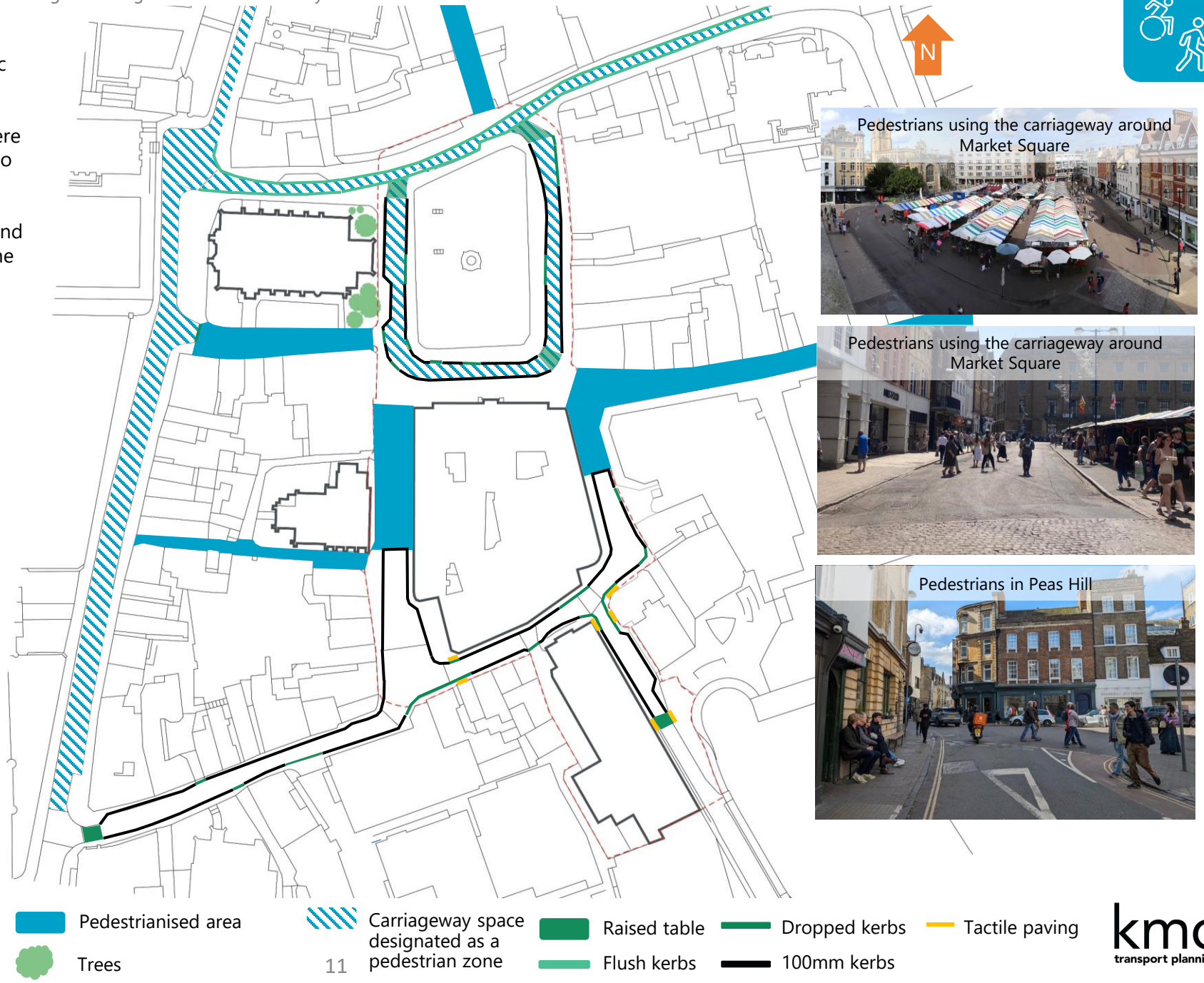
Due to the area's importance to both Cambridge residents and tourists, there are large numbers of pedestrians in/around the Civic Quarter. Footfall data from Cambridge Business Improvement District (BID) indicates that there are circa 150,000 people per month on Market Hill.

Issues

There are several issues with pedestrian accessibility in the Civic Quarter including,

- Dominance of carriageway around Market Hill (7-8m) which gives the perception that vehicles have greater priority than pedestrians, despite a pedestrian zone designation.
- Lack of accessibility for all on the listed granite setts in the Market, plus other damaged surfacing.
- Narrow footways with lack of dropped kerbs/tactile paving on desire lines.
- Street furniture including large waste bins, cycle parking and signage can cause clutter and issues for pedestrians.
- Lack of seating, shade and places to dwell, particularly near food outlets in the Market.
- Inconsistences in the quality of surfacing and integration of heritage setts, contributing to overall poor public realm.

Fig. 6. Existing Pedestrian Accessibility



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Existing cycle access

Given the high levels of cycling in Cambridge for all trip purposes, facilitating easy and convenient access to shops and leisure facilities in the Civic Quarter is important.

However, route management for cyclists is inconsistent across the Civic Quarter area at present, which can result in some cyclists not adhering to restrictions through pedestrianised areas or on one-way streets with no contraflow provision. This can create some conflicts with other street users.

The Civic Quarter acts as a trip attractor for cycling as there are circa 400 cycle parking spaces located on-street within 200m of the Civic Quarter, double the number which are within the Grand Arcade Cycle Park.

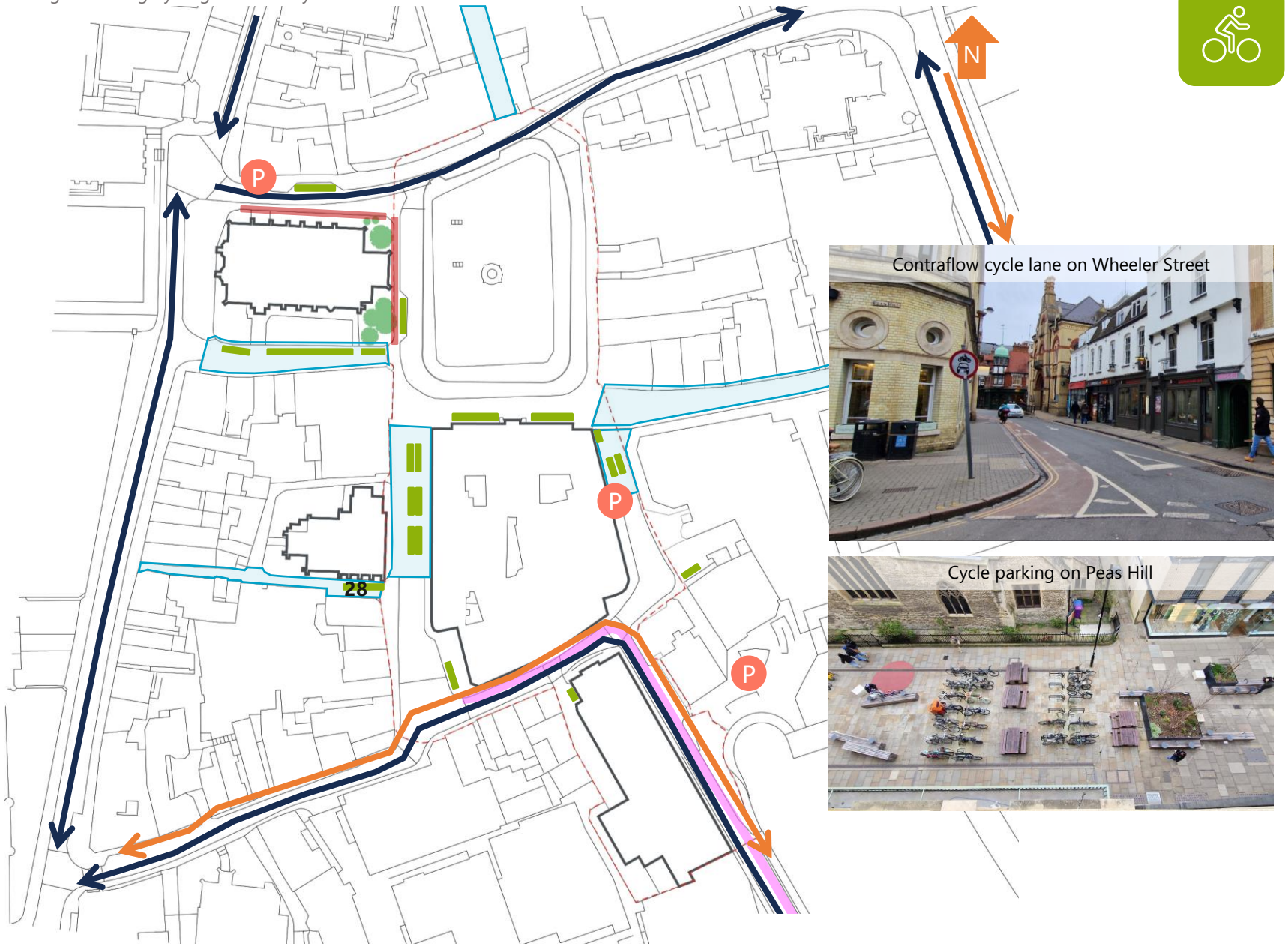
In addition, Market Street and Corn Exchange/Bene't Street form part of cross-city cycle routes and are well-used by cyclists for all purposes.

Issues

There are several issues with cycling access to the Civic Quarter including,

- Narrow cycle contraflow lane along Wheeler Street and Corn Exchange Street which can present conflict with oncoming vehicles.
- No other dedicated cycle infrastructure within the Civic Quarter.
- Lack of potential contraflow opportunities close to Civic Quarter resulting in adhoc contraflow from some cyclists on Market Street and to a lesser extent on Petty Cury, where cyclists are required to dismount.

Fig. 7. Existing Cycling Accessibility



Cycles parked to street furniture

Contraflow cycle movement allowed

Pedestrianised area

cycle parking within Civic Quarter

Contraflow cycle lane on Wheeler Street / Corn Exchange Street

Designated Voi e-scooter/bike parking

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Existing cycle parking

There are currently circa 200 cycle parking spaces within the Civic Quarter, and a further circa 200 within 200m walking distance of the Civic Quarter (not including Grand Arcade).

The demand for cycle parking is high, as demonstrated by survey data collected in June 2024 of the cycle stands directly in or adjacent to the Civic Quarter study boundary. Here, the results demonstrated that all stands within the surveyed area exceeded 75% capacity with three stands over capacity (more cycles parked adhoc to the stands than intended). In addition, there were more than 50 cycles parked to street furniture across the Civic Quarter at the peak of the day.

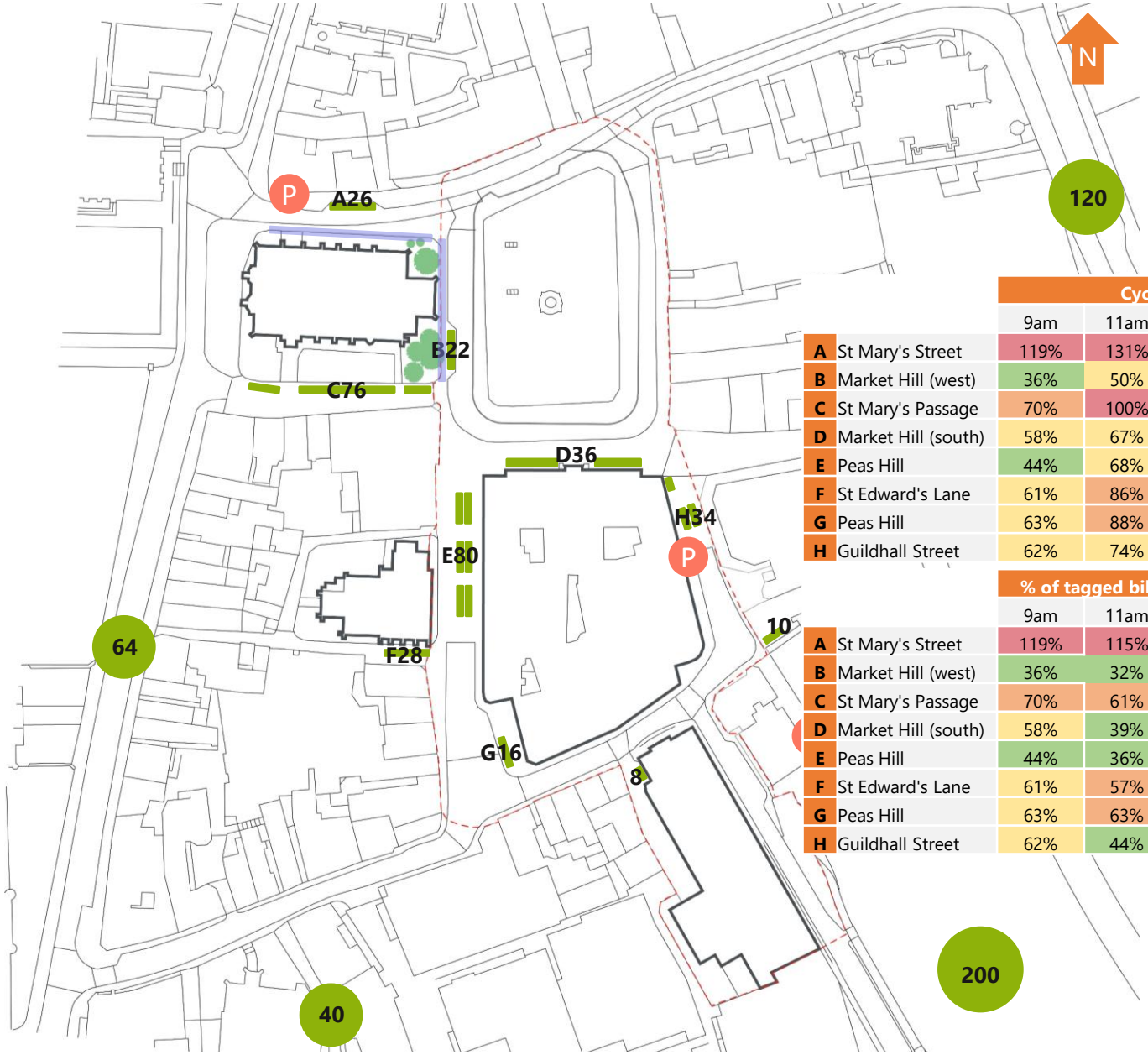
To demonstrate the demand for long-stay cycle parking, the survey assessed how many bikes had been parked in the same place since 9am, indicating that approximately 1/3 of spaces were utilised all day, and 1/5 were utilised for over 24 hours.

Issues

There are several issues with cycling parking within/near to the Civic Quarter including,

- High demand for cycle parking in certain locations.
- Lack of management of cycle parking, resulting in long-stay, abandoned cycles and overreliance on cycle parking from University Colleges.
- Lack of cycle parking for employees of businesses within the Civic Quarter results in long-stay parking in Civic Quarter.
- Cycle parking on footway can cause pinch points.
- Street space conflict from designated e-scooter /e-bike hire parking zones.

Fig. 8. Existing Cycling Parking



	Cycle Parking Capacity				
	9am	11am	1pm	3pm	7am next day
A St Mary's Street	119%	131%	138%	131%	88%
B Market Hill (west)	36%	50%	77%	82%	27%
C St Mary's Passage	70%	100%	97%	83%	22%
D Market Hill (south)	58%	67%	94%	103%	28%
E Peas Hill	44%	68%	75%	75%	24%
F St Edward's Lane	61%	86%	82%	93%	29%
G Peas Hill	63%	88%	100%	106%	31%
H Guildhall Street	62%	74%	82%	94%	32%

	% of tagged bikes present since 9am on 26/06				
	9am	11am	1pm	3pm	7am next day
A St Mary's Street	119%	115%	112%	96%	65%
B Market Hill (west)	36%	32%	32%	32%	18%
C St Mary's Passage	70%	61%	50%	43%	17%
D Market Hill (south)	58%	39%	36%	33%	19%
E Peas Hill	44%	36%	33%	28%	18%
F St Edward's Lane	61%	57%	50%	43%	21%
G Peas Hill	63%	63%	63%	63%	25%
H Guildhall Street	62%	44%	35%	32%	21%

C76 Exact cycle parking spaces within Civic Quarter (letter denotes our reference for cycle parking table)

64 Approximate cycle parking spaces near to Civic Quarter

Cycles parked to street furniture

P Designated Voi e-scooter/bike parking

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Existing Blue-Badge access

Blue-badge access currently differs in the two core areas of the Civic Quarter:

Market Hill/St Mary's Street

- No motor vehicles, except for permit holders including City Centre disabled access users and Dial-A-Ride bus service between 10am-4pm Monday-Saturday.
- All other Blue-Badge holders can access outside of 10am-4pm Monday – Saturday and all day Sunday.
- No designated Blue-Badge bays, but Blue-Badge holders can park within the Market Square for up to three hours, including on single or double yellow lines where no loading restrictions are in place or loading access is not obstructed. As per the concessions of the Blue-Badge scheme.

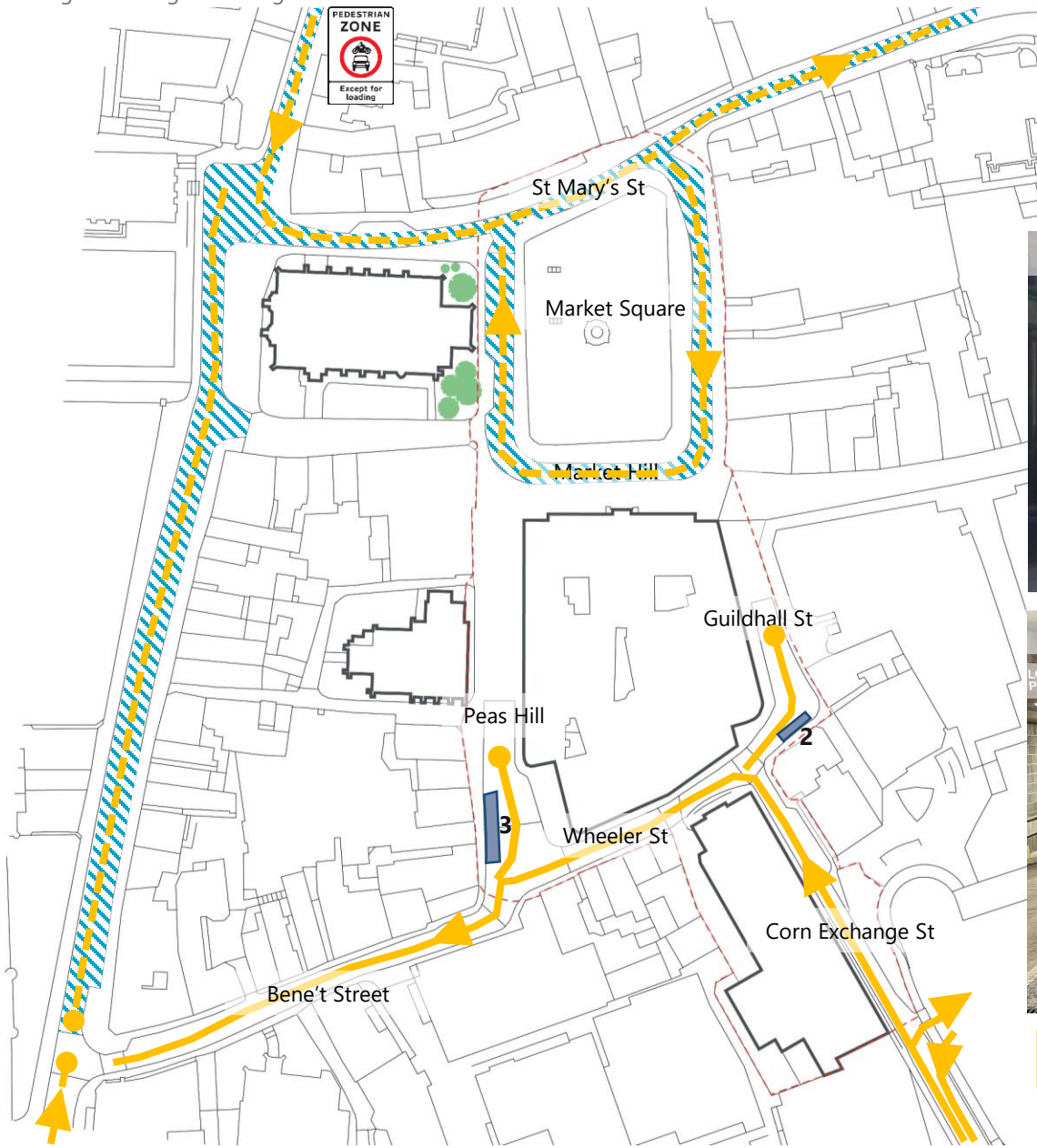
Corn Exchange Street/Wheeler Street/Peas Hill:

- No restrictions for general traffic access.
- One-way, east-west system in operation for vehicular traffic.
- Five designated Blue-Badge bays for all Blue-Badge Holders (three on Peas Hill, two on Guildhall Street).
- In addition to designated bays, all Blue-Badge holders can park within the area for up to three hours, including on single or double yellow lines where no loading restrictions are in place or loading access is not obstructed.

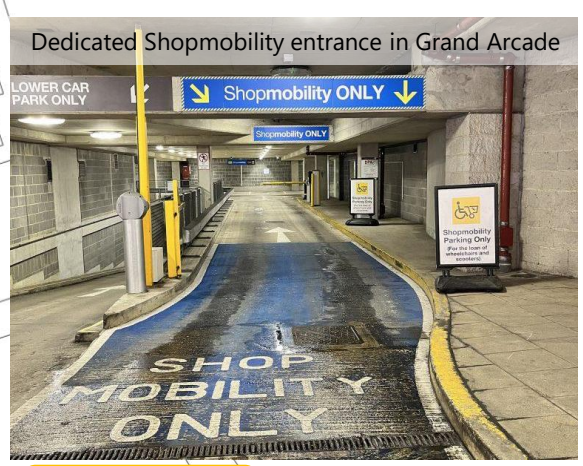
Grand Arcade

- 35 designated Blue-Badge spaces across two floors within the Grand Arcade (-1 and 2).
- Dedicated entrance for Shopmobility with an additional eight spaces for people who have pre-booked the scheme to borrow a mobility scooter or mobility aid.

Fig. 9. Existing Blue-Badge Access



Delivery vans parked in Blue Badge spaces



Dedicated Shopmobility entrance in Grand Arcade

Grand Arcade Car Park

35 Blue Badge spaces

General traffic key lines of movement

Restricted traffic movement

Blue Badge parking bays

Pedestrian zone operating additional disabled access permit scheme

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Existing traffic management

Market Hill/St Mary's Street

- No motor vehicles or loading except for permit holders, City Centre disabled access users (circa 70 permits), Dial-A-Ride, some University/College access, refuse vehicles and some taxis between 10am-4pm Monday-Saturday.
- No restrictions on Sunday.
- Market Hill operates a one-way system west-east and a clockwise one-way system around Market Square.
- Controlled via rising bollards on St John's Street.

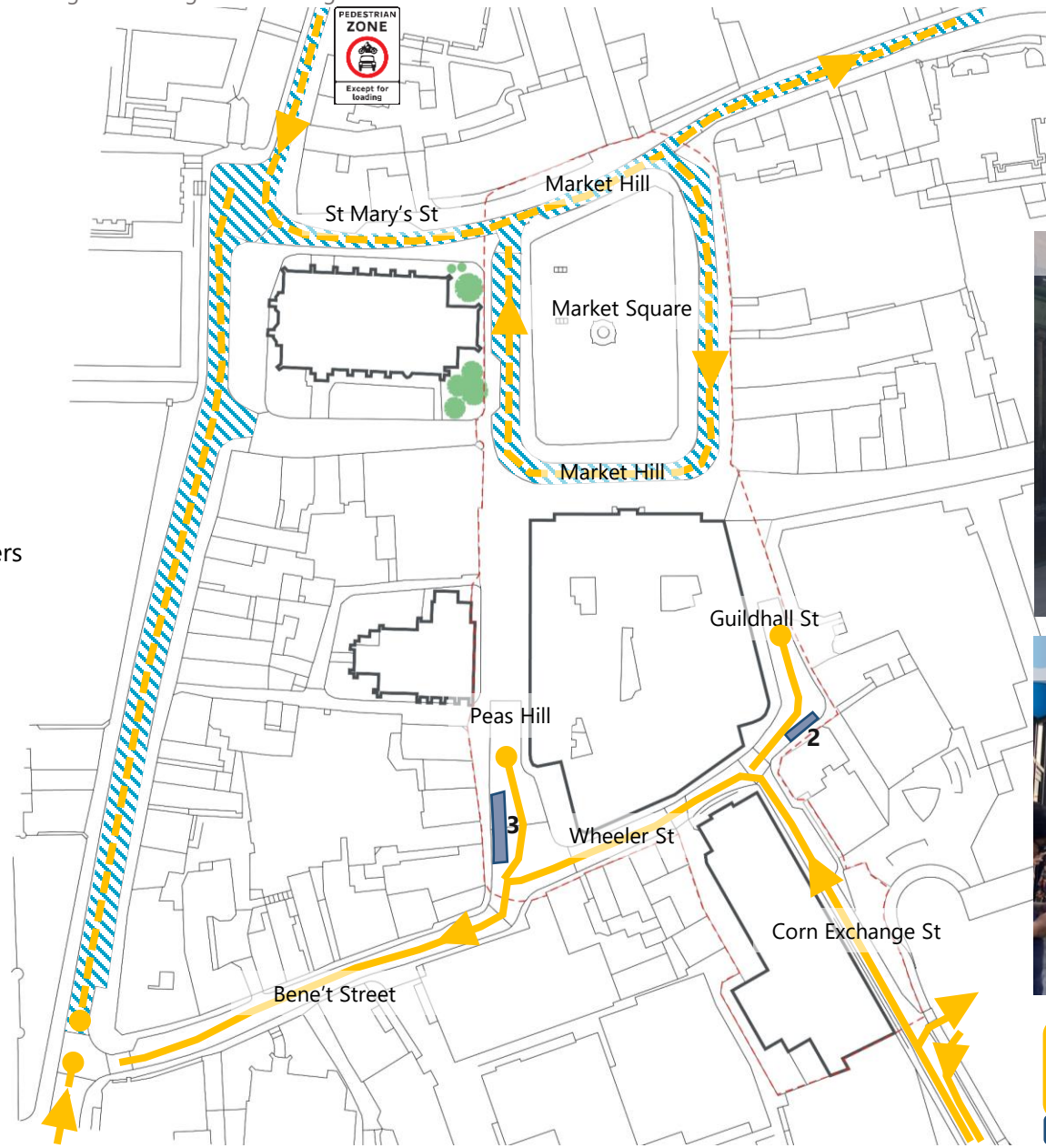
Corn Exchange Street/Wheeler Street/Peas Hill:

- No restrictions for general traffic access.
- One-way, east-west system for vehicular traffic.
- Five accessible Blue-Badge bays for all Blue-Badge Holders (three on Peas Hill, two on Guildhall Street).
- Loading bay Corn Exchange St (loading 7am – 7pm), no waiting 7pm-7am except taxis.
- Loading bay on Peas Hill by Arts Theatre.
- Double yellow lines, on both sides of all streets (no parking, loading or waiting at any time).

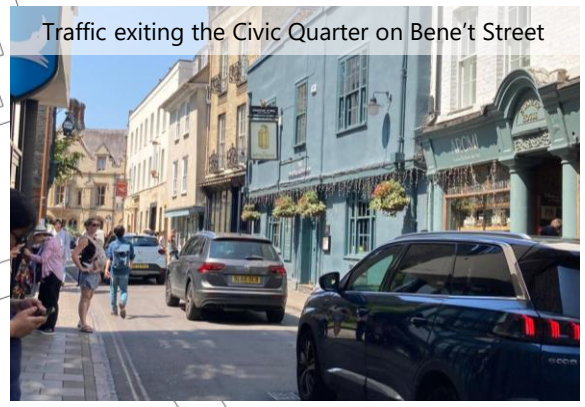
Issues

- General traffic routing along Wheeler Street and Bene't Street from the Grand Arcade Car Park, conflicting with the pedestrians and cyclists.
- Lack of restrictions on Sunday dating back to when Sunday trading was limited, despite high footfall today.
- Lack of enforcement of traffic restrictions due to funding/maintenance.
- Lack of hostile vehicle mitigation (bar Kings Parade).
- Constraints of a historic city centre street network.

Fig. 10. Existing Traffic Management



Delivery vans parked in Blue Badge spaces


Traffic exiting the Civic Quarter on Bene't Street

Grand Arcade Car Park
953 spaces total
35 Blue Badge spaces

General traffic key lines of movement
Restricted traffic movement
Blue Badge parking bays
Pedestrian zone operating additional disabled access permit scheme

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Existing deliveries and servicing

The restrictions discussed in the general traffic section also apply to servicing and deliveries. There are two servicing routes to premises within the Civic Quarter, via St Mary's Street/Market Hill/Market St or via Corn Exchange St/Wheeler Street/Peas Hill.

Within these two servicing loops, there are three existing distinct servicing/delivery considerations:

- **Existing uses of Market Square** including market traders, Marks and Spencer (M&S) loading bay access and other uses around Market Hill.
- **Businesses on Wheeler Street/Peas Hill** including shops and multiple bars/restaurants; and
- **Large event spaces** including Cambridge Arts Theatre, the Guildhall and Corn Exchange.

Issues

- Lack of enforcement for timings of loading/deliveries in the Market Square.
- Delivery vehicles loading/unloading can obstruct pedestrian/cycle movement through the Civic Quarter area.
- Adhoc parking/loading and waste disposal obstructing larger delivery vehicles.
- Proposed changes to land use (e.g. expansion of Cambridge Arts Theatre, new evening pub businesses coming forward and the redevelopment of the Guildhall) likely to change or increase servicing and delivery requirements.

Fig. 11. Existing Deliveries and Servicing

Delivery vehicles loading on Market Hill

M&S delivery loading on pavement

Articulated Heavy Goods Vehicle parking on Peas Hill

Loading bay (24/7)

Loading 7am-7pm

Blue Badge parking bays

Waiting/Loading prohibited (8.30am-6.30pm Mon-Sat)

Restricted access zone, no loading Mon-Sat 10am-4pm

Loading by permit holders only between 7pm-9.30am

No loading except in designated areas

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Existing deliveries and servicing

The below information has been taken from engagement with businesses and observational surveys.

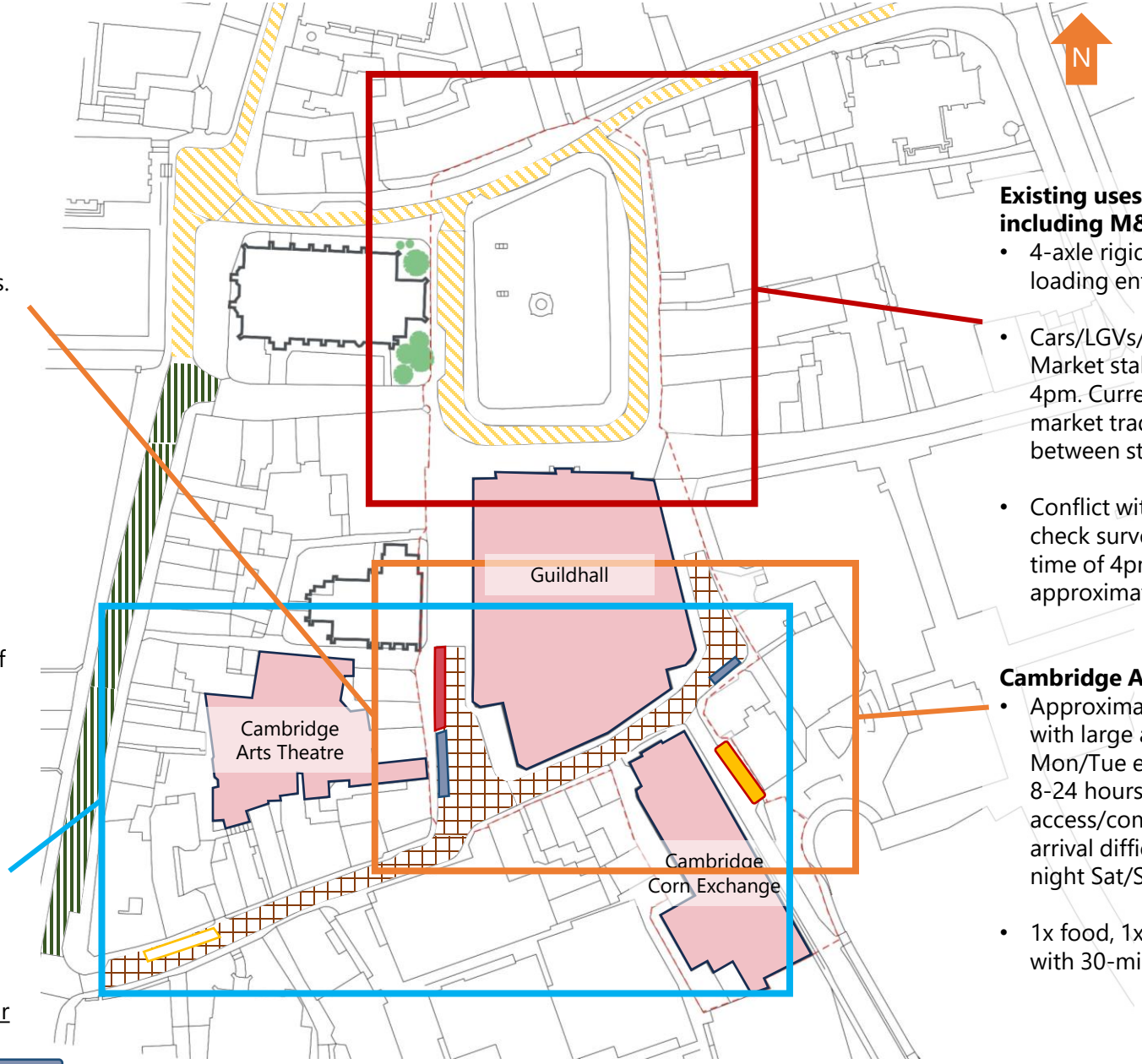
Cambridge Corn Exchange and Guildhall

- 8-10 delivery vehicles per day including adhoc parcels, production vehicles and snacks/ice cream/drinks.
- Food/drink deliveries, five days per week can take up to 45 minutes. Adhoc parcels typically take less than five minutes.
- Corn Exchange production vehicles arriving on daily basis. Average dwell time is 10 hours, increasing to up to 17 hours for tour buses. Informal arrangement with loading space at Grand Arcade for tour buses.
- Production vehicles range from LGVs to articulated HGVs.
- Over the average week currently 50% of vehicles arrive during the hours of 10am-4pm.

Businesses on Wheeler Street/Peas Hill

- Survey of businesses conducted demonstrated lack of cohesion in delivery and waste strategy, plus a high level of unknown/adhoc small deliveries for shops by couriers.
- Food/drink premises often have 1x rigid HGV delivery per week for drink and 1x rigid HGV food delivery per day, which can take between 60-90 minutes.
- Some businesses have overnight deliveries to reduce impact on area during the day.
- Large deliveries typically in AM peak, but no set times.
- Waste bins often kept on-street causing obstruction of the footway.
- Approximately 15-20 LGVs and six HGVs in total per day for deliveries in total.

Fig. 12. Existing Deliveries and Servicing



Existing uses of Market Square including M&S

- 4-axle rigid HGV for access to M&S loading entrance after 4pm.
- Cars/LGVs/small HGVs accessing Market stalls before 9am and after 4pm. Current arrangement allows market traders to drive onto the setts between stalls for loading/unloading.
- Conflict with through traffic (spot check survey during peak loading time of 4pm-5pm showed approximately 25 through vehicles).

Cambridge Arts Theatre

- Approximate pattern of deliveries with large articulated HGVs arriving Mon/Tue early morning and staying 8-24 hours (partly because access/competition for spaces makes arrival difficult), then returning late night Sat/Sun for 3-4 hours.
- 1x food, 1x drink delivery per week with 30-minute dwell time.

Loading bay (24/7)
Loading 7am-7pm
Blue Badge parking bays
Waiting/Loading prohibited (8.30am-6.30pm Mon-Sat)
Restricted access zone, no loading Mon-Sat 10am-4pm
Loading by permit holders only between 7pm-9.30am
No loading except in designated areas

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Existing buses and taxi access

On Sundays a sight-seeing tour bus routes through the Civic Quarter along St Mary's Street, Market Hill and Sidney Street. During peak months, this is as frequent as 3 buses per hour between 10am and 3pm.

Dial-a-Ride minibuses drop off and pick up in the Civic Quarter (Monday – Friday). This is a flexible service, for people with additional mobility needs to be able to book journeys in advance to suit their needs in terms of time and location.

There are currently two taxi ranks within the Civic Quarter, both in operation from 7pm-6am, one on Market Hill (north) and on Market Hill (west).

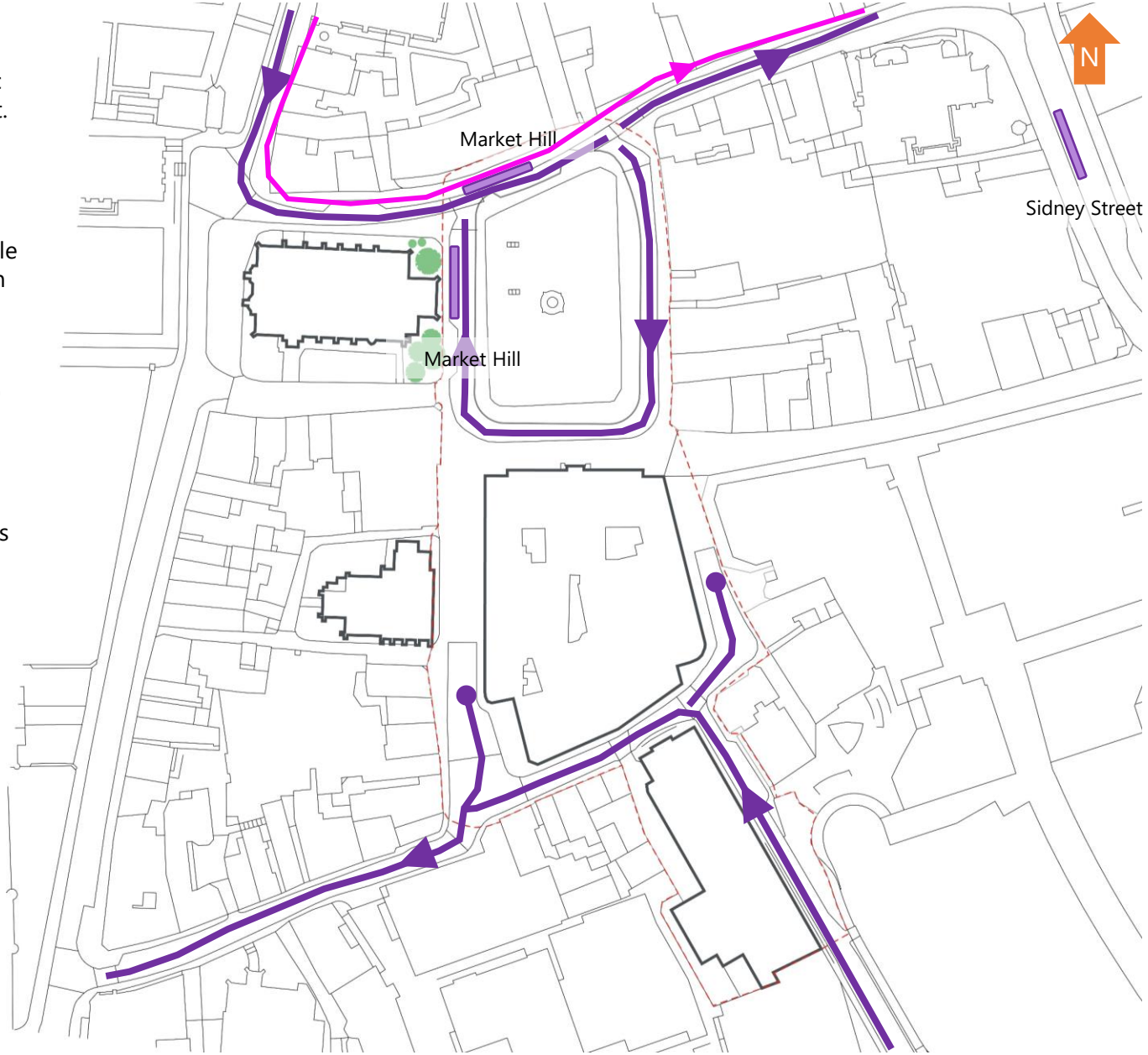
There is a thriving night-time economy around the Civic Quarter. Currently there are music venues, theatres, restaurants, bars and nightclubs, plus two regular food trucks in the Market Square.

Issues

There are currently some issues with buses and taxi access in the Civic Quarter:

- Location of taxi rank can restrict footway width in some areas.
- Lack of enforcement of existing restrictions allows taxis unfettered access to the Market Square during the daytime, which is not in accordance with the traffic regulation order.
- The sightseeing bus routes through the Civic Quarter during peak times on a Sunday, which can cause conflict with pedestrians and cyclists.

Fig. 13. Existing Taxi and Bus Access



Taxi ranks in operation 7pm – 6am

Taxi /dial-a-ride key lines of movement

Sightseeing bus key line of movement (Sundays 10am-3pm)

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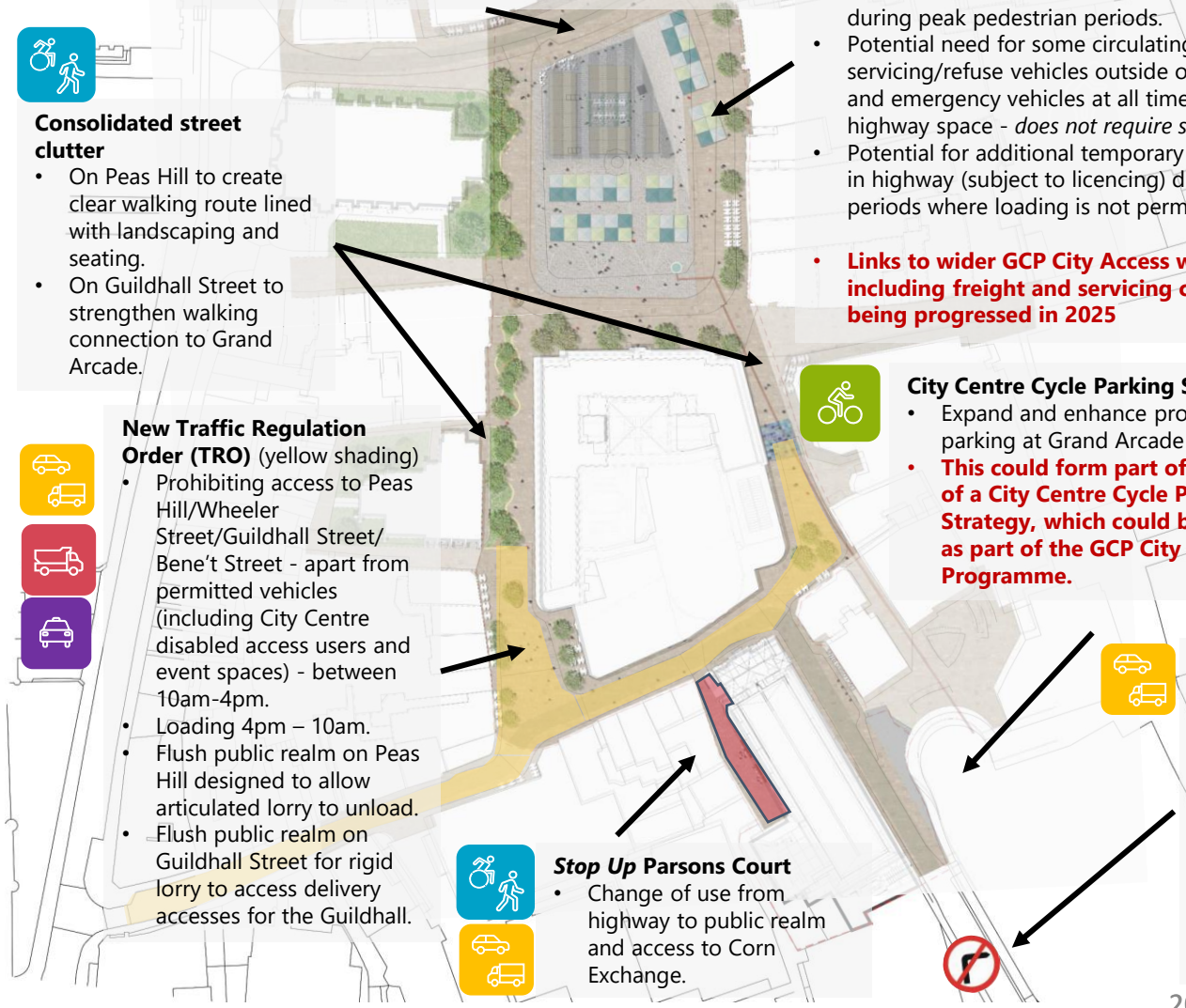
3.0 Recommendations

Vision

Realigned Market Street carriageway
- Realign carriageway within highway extent to provide clear minimum 2m footway on both sides.
- Relocated loading bay to adjacent to Market canopy.
- Loading available 6am-10am and 4pm-7pm. Taxi rank between 7pm-6am. Blue Badge parking available between 10am-4pm.

Consolidated street clutter
- On Peas Hill to create clear walking route lined with landscaping and seating.
- On Guildhall Street to strengthen walking connection to Grand Arcade.

New Traffic Regulation Order (TRO) (yellow shading)
- Prohibiting access to Peas Hill/Wheeler Street/Guildhall Street/ Bene't Street - apart from permitted vehicles (including City Centre disabled access users and event spaces) - between 10am-4pm.
- Loading 4pm – 10am.
- Flush public realm on Peas Hill designed to allow articulated lorry to unload.
- Flush public realm on Guildhall Street for rigid lorry to access delivery accesses for the Guildhall.



***Stop Up* Parsons Court**
- Change of use from highway to public realm and access to Corn Exchange.

Enhanced public realm within Market Square
- Lifting, refurbishment, re-laying and extension of listed granite setts
- Resurface Market Hill
- Likely reduction in service vehicles due to covered market and storage solutions.
- Extension of TRO to include Sundays 10am-4pm during peak pedestrian periods.
- Potential need for some circulating servicing/refuse vehicles outside of 10am-4pm and emergency vehicles at all times on current highway space - *does not require stopping up.*
- Potential for additional temporary market stalls in highway (subject to licencing) during time periods where loading is not permitted.
- **Links to wider GCP City Access work including freight and servicing consolidation being progressed in 2025**

City Centre Cycle Parking Strategy
- Expand and enhance provision of cycle parking at Grand Arcade Cycle Hub
- **This could form part of a first phase of a City Centre Cycle Parking Strategy, which could be delivered as part of the GCP City Access Programme.**

Right-turn ban for traffic <u>egressing</u> Grand Arcade car park
- All traffic to route left onto Downing Street, which would remove general traffic from Civic Quarter.
- Wider implications of right turn ban would need to be assessed as part of next steps.
- **Links to wider GCP City Access work and modelling options in Spring 2025.**

Fig. 14. Overall vision

Why?

In March 2022 a report to the Environment and Community Scrutiny Committee approved the updated vision for the Market Square:

"An inspiring, strategic public realm heart to the city centre, the market square will be welcoming to all to work, visit and spend time here. A 21st century international and local multi-generational and multi-cultural space, celebrating Cambridge's history and heritage, it integrates a thriving, sustainable, accessible, safe and open environment, connecting the surrounding streets with spaces to shop, wander, stop and socialise. A bustling 7-day market, space for seating and eating, additional business and social opportunities and engaging and inclusive cultural events will add to the richness of the area, making this an active day and evening hub in the city centre for local businesses, residents, and the wider community."

We have a once-in-a-century opportunity to reimagine the area around the Guildhall, Corn Exchange and Market Square to create a new focal point for residents and visitors that lives up to the city's reputation as a centre of excellence and cultural significance.

The following sections set out the various elements of the RIBA Stage 2 concept plan in more detail and further work that is required in order to resolve issues, assess the potential transport effects of the concept and further develop the proposals. The concept design is not able to be fixed until the further work has been undertaken and ongoing engagement with stakeholders would be required to feed into the design process.

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Managing traffic

Where?

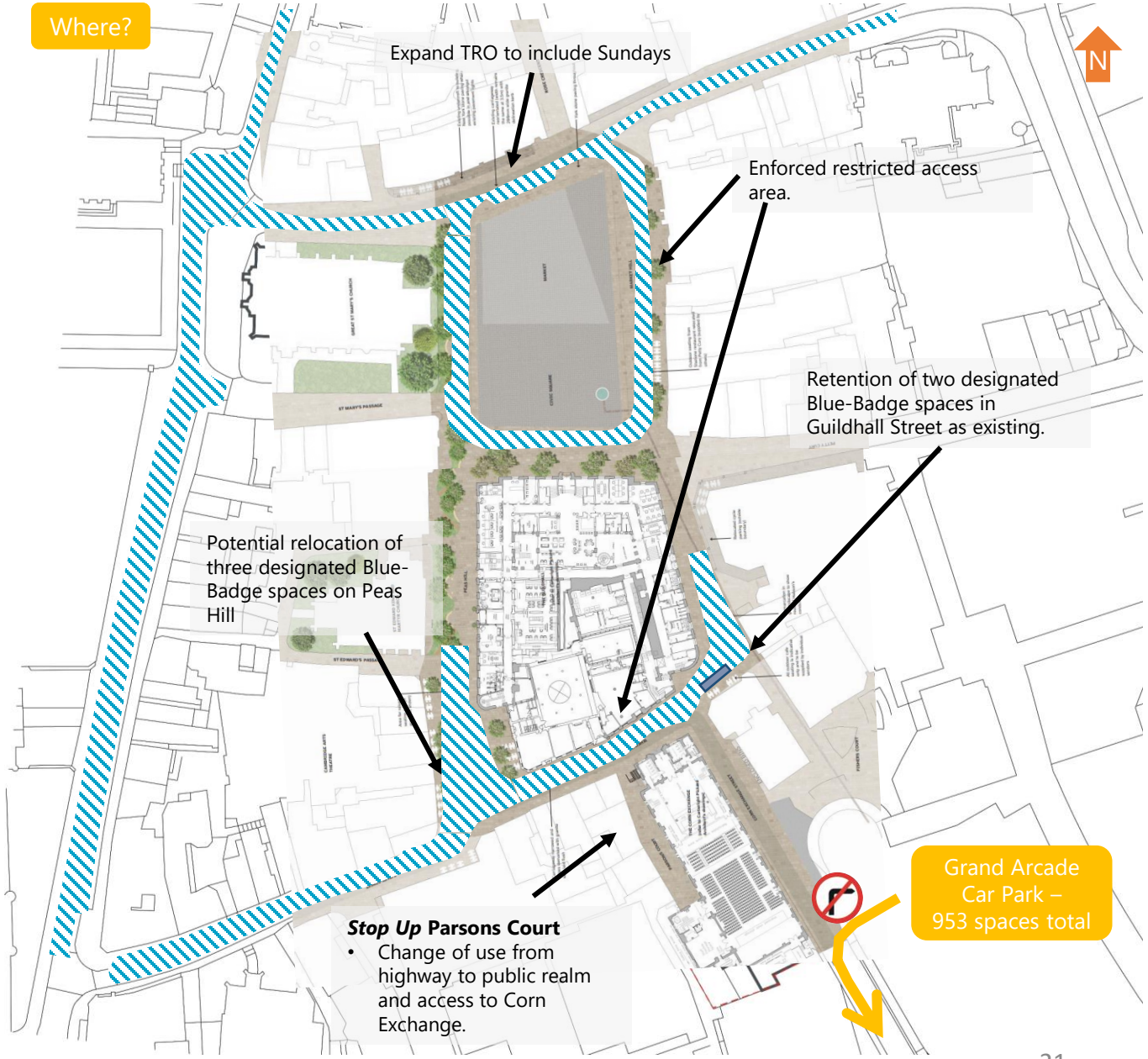

Fig. 15. Potential Traffic Management

Why?

- Enforcement of existing vehicle restrictions in Market Square and removal of general traffic on Wheeler Street and Bene't Street aims to reduce conflict between pedestrians, cyclists and vehicles.
- Fewer vehicles in busy spaces provides the opportunity to have more public realm and improve safety for all other street users.

What?

- Ban the right turn for vehicles egressing out of Grand Arcade Car Park. All vehicles to route left onto Downing Street – at all times. Bene't Street is very busy with pedestrians and reducing traffic would improve safety and comfort levels.
- Implement a Traffic Regulation Order (TRO) on Guildhall Street/Peas Hill/ Wheeler Street /Bene't Street to prohibit vehicles other than permit holders between 10am and 4pm Monday- Sunday.
    - Permitted vehicles include large deliveries associated with Arts Theatre/Corn Exchange /Guildhall and people with city centre disabled access permits (as per current Market Street arrangement). All other deliveries to take place outside of 10am-4pm.
- Expand the existing TRO on Market Street to include Sundays between 10am-4pm.

Links to wider schemes

- Links to wider City Access Study by the Greater Cambridge Partnership (GCP), evaluating vehicle access to the City Centre.
- The GCP are undertaking modelling for City Access Study in 2025, which would be able to consider impact of right-turn ban from Grand Arcade car park on the wider highway network. using a traffic model.

As part of the next stage of the Civic Quarter project, the above approach will be subject to further study, surveys and consultation to finalise the strategy. This would include a review of potential TRO access options.

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Facilitating Blue-Badge access

Where?

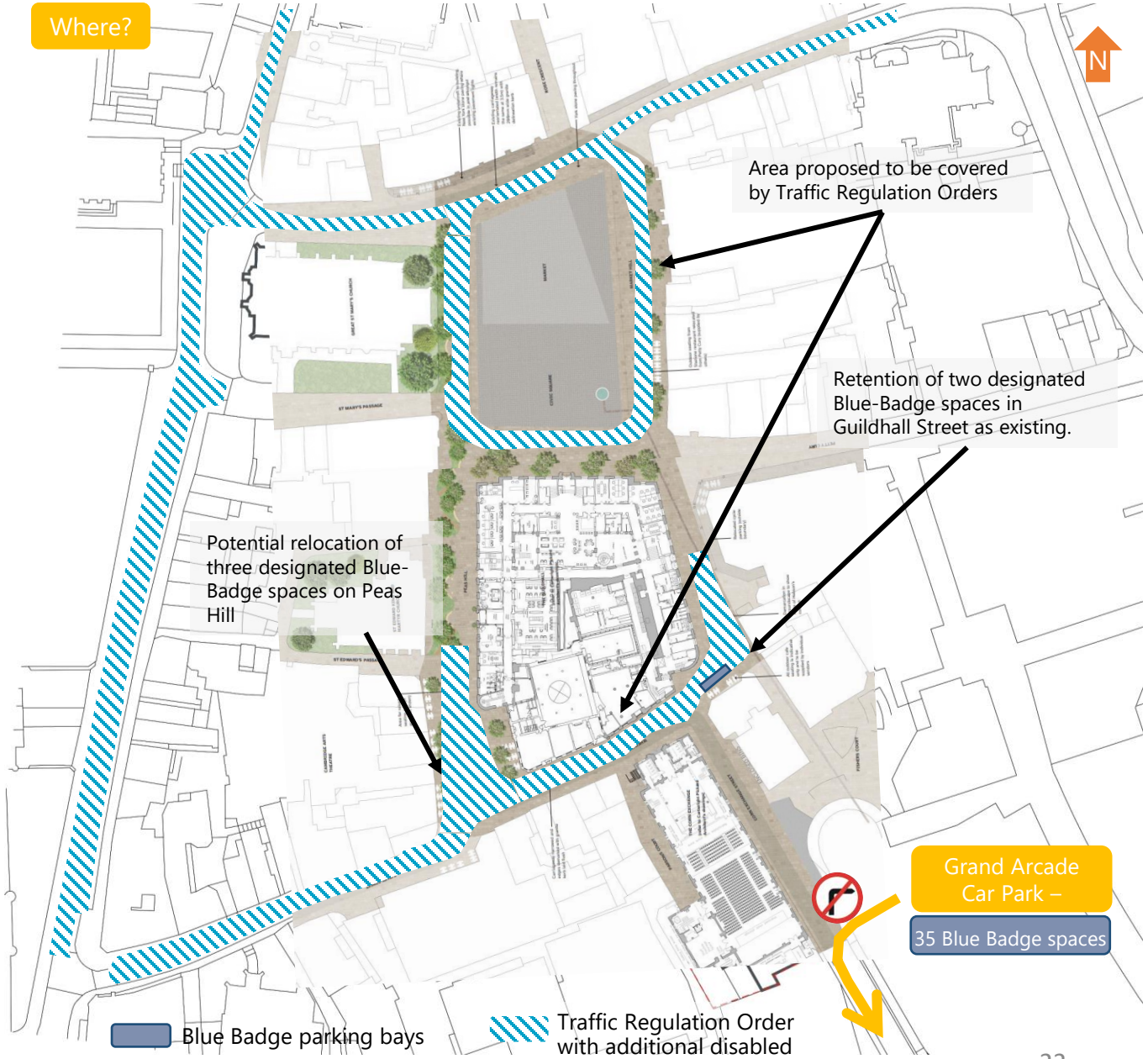

Fig. 15. Potential Traffic Management

Why?

- Important to facilitate access to the Civic Quarter for those with additional mobility needs.

What?

Market Hill/St Mary's Street – *expand traffic restrictions to include Sunday*

- No motor vehicles, except for permit holders including City Centre disabled access users and Dial-A-Ride bus service between 10am-4pm Monday-Sunday.
- All other Blue-Badge holders can access outside of 10am-4pm Monday – Sunday.
- No designated Blue-Badge bays, but Blue-Badge holders can park within the Market Square for up to three hours, including on single or double yellow lines where no loading restrictions are in place or loading access is not obstructed. As per the concessions of the Blue-Badge scheme.

Corn Exchange Street/Wheeler Street/Peas Hill – *changes as below*

- Implement a Traffic Regulation Order (TRO) on Guildhall Street/Peas Hill/ Wheeler Street /Bene't Street to prohibit vehicles other than permit holders between 10am and 4pm Monday- Sunday.
- Permit holders to include city centre disabled access permits (as per current Market Square arrangement). Blue-badge holders can apply for this permit if they meet the accessibility requirements.
- Retention of two designated Blue-Badge bays on Guildhall Street.
- Potential relocation of three designated Blue-Badge Bays on Peas Hill to rebalance the use of space in Peas Hill. However, proposals to reduce general traffic and loading in Peas Hill during day will generate more space for City Centre disabled access permit holders to park for up to three hours.

Grand Arcade – *as existing*

- 35 designated Blue-Badge spaces across two floors within the Grand Arcade.
- Dedicated entrance for Shopmobility with an additional eight spaces for people who have pre-booked the scheme to borrow a mobility scooter or aid.

As part of the next stage of the Civic Quarter project, the above approach will be subject to further study, surveys and consultation to finalise the strategy. This could include a review of the City Centre disabled access permit criteria.

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Managing deliveries and servicing

Where?

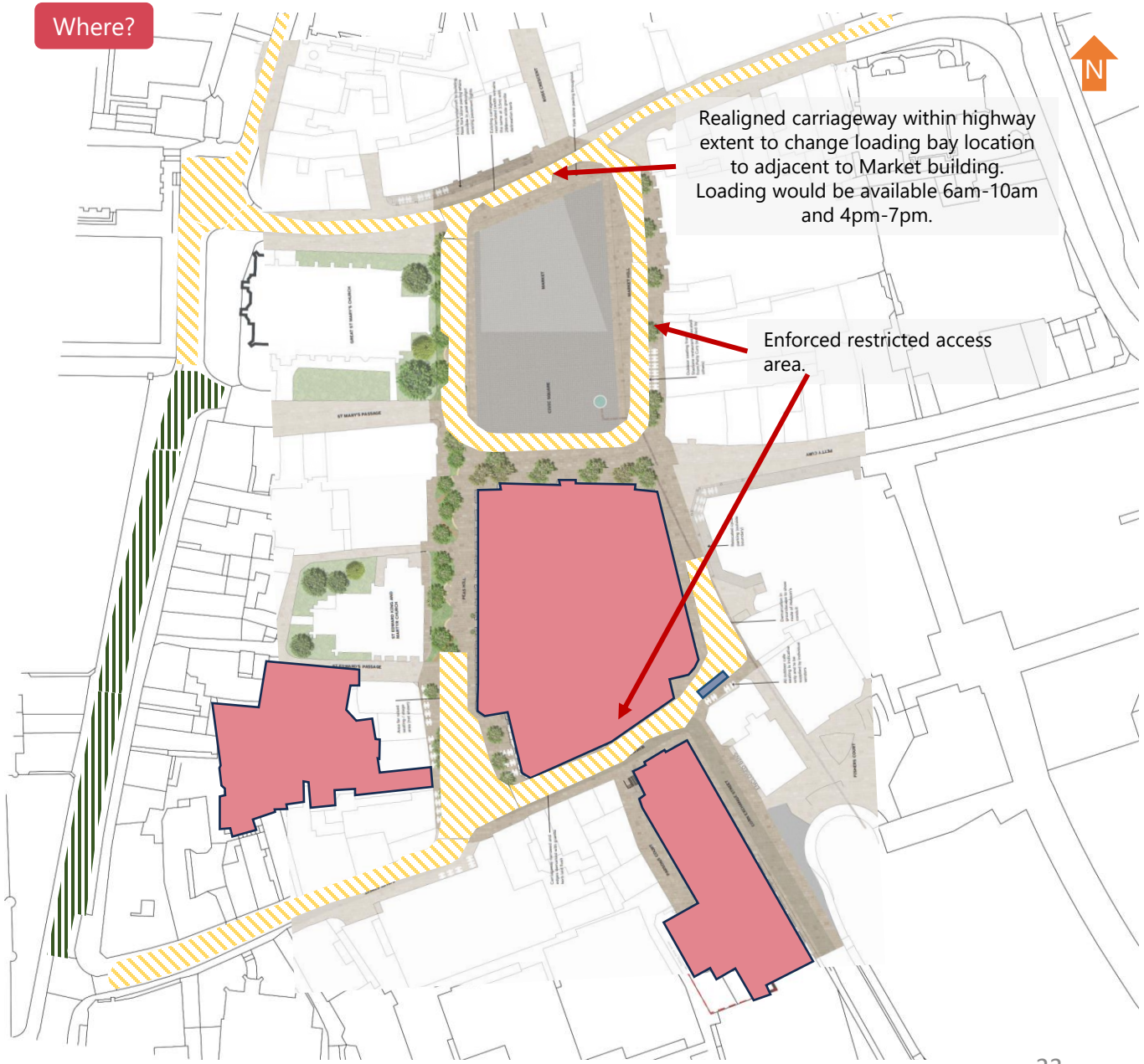

Fig. 16. Potential Deliveries and Servicing

Why?

- Removing general traffic on Wheeler Street and Bene't Street will improve delivery and servicing access, particularly for larger servicing vehicles.
- Consolidating and managing access for deliveries will reduce conflict between delivery vehicles and vulnerable street users.

What?

- Ban the right turn out of the Grand Arcade Car Park for general traffic, reducing the through traffic on Corn Exchange Street – Wheeler Street – Peas Hill – Bene't Street at all times. Bene't Street is very busy with pedestrians and reducing traffic would improve safety and comfort levels.
- Expand the existing Traffic Regulation Order (TRO) to include Sundays to have minimal vehicle movements during the daytime when the Market Square is busiest. Loading between 4pm – 10am only.
- Implement a new TRO for Guildhall Street/Peas Hill/ Wheeler Street /Bene't Street to prohibit vehicles other than permit holders between 10am and 4pm Monday- Sunday.
    - Permitted vehicles would include large deliveries associated with Arts Theatre/Corn Exchange /Guildhall. All other deliveries would need to be from 4pm – 10am.

Links to wider schemes

- Links to wider City Access Study by the Greater Cambridge Partnership (GCP), evaluating vehicle access to the City Centre. GCP aim to reduce traffic by 15% from 2011 levels.
- Links to wider freight study as part of the City Access Study by the GCP. Aim is to change the way goods are transported into Cambridge by using fewer, less polluting vehicles.

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Enhancing pedestrian experience and accessibility

Where?

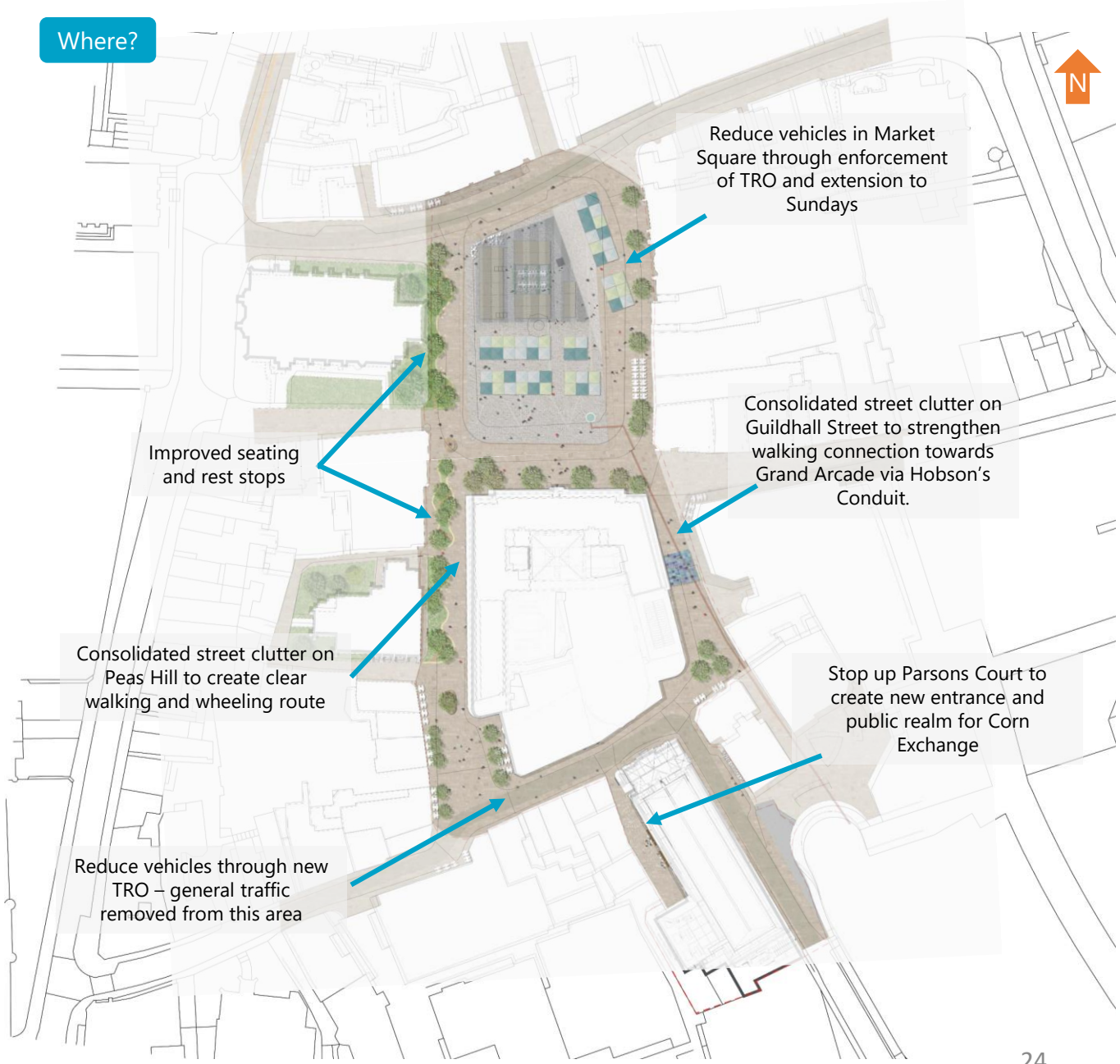

Fig. 17. Potential Pedestrian Accessibility

Why?

Enhance the public realm within the Civic Quarter and reduce vehicle movements to enable people to move through, dwell and enjoy the space more easily.

What?

- Extend existing Traffic Regulation Order (TRO) to include Sundays to have minimal vehicle movements during the daytime when the Market Square is busiest.
- New TRO covering Corn Exchange Street/Wheeler Street/Peas Hill area to ban general traffic and provide similar restrictions to Market Square TRO. Aim to reduce vehicle movements on a busy pedestrian street and improve safety and comfort levels.
- Lift, refurbish and relay the granite setts in market to provide level surface.
- Realign Market Hill along the northern boundary of the market to provide unobstructed 2m footway along both sides. Retain 25mm kerb upstand along St Mary's Street/Market Street route as main route for cyclists.
- Remove wide tarmacked carriageway on east, south and west sides of Market Hill and provide flush surfacing.
- Consolidated street clutter and relocation of some on-street cycle parking to create more pedestrian space (refer to cycle parking strategy options).
- Landscaping strategy to provide shade, seating and biodiversity.

Links to wider schemes

Links to GCP City Access scheme, which seeks to improve sustainable transport to the city centre and create a more people-focused, city-centre environment through the reduction of vehicular traffic.

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Surface treatment considerations

The concept design proposes to lift, refurbish and relay the granite setts and resurface the east, south and west sides of Market Hill as flush surfacing. A flush surface would allow a flexible space for licenced pop-up market stalls or events. A licence would be required for any temporary stalls or infrastructure on the public highway.

The main cycle through-route within the area is along St Mary's Street, Market Hill (northern side) and Market Street. It is proposed to retain the 25mm kerb upstand along this main route for cyclists and the permitted vehicles that travel along this route.

The Department for Transport (DfT) announced a pause on shared surface schemes in July 2018. In September 2018 the DfT issued a letter clarifying the position, which stated that authorities needed to satisfy their obligations under the equalities legislation in the design of all schemes but that *"the focus of the pause is on level-surface schemes in areas with relatively large amounts of pedestrian and vehicular movement, such as high streets and town centres (outside of pedestrian zones)."*

The Market Square is already a pedestrian zone, with a traffic regulation order (TRO) in place restricting vehicles and therefore the pause on shared spaces does not apply.

There are no general traffic movements permitted and the County Council has control of which vehicles are permitted to use the area and at what times. However, the existing TRO has not been enforced for some time, which has resulted in vehicles moving through the area which are not permitted to. It is understood that the rising bollard on St John's Street is to be reinstalled by Cambridgeshire County Council in October 2024, which will enforce the existing TRO. In addition, as part of the Civic Quarter scheme, it is proposed to extend the TRO to include Sundays.

Between 10am and 4pm when pedestrian flow is at its highest there would only be access to the area for vehicles with a permit, which is minimal. Before 10am and after 4pm, when pedestrian flows are lower, market traders who are not able to store goods in the new market would need to unload/load and other shops/restaurants would need to take deliveries. The GCP aim to change the way goods are transported into Cambridge by using fewer, less polluting vehicles and is progressing a freight and consolidation strategy in 2024-25, which will set out measures to achieve this. The GCP strategy, along with the ability for market traders to store goods within the market, will further reduce vehicle movements before 10am and after 4pm.

Whilst the DfT pause on shared space does not apply to the Market Square, the local authorities need to satisfy themselves in the design of all schemes that they have met their obligations under the Equality Act 2010. Generally, for the purposes of discussion about accessibility it is necessary to group people into the following categories:

- Ambulant disabled people (includes walking stick, crutch or frame users and people with prosthetic limbs)
- Wheelchair users
- Mobility scooter users
- Blind and partially sighted people
- Deaf and hearing-impaired people
- People with learning disabilities
- People of short stature
- Neurodivergent people

Having flush surfacing on the east, south and west sides of Market Hill will enable ambulant disabled people, wheelchair and mobility scooter users and people of short stature to pass through the area with ease. Consideration therefore needs to be given to blind/partially sighted people, deaf/hearing impaired people, people with learning difficulties and neurodivergent people.

Research was undertaken on the design of Exhibition Road in Kensington. The road has a chequered granite surface that covers the full width from building to building. Comfort areas are provided for pedestrians along both sides of the shared space with an 800mm corduroy tactile delineator strip and black drainage channel for colour contrast to help people navigate the street.

Prior to construction, Guide Dogs for the Blind and Royal Borough of Kensington and Chelsea conducted on-street trials with visually and mobility impaired people to test whether the corduroy paving could be detected by visually impaired people and was passable by people with mobility impairment. The trials were successful. Once operational, a two-year monitoring review was undertaken of road user behaviour. Every six months, the results were presented to the access group, which consisted of representatives from different disability groups.

Unlike Market Square, Exhibition Road is open to general traffic but nevertheless the research provides useful evidence for the design of the Civic Quarter. A similar approach could be taken in Market Square to provide a comfort zone either side of the route that would be used occasionally by vehicles. These could be marked with drainage channels and corduroy tactile paving.

This will need to be considered further as part of RIBA Stage 3 in consultation with the local authorities, the Access Officer and stakeholders to ensure that the scheme design meets the requirements of the Equality Act 2010.

Improving cycle journeys to the Civic Quarter

Where?

Fig. 18. Potential Cycling Accessibility

Why?

The city of Cambridge has one of the UK's highest levels of cycling, and the aim is to increase active travel further to achieve net zero (Cambridgeshire County Council's Active Travel Strategy, March 2023)

The City Council aims for the Civic Quarter to be a destination for people to travel to by sustainable transport, including cycling.

What?

As set out in the baseline conditions, there are circa 200 cycle parking spaces within the Civic Quarter and demand for cycle parking is high. The main cycle routes through the Civic Quarter are Great St Mary's Street/Market Street and Bene't Street/Wheeler Street/Corn Exchange Street. Beyond this cycling tends to occur within the Civic Quarter in order for people to find cycle parking rather than as a through trip.

Following a consideration of a number of options, the recommended approach would be as follows:

- Cycle parking would be retained on the approaches to the Civic Quarter, such as St Mary's Street, St Mary's Passage, St Edward's Passage etc.
- Rationalise the on-street cycle parking in the Civic Quarter to provide more space for public realm. The current design demonstrates how much public realm including seating and planting could be achieved if a large amount of cycle parking was relocated from the Civic Quarter.
- Re-provide more cycle parking via the expansion and enhancement of cycle parking hub at the Grand Arcade, which could form the first phase of a Cambridge city cycle parking strategy to intercept cycle trips at convenient key locations in the City Centre.

This approach would be explored in more detail during the next Stage of works with the aim of finding the right balance to facilitate cycle access and provide high-quality public realm.

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Cycle parking strategy - Enhanced cycle hub

Currently, the only cycle parking hub within the city centre is at the Grand Arcade car park, although an updated smaller cycle hub is due to reopen at Park Street in Winter 2024. All other cycle parking in the city centre is provided through on-street cycle parking.

Cambridge benefits from park&ride facilities on the approaches to the city, which intercept vehicles and transfer people to sustainable transport. Similar to this, but for active travel, would be to create a network of cycle hubs (over and above the existing facility at the Grand Arcade) for the Civic Quarter that would intercept cycle movements on their approach to the city centre and transfer people to walking. There would still be a need for short stay cycle parking, but a cycle hub or hubs for the Civic Quarter would create high quality and secure facility for cycle trips.

This would align with policy objectives, including the Cambridge City Climate Change Strategy 2021-2026, and would build on the approach taken at the Park Street development, which is to provide 270 public cycle spaces. This, along with Park Street, could form the first phase of a cycle hub strategy for the city centre.

The Civic Quarter cycle hub could be provided at the Grand Arcade Cycle Park, which could be expanded to 450 spaces, which was the size originally included in the planning application drawings as shown in the extract below. It is recommended that this option is considered further as part of RIBA Stage 3.

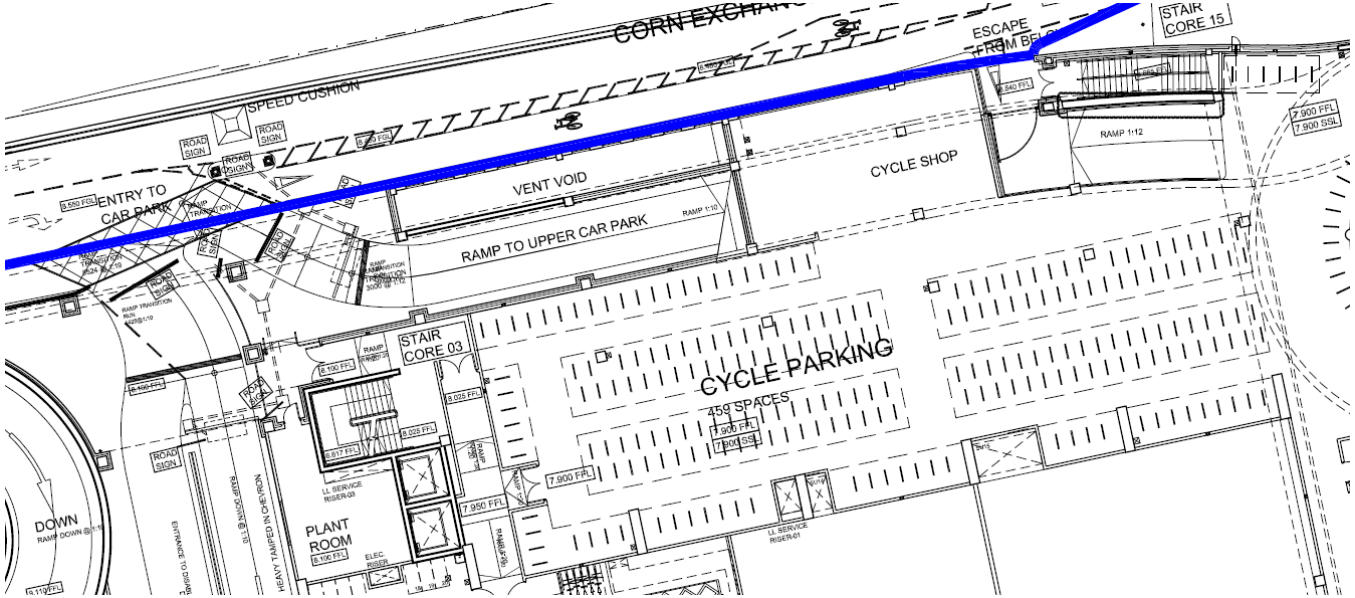

Fig. 19. Original drawings for Grand Arcade

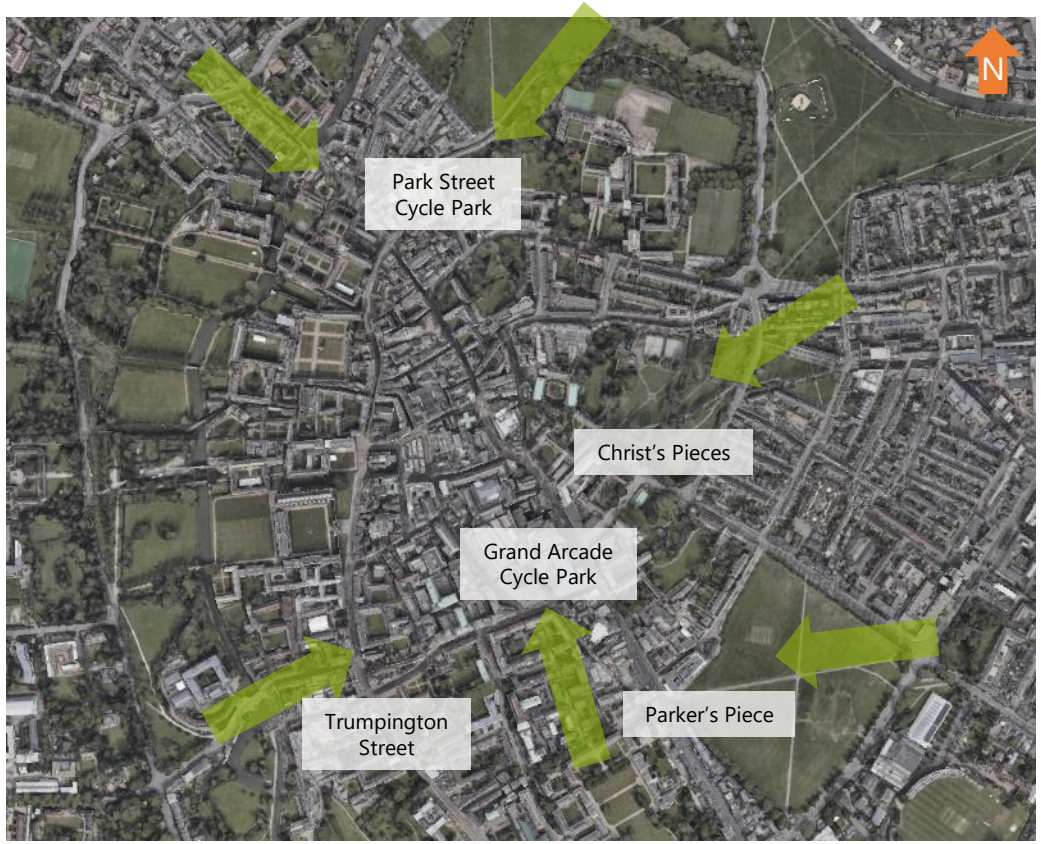

Fig. 20. Potential City Cycle Hub Strategy

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Enabling bus and taxi movement

Where?

Fig. 21. Potential Taxi Access

Why?

- The existing taxi rank on the north side of Market Hill compromises the pedestrian space on a key east-west route through the Market Square.

What?

- The taxi rank on the northern side of Market Hill is proposed to be relocated to be adjacent to the proposed market canopy.
- This would enable an unobstructed 2m footway to be provided along the northern and southern sides of Market Hill as well as the taxi rank.
- If required, queuing space for taxis could be provided along the western side of Market Hill adjacent to Great St Mary's Church.
- The taxi rank would operate with the same times as currently (i.e. 1900-0600)
- It is proposed to extend the existing TRO restrictions to also include Sundays and therefore taxis would no longer be able to route through the area on Sundays between 10am and 4pm.
- No changes to the Dial-a-Ride provision or Site Seeing bus are proposed.

Links to wider schemes

- Links to wider City Access Study by the Greater Cambridge Partnership (GCP), evaluating vehicle access to the City Centre.

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Movement

The adjacent diagram demonstrates the potential key lines of movement in and around the Civic Quarter following the implementation of the proposals discussed in this report.

It is recognised that this is not an exhaustive list and there are several potential movements not listed, however, it is considered that these are the core movements.

The diagrams demonstrate that some of the conflicts in the present day have been mitigated against through the introduction of new processes or infrastructure.

Fig. 22. Key Lines of Movement by Mode of Transport

Pedestrian key lines of movement

Cyclist key lines of movement

Permitted traffic key lines of movement

Taxi key lines of movement

Deliveries/servicing key lines of movement

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Response to pre-application advice

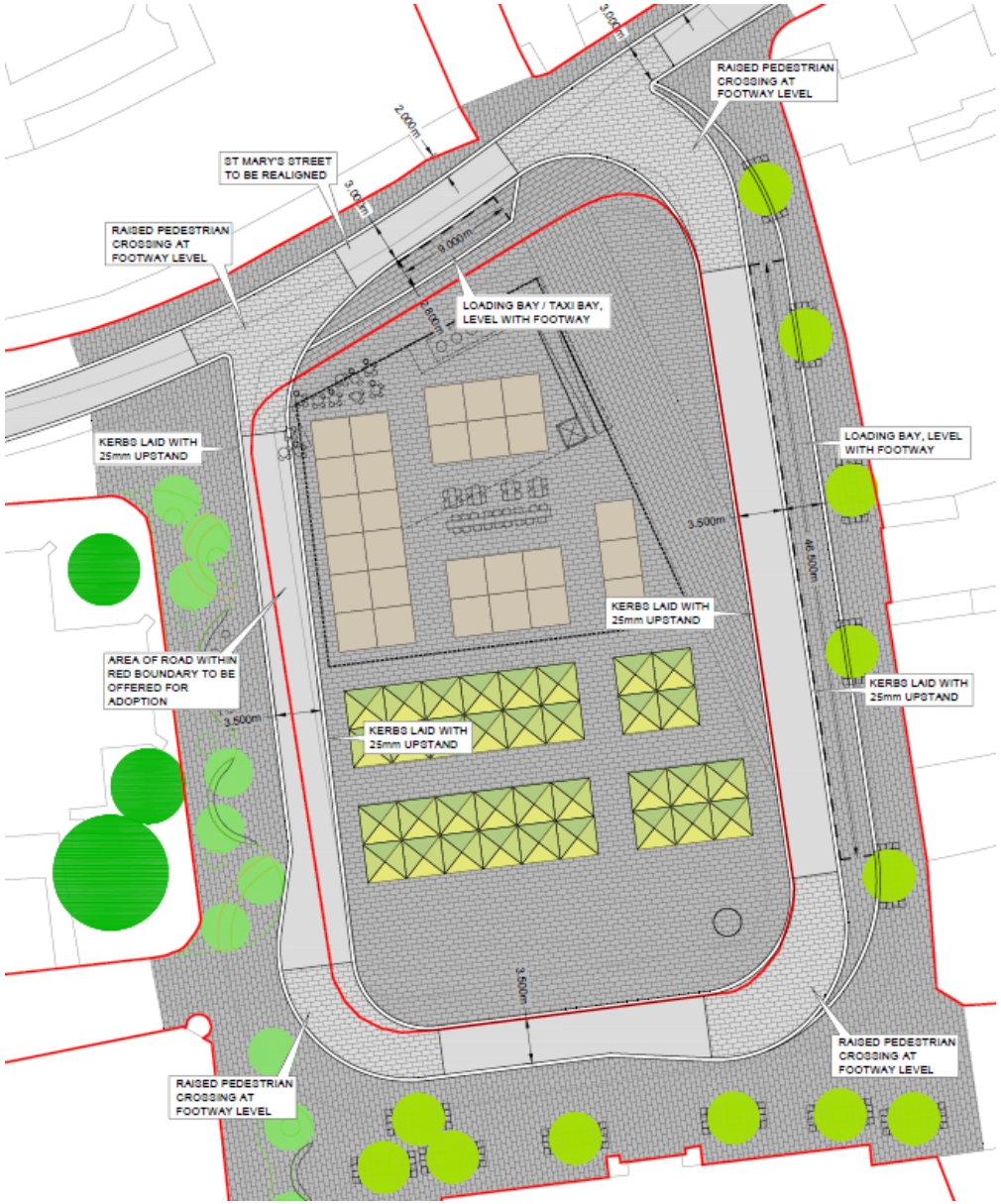

Fig. 23. Consideration of pre-application engagement

Why?

As part of the pre-application engagement with the Access Officer and Cambridgeshire County Council, concern has been raised with the provision of flush surfacing on the east, south and west sides of Market Hill due to the pause on shared streets and obligations under the Equality Act 2010.

Consideration has been given to both of these as part of the design of the concept design, which is set out in detail earlier in this report.

Notwithstanding this, consideration has also been given to the implications on the concept design of providing a vehicle route around Market Square with a 25mm kerb upstand. The adjacent drawing shows a route for a refuse vehicle, which would require the following changes to the scheme:

- Removal of trees along the eastern side of Market Hill
- Removal of pop-up market stalls within the highway boundary due to the 25mm kerb upstand
- Rationalisation of landscaping and seating on the western side of Market Hill
- Dedication of a section of City Council land to public highway on the western side of Market Hill to provide vehicle route with 25mm kerb upstand

This will need to be considered further as part of RIBA Stage 3 in consultation with the stakeholders.

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Summary and Next Steps

KMC has been commissioned to provide transport planning advice as part of a consortium working on the Cambridge Civic Quarter project, with the vision of **reconnecting the Guildhall, Market Square, Corn Exchange, and the wider public realm, to create an inclusive and attractive destination that will increase visitor numbers and shape a more vibrant and people focused civic heart.**

Building the evidence base demonstrated the movement and place needs within the Civic Quarter which would need to be balanced to ensure the space is accessible for all, is future-proofed for increased footfall, meets sustainability targets and provides a civic heart.

This report summarises the RIBA Stage 2 Concept Design from an Access and Movement perspective, taking account baseline transport conditions, stakeholder engagement and the objectives of the Civic Quarter scheme.

The concept design will require further study and input as it moves into RIBA Stage 3 and the development of a planning application. This includes but is not limited to:

- Commission survey data of movement by all modes of transport through the Civic Quarter to further inform the development of the design;
- Commission survey data to inform detailed Blue-Badge strategy;
- Further engagement with all stakeholders to input into the development of the design;
- Independent Access Audit on the design to ensure accessibility for all;
- Independent Stage 1 Road Safety Audit on the design to consider and respond to any safety problems identified in the design;
- Undertake city centre transport modelling to understand the potential effects of the removal of the right-turn out of the Grand Arcade car park and a TRO on Wheeler Street and Peas Hill;
- Understand how hostile vehicle mitigation could be incorporated into the design in order to design out potential for incidents. This could be in the form of street furniture, without the need for bollards, as has been achieved recently at Cambridge North railway station; and
- Further development of the concept design based on the survey data, audits and stakeholder engagement.

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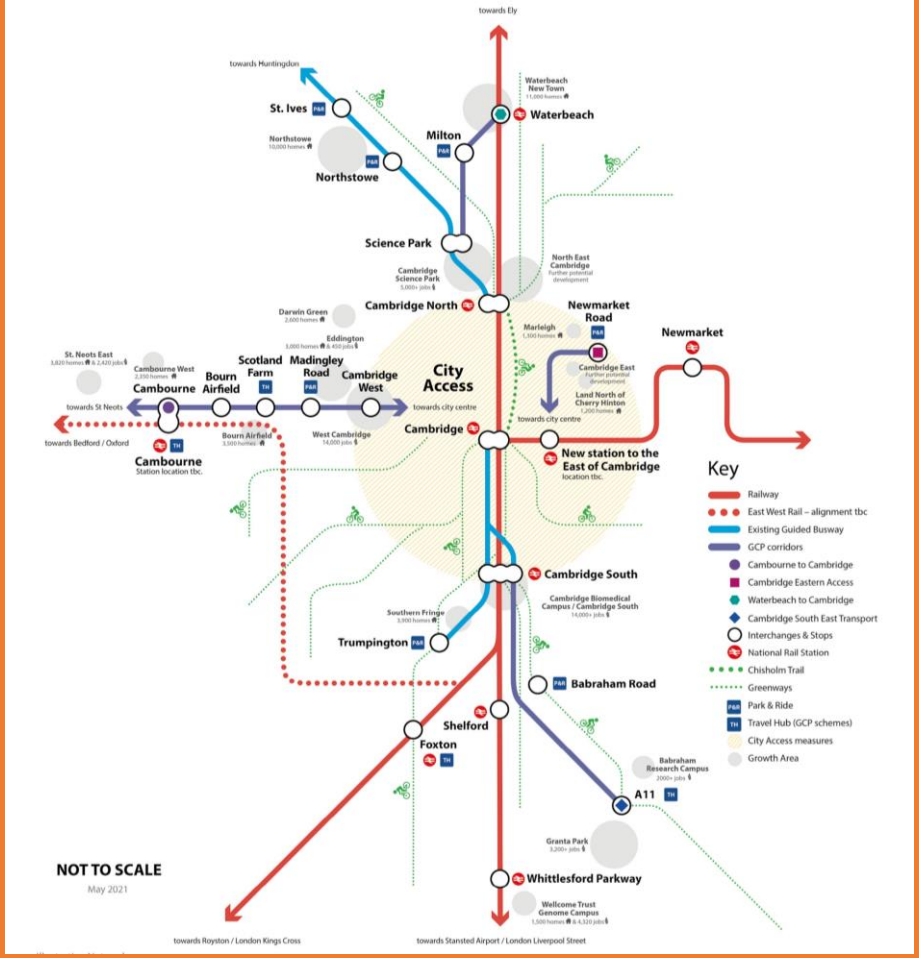
Integration with GCP

As set out in this report, there are synergies between proposals as part of the Civic Quarter and the programme of works currently being undertaken by the Greater Cambridge Partnership (GCP) through their City Access scheme.

As part of this programme of works, the GCP is considering strategies to reduce traffic, improve cycle parking and freight management in Cambridge, which would have a positive effect on the number of vehicles accessing the city centre.